

# **INSTITUTE DAY**

**23<sup>rd</sup> April, 2013**

**Annual Report 2012-13**



**National Institute of Technology  
Tiruchirappalli - 620015**

# INSTITUTE DAY 2013

April 23, 2013



National Institute of Technology  
Tiruchirappalli - 620 015, Tamilnadu,  
India.

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## **Report on Academic Excellence**

**-Dr. P. Asokan**

The Chief Guest of the Institute Day 2013, **Dr. Rajaram Nityananda, Chairperson, BOG, NIT Tiruchirappalli and Senior Professor, National Center for Radio Astrophysics, TATA Institute of Fundamental Research, Pune, Dr. Srinivasan Sundarrajan, Director, NIT Tiruchirappalli, Deans, Heads of the Department, Faculty, Staff, Mr. Gaurav Kumar, President, Students' Association, Mr. Vigneshwaran Ilango, Vice President, Invited guests, the Press and the other media representatives**

### **GOOD EVENING AND A WARM WELCOME**

We are marching towards the golden jubilee year for National Institute of Technology, Trichy, and the academic year 2012-13 was nonetheless a year of success and achievements for us. We take immense pleasure in sharing the laurels gained by our faculty and students on our Institute day.

NIT Tiruchirappalli has initiated a major programme of transformation. Such a transformation aims not only to take the institute to be one among the top few technical institutions in the country, but also to bring the quality of higher education to the next level.

The institute has worked out number of initiatives involving industry-institute interaction and up-gradation of academic curriculum, delivery and evaluation. The global trend is on inter-disciplinary education and research. The institute has formed a number of Task Teams working on niche areas with members drawn from various disciplines. These task teams are working with reputed institutions and leading Research and Development establishments along with industries in the thrust areas.

The academic curriculum structure is modified to suit the current industrial requirements. A revised curriculum is being framed to allow core teaching by industry personnel through online model or other suitable methodologies. It has been suggested in the curriculum to have lectures in the core courses by industry experts. It could be highlighted over here that, MHRD, Govt. of India has also initiated directives in the same direction with 25% from industry inputs in all the core courses. This paves way for more students to take up their Summer Internships in leading universities in USA, Germany, Canada, Singapore, etc and other research organizations.

Development of students through participation in all academic decision making activities is the hallmark of this institute. With a commitment to free and open inquiry, the faculty members and research scholars in NIT, Trichy take an interdisciplinary approach to research that spans from science to engineering. The institution partners with the neighboring industries and research institutes through MoU on innovative initiatives to promote collaborative research and consultancies with local benefits and replicable outcomes.

The institute has applied for NBA accreditation for all under graduate programmes in the first phase to ensure the quality of education and improvement. Through this, the programmes/courses would be critically appraised to verify that the institute or the programme continues to meet and exceed the norms and standards prescribed by international institutions.

Despite the global economic meltdown, NIT Trichy has been able to prove to be the best in terms placement opportunities for the students. As of Mar. 2013, 92.3 % of undergraduate students registered for placement and 56.7% of the postgraduate students registered for placement have received job offers through the Department of Training and Placement, NIT Trichy. This academic year witnessed a steep increase in the international placements with many multinationals like Facebook, Microsoft providing job placements in United States. With the placement season still going on, we aim to achieve 100% placement for the UG and 70% for the PG by the end of this academic year.

The Faculty of Department of Architecture presented their research papers in International Conference at Glasgow and many national conferences. The Department had organized workshops on Earthquake Risk Management and also had its faculty publish their research work in reputed journals like International Journal of Research in Social Sciences

Department of Chemical Engineering has taken up research projects worth Rs.10 lakhs from CSIR and Rs. 24.81 lakhs from Ministry of Environment and Forests, Govt. of India. The Department has also bagged a Consultancy project for Rs. 19.8 lakhs from V.O.Chidambaranar Port Trust. The Department had a phenomenal increase in the no of articles published in various national and international journals this year.

The Department of Chemistry has taken up a research project worth Rs.25 lakhs from Govt. of India and also has published 67 research articles in reputed international and national journals.

CECASA has launched M.S.(by research) in Corrosion and Surface Engineering for Executives working in public sector units under part time sponsored category. Presently two candidates are pursuing their M.S. programme sponsored from Southern Railway, Diesel Loco Shed, Ponmalai, Tiruchirappalli.

Department of Civil Engineering works on a new research project worth 419.8 lakhs from Coir Board of India, two projects worth 19.25 lakhs from NLC, a project worth Rs.15.94 lakhs from SERB. The department also has published 47 research articles in various reputed journals. The MHRD, Govt. Of India has sanctioned a Centre of Excellence in Transportation Engineering to the Department of Civil Engineering, N.I.T.,Tiruchirappalli. The total grant amounts to Rs. 2.5 crores

Students of Department of Computer Science and Engineering have received admissions for their postgraduate programs from many prestigious universities like Stanford, University of California, North Carolina State University and also have received various scholarships like the Schneider Electric India Foundation. Department of Computer Applications had 11 research papers published this year. Similarly, the Department of Humanities had also produced 3 Ph.Ds apart from publications in journals.

The Department of Electrical and Electronics Engineering has undertaken a research project worth 21 lakhs from Department of Science and Technology, Govt. of India. The Department published 58 research papers in various journals and has organized 10 workshops on various topics this academic year.

Department of Electronics and Communication Engineering has secured two project grants worth 28 lakhs each from UKIERI, 155 lakhs from Ministry of Communications and Information Technology, Govt. of India, and the faculty have published 22 research articles in reputed journals.

Department of Management studies received the Best B School Award from HUL, DNA, STAR Group, Dewang Mehta Association and Amar Ujala Awards. The Department had organized 4 management conclaves this year and published 5 research papers in reputed journals. Department of Mathematics works on project worth 17 lakhs from Govt. of India and has 9 research articles to its credit this year.

Department of Mechanical Engineering works on research project worth 35 lakhs from BHEL, 7.7 lakhs from UGC-CSIR, and has published 31 research articles this year.

Students of Department of Metallurgical and Materials Engineering have received prestigious DAAD fellowship and department works on project worth 250

lakhs from Ministry of Coal, Govt. of India. The Department has 20 research articles to its credit this year.

The Department of Physics had 62 research papers to its credit this year. It has signed a MoU with The University of Shiga Prefecture, Japan for collaboration at the Institute level from March 2013.

Department of Production Engineering is currently working on research project worth 250 lakhs. It has also provided consultancy worth 22 lakhs to various organizations like BHEL. The Department has 54 research papers to its credit this year.

The Computer Support Group has successfully extended the Wi-Fi internet access to the Opal Hostel, Guest House, and Faculty Quarters, Central Library premises, Administrative building and some of the boys' hostels. To enable National knowledge Network, a Virtual Class Room (VCR) has been set up in central lecture hall complex of NITT at a budget of 30 lakhs, as a part of National knowledge Network project, provides high speed network connectivity between all the IITs, NITs and R&D as well as defense laboratories of India. In addition, 10 rooms in the lecture hall complex have been converted to virtual class rooms in this year.

Entrepreneurship Cell of NIT Trichy plays instrumental role instilling the spirit of entrepreneurship among the students with various programs like Genesis 2012, Ventura – international B plan competition, and Paisa Inc. student magazine on entrepreneurship.

NITT has proved its mettle not only in academics but also in sports and games. NITT won the overall championship in the All India Inter NIT Tournaments organized by NIT Trichy in Feb 2013. Students have won many laurels in Basket Ball, Shuttle Badminton, Table Tennis, and Volley Ball in IIT Kharagpur, NIT Surat and NIT Suratkal.

The A Flight NCC Cadets of NIT Trichy have performed exceedingly well and thirty Cadets appeared for 'B' certificate examination and twenty cadets appeared for 'C' Certificate examination which was conducted by NCC Directorate in Feb & March this year. A total of 678 NSS Volunteers have registered for the Year 2012-13 and the NSS of NIT T have been involved in various activities like drug addiction awareness programs, environmental cleaning programs.

NITT students also excel in their extra-curricular activities. This year, Festember, the annual cultural event of NITT saw a staggering participation of 8000 students across various cities from the country. The ninth edition of Pragyan, had partnered with 112 companies, with the highest budget of any fest in South India. More than 4500 people attended Pragyan along with 10,000 registrations for the events. The inter department

literary and cultural fest, NITT FEST, had grown leaps and bounds to become a 4 day long theme based festival to celebrate raising levels of ability and capability.

With the happiness gained from our achievements, we feel the responsibility of continuing the success on working to make NIT Trichy a world class educational institution.

## INSTITUTE DAY PRIZE WINNERS – 2013

### B.Tech. CHEMICAL ENGINEERING

Batch	Rank	Roll Number	Name	CGPA
2008	1	102108064	SMRITI GUPTA	9.86
	2	102108069	ADARSH GOPI	8.91
	3	102108062	MUDIT KSHATRIYA	8.65
2009	1	102109035	PAVTHRA N	9.74
	2	102109065	VANDANA SWAMINATHAN	9.67
	3	102109006	AKANKSHA GUPTA	9.19
2010	1	102110002	A MONICA ROY	9.62
	2	102110050	R NANDINI	9.2
	3	102110017	DIVYA JAGANATHAN	9.09

### B.Tech. CIVIL ENGINEERING

Batch	Rank	Roll Number	Name	CGPA
2008	1	103108008	ADITYA MURALIDHAR	9.79
	2	103108096	ROUSHAN BHARATI	9.69
	3	103108023	RAMKISHORE B	9.57
2009	1	103109087	SUBRAMANIAN S	10
	2	103109082	SHIVANG KUMAR PATHAK	9.83
	3	103109002	ABHIJEET SINGH	9.61
	3	103109056	NITIN KUMAR VERMA	9.61
2010	1	103110092	V SVETHA	9.93
	2	103110005	AKSHAY SUKHWANI	9.8
	3	103110040	MADHUKAR DHINGRA	9.67

### B.Tech. COMPUTER SCIENCE AND ENGINEERING

Batch	Rank	Roll Number	Name	CGPA
2008	1	106108011	VISWANTH S	9.44
	1	106108020	LAKSHMI PRIYA S	9.44
	2	106108058	PARDESHI HRISHIKESH MOHANSING	9.42
	3	106108079	SANJANA SINGH	9.4
2009	1	106109068	R V LAYAMRUDHAA	9.48
	2	106109008	AMRITHA RAGHUNATH	9.32
	2	106109103	V JANANI	9.32
	3	106109091	SIDDHARTH S	9.23
2010	1	106110006	ANGELYN ARPUTHA B	9.82
	2	106110019	DEV AGARWAL	9.8
	3	106110026	GAUTHAM ESHWAR N	9.59

**B.Tech. ELECTRICAL AND ELECTRONICS ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	107108103	SAMBHAV R JAIN	9.93
	2	107108077	PRADHYUMNA R	9.72
	3	107108084	PRIYANK BAVISHI	9.65
2009	1	107109063	R VIGNESH	9.73
	2	107109028	HARINI M	9.68
	3	107109035	SHANKAR GANESH K	9.55
2010	1	107110069	RAMESH K GOVINDARAJAN	9.9
	2	107110103	VIVEKANANDAN B	9.71
	3	107110060	P KISHORE	9.65

**B.Tech. ELECTRONICS AND COMMUNICATION ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	108108011	ADITYA VENKATARAMAN	9.88
	2	108108007	SREENIDHI M	9.47
	2	108108044	SUREKA KASINATH	9.47
	3	108108015	SARVESH G	9.44
2009	1	108109084	SABAREESH KUMAR R	9.95
	2	108109030	SABAREESH G	9.93
	3	108109020	C PRADEEP CHANDAR	9.91
2010	1	108110061	PADMAPRIYA DURAISAMY	9.75
	2	108110057	NAVIN KUMAR	9.73
	3	108110090	SNEHA BALAN	9.45

**B.Tech. INSTRUMENTATION AND CONTROL ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	110108093	CT VALLI MEENAL	9.56
	2	110108120	SONAM KUMARI	9.36
	3	110108109	SRIHARI S S	9.02
2009	1	110109097	UPPALAPATI NAVEEN KUMAR	9.73
	2	110109042	MOHIT SINGH RATHOD	9.43
	3	110109088	SHWETA KANNAN	9.41
2010	1	110110008	ANEESH KULSHRESTHA	9.83
	2	110110096	ZAID MANZOOR KHAN	9.24
	3	110110012	ARJUN KASHYAP	9.13

**B.Tech. MECHANICAL ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	111108051	ANKIT ANURAG NAIK	9.63
	2	111108064	PAIPURI MAHENDRA	9.48
	3	111108092	MOHIT GUPTA	9.4
2009	1	111109032	GAUTAM KUMAR MANDAL	9.75
	2	111109056	MAMIDALA VINAY KUMAR	9.61
	2	111109059	MOHD IMTIYAZ AHMAD	9.61
	3	111109105	VIKASH KUMAR	9.48
2010	1	111110002	AAYUSH MISHRA	9.7
	2	111110017	AVINASH MISHRA	9.67
	3	111110066	R BHARADWAJ	9.61

**B.Tech. METALLURGICAL AND MATERIALS ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	112108007	KETAN MURALI	9.29
	2	112108013	ARUN ANIL KUMAR	9.17
	3	112108048	SRINIDHI GOVINDARAJAN	9.1
2009	1	112109032	RANGASAYEE K	9.94
	2	112109024	PAVITHRA R	9.87
	3	112109020	N DILIP KRISHNA	9.68
2010	1	112110021	R TARUNIKA	9.6
	2	112110013	JOSHUA J GABRIEL	9.38
	3	112110010	HARSHITA MEHTA	9.31

**B.Tech. PRODUCTION ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2008	1	114108037	MUTHU KUMAR AN	9.64
	2	114108095	SANTHOSH D	9.45
	3	114108074	DEEPAK SHARMA	9.43
2009	1	114109083	SURAPANENI BHAVANA	9.57
	2	114109003	A ASIF BASHA	9.32
	2	114109073	S SANDEEP BHAT	9.32
	3	114109042	KUMAR KANISHKA	9.3
2010	1	114110098	CHANDRA VINOTH S	9.93
	2	114110053	R RISHWANTH	9.78
	3	114110089	VIJAY VENKATESH S	9.71

**Batch: 2011-2012 I year B.Tech.**

Batch	Rank	Roll Number	Name	CGPA
2011	1	112111009	APOORVA SARAF	9.89
	2	103111052	NIKITAA SIVAAKUMAR	9.78
	3	110111093	VISWA TEJA PATNAIK VURITY	9.73

**ARCHITECTURE**

Batch	Rank	Roll Number	Name	CGPA
2007-2008	1	101107002	SRIRAM R	9.63
	2	101107004	MEERA MURALI	9.02
	3	101107016	VISHAL BHUSHAN JHA	8.93
2008-2009	1	101108021	SHILPA K	9.31
	2	101108012	SAURABH KISHORE OJHA	9.11
	3	101108013	SURBHI	8.92
2009-2010	1	101109007	V SRUTI	8.48
	2	101109053	MADHUBALA A	8.43
	3	101109014	MAANASA G	8.39
2010-2011	1	101110018	MONICA S	9.41
	2	101110037	DEVIKA PRAKASH	8.3
	3	101110019	NITHYA S	8.11
2011-2012	1	101111033	LINDA REEBA KOSHY	9.16
	2	101111038	IVANA RAKSHIT	8.91
	3	101111004	AKSHATHA N HEGDE	8.67

**M.Tech / CHEMICAL ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	202110008	DEEPA ARAVIND	9.23
	2	202110019	MERAM NAGARAJA	8.86
	3	202110010	ANUJA VIJAYAN	8.75
2011	1	202111013	MAHA LAKSHMI P	9.6
	2	202111024	REMYA K	8.95
	3	202111003	PRABISHA M	8.58
	3	202111004	MADHVI AGARWAL	8.58

**M.Tech / ENERGY ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	202310004	MANDE AMOL BALU	9.09
	2	202310001	HEMA PRIYAMVADA R	9.08
	3	202310003	SARANYA R	9.05
2011	1	202311009	ELAKKIYA E	9.71
	2	202311016	KARAN MEHRA	9.27
	3	202311021	PRAMILA M	9.12

**M.Tech / PROCESS CONTROL AND INSTRUMENTATION**

Batch	Rank	Roll Number	Name	CGPA
2010	1	202210006	KRISHNA CHAITANYA KARANAM	9.32
	2	202210007	SRIKANTH REDDY	8.83
	2	202210012	PURUSHOTHAMAN J	8.83
	3	202210022	V N L ANUSHA AMERAPU	8.75
2011	1	202211021	GAYATHRI M	9.28
	2	202211013	NAVIN JOHN MATHEW	8.85
	3	202211001	VANDANA T K	8.79

**M.Tech / ENVIRONMENTAL ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	203410007	PARVATHY S.NAIR	9.53
	2	203410008	ALBIN BABU	8.64
	3	203410009	PONNARASI C	8.55
2011	1	203411004	SARANYA P	9.8
	2	203411016	DEVIKA VENU	9.15
	3	203411015	STEPHY JACQUELINE GEORGE	8.7

**M.Tech / STRUCTURAL ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	203210007	SOMASUNDARAM S	9.3
	2	203210009	MERIN SEBASTIAN	8.95
	3	203210013	INNASI RAJA V	8.89
	3	203211020	SAKTHIVEL T	8.89
2011	1	203211007	JEYASHREE T M	9.42
	2	203211011	DHANYA J	9.4
	3	203211006	RESMI G	9.35

**M.Tech / TRANSPORTATION ENGINEERING AND MANAGEMENT**

Batch	Rank	Roll Number	Name	CGPA
2010	1	203110007	BASIL BASHEERUDEEN	8.95
	2	203110004	B.V.BHARGAVA SAI	8.55
	3	203110011	HEMALATHA M	8.53
2011	1	203111019	K P REMYA	9.4
	2	203111009	GANGHA.G	9.28
	3	203111004	KAVITHA K	9.1

**M.Tech / COMPUTER SCIENCE AND ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	206110022	SRINIVAS V V	9.64
	2	206110001	JAYADIVYA S K	9.54
	3	206110028	SIVA BRAHMASANI	9.49
2011	1	206111035	AMIT KUMAR SINGH	9.95
	2	206111002	TULASIRAM NEELAKANTAM	9.68
	3	206111009	KODURU ANUSHA	9.41

**M.Tech / POWER ELECTRONICS**

Batch	Rank	Roll Number	Name	CGPA
2010	1	207210002	DURGA VENKATESH CHEDALLA	8.89
	2	207210005	S DILEEP KUMAR	8.67
	2	207210010	NAGESWARA RAO ANUPOJU	8.67
	3	207210017	AVINASH ATLA	8.61
2011	1	207211014	SWETHA VUCHA	9.79
	2	207211013	SINDHURA KASARANENI	9.32
	3	207211025	ANJU JAMES	9.26

**M.Tech / POWER SYSTEMS**

Batch	Rank	Roll Number	Name	CGPA
2010	1	207110029	RIJESH A	9.42
	2	207110006	VENKATA RAMA RAJU RUDRARAJU	9.27
	3	207110003	S RAJA SARASWATI RAM	8.94
2011	1	207111022	KOLA.Y.V.BHARGAV REDDY	9.79
	2	207111002	SOUMYA N.K	9.29
	3	207111003	DEBIDASI MOHANTY	9.05

**M.Tech / COMMUNICATION SYSTEMS**

Batch	Rank	Roll Number	Name	CGPA
2010	1	208110011	DIVYA PENMETSA	9.7
	2	208110018	MALLIKHARJUNA RAO P	9.53
	3	208110009	P. RAVINDRANATH	9.44
2011	1	208111012	S. VENKATA SIVA PRASAD	9.55
	2	208111002	SANAGAPALLI ASWIN KUMAR	9.52
	3	208111004	SANDEEP KUMAR THADKA	9.29

**M.Tech / VERY LARGE SCALE INTEGRATED SYSTEM**

Batch	Rank	Roll Number	Name	CGPA
2010	1	208210009	A JASWANTH	9.62
	2	208210004	ABSEL K	9.56
	3	208210019	KARTHEEK DOMAKUNTLA	9.44
2011	1	208211003	VENKATA REDDY KOLAGATLA	9.9
	2	208211024	MIDHUN C K	9.33
	3	208211001	MANJU NAIR	9.02

**M.Tech / INDUSTRIAL SAFETY ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	211210001	SUCHEENDRAN M K	9.41
	2	211210019	AJAY KUMAR N B	9.35
	3	211210008	HARISIVASRI PHANINDRA K	9.08
2011	1	211211006	BIMITH MATHEW	9.67
	2	211211004	VIJESH CHANDRAN	9.26
	3	211211005	SARATH MOHAN V	9.15

**M.Tech / THERMAL POWER ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	211310003	NITHIN K KRISHNAN	9.39
	2	211310012	RAJIV K	8.97
	3	211310015	RENI DAVID	8.9
2011	1	211311004	NAREN DHASS S	9.65
	2	211311006	VISHNU S	9
	2	211311008	AJAY KUMAR SHARMA	9
	3	211311007	JISAH K	8.95

**M.Tech / MATERIALS SCIENCE AND ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	212210001	KOUNDINYA N T B N	9.58
	2	212210002	BODUGU GOPI	9.45
	3	212210005	B G ANOOP	8.95
2011	1	212211029	GIRESAN G	9.6
	2	212211006	TEJAS R	9.08
	3	212211020	MOHIT VISHNOI	9.05
	3	212211028	ATMARAMUDU TIRUMALLA	9.05

**M.Tech / WELDING ENGINEERING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	212110004	ARUNKUMAR M	9.77
	2	212110010	RAHUL JANARDHANAN	9.41
	3	212110018	DINNI SYASHANKA	9.28
2011	1	212111010	RAMU TORRIKONDA	9.34
	2	212111017	JUSTINE JOSE	9.32
	3	212111029	ATHUL.P	9.22

**M.Tech / INDUSTRIAL METALLURGY**

Batch	Rank	Roll Number	Name	CGPA
2011	1	212311014	MANI RAGHU RAM K	9.49
	2	212311020	BALAJI K	9.21
	3	212311007	KAMALJEET SINGH	9.02

**M.Tech / INDUSTRIAL ENGINEERING / INDUSTRIAL ENGG & MANAGEMENT**

Batch	Rank	Roll Number	Name	CGPA
2010	1	214210007	KATAKAR PRAVIN KERBA	9.7
	2	214210003	ROBIN JOY	9.47
	3	214210008	VIMAL K E K	9.13
2011	1	214211022	SHAMA M S	9.72
	2	214211032	KAMALA V	9.67
	3	214211002	BOMBLE SHARAD ARUN	9.31

**M.Tech / MANUFACTURING TECHNOLOGY**

Batch	Rank	Roll Number	Name	CGPA
2010	1	214110015	K VIKRAM GOUD	9.22
	2	214110001	JIJU V ELIAS	8.87
	3	214110021	BHOSALE SANJAY MAHADEV	8.82
2011	1	214111001	VINEETH MURALI	9.51
	2	214111004	WAGH ANIKET RAMCHANDRA	9.38
	3	214111026	TINU P SAJU	9.16

**M.Tech. / NON-DESTRUCTIVE TESTING**

Batch	Rank	Roll Number	Name	CGPA
2010	1	213110003	GIRISH N NAMBOODIRI	9.66
	2	213110016	MAHESWARAN M	8.92
	3	213110007	SAMBHU R	8.87
2011	1	213111020	INDIMATH SHIVANANDAN SHASHIDHAR	9.43
	2	213111018	SHEETHAL S	8.95
	3	213111009	NIKHIL	8.92
	3	213111019	VIVEK MADHAVAN	8.92

**M.Sc. / APPLIED PHYSICS**

Batch	Rank	Roll Number	Name	CGPA
2010	1	213210010	BHUVANESHWARI S	9.42
	2	213210020	SIVASANKARI C	8.74
	3	213210013	MANIVANNAN R	8.68
2011	1	213211001	AKSHAY SRINIVAS	9.24
	2	213211006	PERLA SREEKOTI SUBHA PUJTHA	9.18
	3	213211011	GOVINDAN KUTTY R	8.88

**M.Sc. / APPLIED CHEMISTRY**

Batch	Rank	Roll Number	Name	CGPA
2010	1	204110006	SAKTHIVEL R	8.91
	2	204110018	BALAKUMAR E	8.56
	3	204110013	PRATHEEPKUMAR A	7.88
2011	1	204111001	SUMANTA BANERJEE	8.82
	2	204111007	NATARAJAN N	7.76
	3	204111002	VINITHRA G	7.59

**M.Sc. OPERATIONS RESEARCH AND COMPUTER APPLICATIONS**

Batch	Rank	Roll Number	Name	CGPA
2010	1	216110011	RAJESHWARI R	8.89
	2	216110016	PRIYADARSHINI P K	8.7
	3	216110017	AGILANDESWARI D	8.63
2011	1	216111009	SRISAKTHI R	9.08
	2	216111008	BHARATH N	9.05
	3	216110018	GOWTHAMI P	8.71

## M.C.A. COMPUTER APPLICATIONS

Batch	Rank	Roll Number	Name	CGPA
2009	1	205109056	APARNA CHUGH	9.38
	2	205109049	SUNIL KUMAR	9.31
	3	205109037	ANUSHREE NEEMA	9.28
2010	1	205110019	DEBOSHRESTHA DE	9.53
	2	205110008	ALKA	9.16
	2	205110038	HARINNI RAVIKUMAR	9.16
	3	205110003	RANJANI S	9.03
2011	1	205111007	RITIKA GUPTA	9.76
	1	205111008	S SWAPNA	9.76
	2	205111018	RAKHI BANSAL	9.71
	3	205111034	TRIPUN GOEL	9.05
	3	205111037	PRETY KUMARI	9.05

## BUSINESS ADMINISTRATION

Batch	Rank	Roll Number	Name	CGPA
2010	1	215110004	HARNI A S	9.67
	2	215110038	UMAYAL M	9.5
	3	215110072	KOWSIK R	9.44
2011	1	215111071	AKILA S	9.38
	1	215111085	BAVYA SIVASHREE J	9.38
	2	215111013	R SRIVIDHYA	9.05
	3	215111091	SARANYAN V S	8.93

## ENDOWMENT AND MEMORIAL AWARDS: INSTITUTE DAY 2013

S. No.	Name of the award	Roll No	Name of the student
1.	Smt. G.S. Rajalakshmi Memorial Award presented to First Three Rank holders upto VII semester in Chemical Engg.	102109035	N PAVITHRA
		102109065	VANDANA SWAMINATHAN
		102109006	AKANKSHA GUPTA
2.	Dr. M. Shanmugam Endowment Award for the First Rank holder upto VII semester in Civil Engg.	103109087	SUBRAMANIAN S
3.	Sri. Karchae Endowment Award for the Best Project in the Department of Architecture	101107002	SRIRAM R
4.	Sri. M. S. Balakumaran Memorial Award for the Best Outgoing Student of M.Tech. NDT	213111018	SHEETHAL S
5.	Prof. S. Muthukaruppan Endowment Award for the Second Rank holder in B.Tech. EEE up to VII semester.	107109028	HARINI M
6.	Sri. Janardhana Iyengar Memorial Award for the Best Academic Performance in just concluded academic year.	107108103	SAMBHAV R JAIN

7.	Smt. Seethamma Memorial Award for the First Rank holder upto VII Semester in BTech ECE	108109084	SABAREESH KUMAR R
8.	Dr. Sargurudoss Memorial Award for the Best Performance in Mathematics in I Year B.Tech.	106111093	SURYA PRATAP SINGH TANWAR
9	Sri. Avinash Memorial Award for the Best Outgoing Male student of ICE branch	110109069	S BHARANI DHARAN
10.	Sri. Avinash Memorial Award for the Best Outgoing Female student of ICE branch	110109020	DIVYA KONDA
11.	Prof. Ibrahim / Dr. Sittaraman Endowment Award for the Best Outgoing Student of DoMS	215111071	AKILA S
12.	Prof. Thirumalaiarasan Memorial Award for the Topper in HR & OB Subjects in MBA	215111071 215111013	AKILA S R SRIVIDHYA
13.	Smt. Neela Balasubramanian Memorial Award for Best Outgoing Student in ECE branch	108109084	SABAREESH KUMAR R
14.	Karthik S Memorial Award for the First Rank holder upto VII semester in BTech Production Engg.	114109073	S SANDEEP BHAT
15.	Smt. Vijayalakshmi Kannan Memorial Award for the First Rank holder upto VII semester in BTech ECE Engg.	108109084	SABAREESH KUMAR R
16.	Late S. Doraiswamy Memorial Award for the First Rank holder upto III semester in MTech Industrial Safety Engg.	211211006	BIMITH MATHEW
17.	Sri. Ramanujam & Smt. Sundari Ramanujam Memorial Award for the First Rank holder in English in B.Tech.	106111037	HARISH K
18.	Mr Subash Chandrabose Endowment Award for the Best Outgoing in B.Tech. MME	112109020	N DILIP KRISHNA
20.	Dr T Balasubramaniam Endowment Award for first rank holder in MSc Physics in I & II semester	213211001	AKSHAY SRINIVAS
21.	Dr A L Abdus Sattar Memorial Award for Best Outgoing student in ECE	108110061	PADMAPRIYA DURAISAMY
22.	Mr.Oisik Adak Endowment Award for “Best Creative Designer” in the Department of Architecture	101108012	SAURABH KISHORE OJHA

Best NCC cadet	114109022	D DINESH KUMAR
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Dr. P. S. Manisundaram Endowment Award for Best Non-Teaching Staff	Mr. K.KUMARASAMY
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### ALUMNI AWARDS: UG

Sl.No.	Department	Roll.No.	Name	CGPA
1	Architecture	101108012	SAURABH KISHORE OJHA	8.63
2	Chemical Engineering	102109035	N PAVITHARA	9.77
3	Civil Engineering	103109087	SUBRAMANIAN S	9.95
4	Computer Science Engineering	106109068	R V LAYAMURUDHAA	9.62
5	Electronics & Communications Engineering	108109084	SABREESH KUMAR R	9.83
6	Electrical & Electronics Engineering	107109063	R VIGNESH	9.51
7	Instrumentation and control Engineering	110109097	UPPALAPATI NAVEEN KUMAR	9.58
8	Mechanical Engineering	111109091	SATHEESH S	9.36
		111109078	RISHI VORA	9.36
9	Metallurgical and Materials Engineering	112109020	N DILIP KRISHNA	9.67
10	Production Engineering	114109073	S SANDEEP BHAT	9.35

### ALUMNI AWARDS: PG

S.No.	Dept./Specialization	Roll.No.	Name	CGPA
11	<b>Computer Applications</b>			
	MCA	205110019	DEBOSHESTHADE	9.39
	OR & CA (M.Sc)	216111008	BHARATH N	9.21
12	<b>Management Studies</b>	215111071	AKILA S	9.46
13	<b>Chemical Engg</b>			
	Chemical Engg	202111013	MAHALAKSHMI P	9.46
	Energy Engg	202311009	ELAKKIYA E	9.55
	Process Control & Instrumentation	202211021	GAYATHRI M	9.22
14	<b>CSE</b>	206111035	AMIT KUMAR SINGH	9.96
15	<b>Civil Engg</b>			
	Trans. Engg & Management	203111019	K P REMYA	9.31
	Structural Engg	203211007	JEYASHREE T M	9.33
	Environmental Engg.	203411004	SARANYA P	9.62
16	<b>E&amp; C Engg</b>			
	Commun. Systems	208111002	SANGAPALLI ASWIN KUMAR	9.63
	VLSI Systems	208211003	VENKATA REDDY KOLAGATLA	9.93
17	<b>E&amp; E Engg</b>			
	Power Systems	207111022	KOLAYR BHARGAVI REDDY	9.84
	Power Electronics	207211014	N SWETHA VOUVA	9.6
18	<b>Mech. Engg</b>			
	TE	211311004	NAREN DHASS S	9.24
		211311008	AJAY KUMAR SHARMA	9.24
	ISE	211211006	BIMITH MATHEW	9.75
19	<b>Meta &amp; Mat. Engg.</b>			
	Welding Engineering	212111017	JUSTINE JOSE	9.25

	Material Science and Engg.	212211029	GIREESAN G	9.69
	Industrial Metallurgy	212311014	MANI RAGHU RAM K	9/.38
		212311020	BALAJI K	9.38
20	<b>Prod. Engg.</b>			
	Manufacturing Technology	214111001	VINEETH MURALI	9.39
	Industrial Engineering	214211022	SHAMA M S	9.54
21	<b>Physics</b>			
	NDT (M.Tech.)	213111020	INDIMATH SHIVANANVAN SHASHIDHAR	9.33
	Applied Physics (M.Sc.)		213211006	PERLA SREEKOTI SUBHA POJITHA
	<b>Chemistry</b>			
	Chemistry	204111001	SUMANTA BANERSEE	8.77

**In addition the following awards are also instituted by RECAL**

Overall Outstanding Student of the year	:	SAURABH KISHORE OJHA (101108012)
Anand Chidambaram Memorial Award	:	ARVIND R (102109014)
Praveen Kumar memorial award for the best Performance in I year "E" section	:	VIKAS SAKARAY (108111102)
Outstanding Sportsman	:	C PRADEEP CHANDAR (108109020)
Outstanding Sport Woman	:	DIKSHA GOHLYAN (106109021)
Best Batsman of the Institute	:	R SRICHARAN (110110065)
Best Bowler of Cricket	:	S SRIVATHSAN (111110078)

List of Ph.D./M.S.(By Research) Scholars who completed their  
Public Viva Voce Examination – 2012-13

Sl. No.	Roll No.	Name of the Candidate	Guide	Department
1.	411108052	Alphin M.S.	Dr.K.Sankaranarayanasa my	Mechanical Engineering
2.	MEZ0403	M.Marimuthu	Dr.R.B.Anand	Mechanical Engineering
3.	CVZ0302	Niranjana G.	Dr.Samson Mathew	Civil Engineering
4.	CSZ0602	Raghunathan A.	Dr.K.Murugesan	Computer Science & Engg.
5.	MEZ0402	P.Selvaraj	Dr.J.Sarangan	Mechanical Engineering
6.	404107052	Gunasekaran N.	Dr.R.Karvembu	Chemistry
7.	CAZ0303	K.Ponnammal	Dr.R.Ponalagusamy	Computer Applications
8.	408107001	J.Manikandan	Dr.B.Venkataramani	Electronics & Communication Engineering
9.	MAZ0304	R.Tamizharasi	Dr.V.Kumaran	Mathematics
10.	PHK0605	Balakrishnan S.	Dr. R.Sankaranarayanan	Physics
11.	PRZ0602	Prasanna Venkatesan S.	Dr.S.Kumanan	Production Engineering
12.	404108052	A.Manivel	Dr.S.Anandan	Chemistry
13.	414108055	Hafeez Ahamed	Dr.V.Senthilkumar	Production Engineering
14.	404909002	Linga Reddy Enakonda	Dr.CH.Subrahmanyam	Chemistry
15.	404909001	Karuppiah J.	Dr.CH.Subrahmanyam	Chemistry
16.	405907001	Janet B.	Dr.A.V.Reddy	Computer Applications
17.	405107051	Saravana Kumar S.	Dr.A.Vadivel	Computer Applications
18.	415908051	Manikandan L.	Dr. N.Thamaraiselvan	Management Studies
19.	MEZ0303	Vijayaraj S.	Dr.J.Sarangan	Mechanical Engineering
20.	406107001	Udaya Kumar Reddy K.R	Dr.K.Viswanathan Iyer	Computer Science & Engg.
21.	CYK0604	Muthu Tamizh M.	Dr.R.Karvembu	Chemistry
22.	411108054	Kannan G.R.	Dr.R.Anand	Mechanical Engineering
23.	MEK0602	Siva Shanmugam N.	Dr.K.Sankaranarayanasa my	Mechanical Engineering
24.	MEZ0601	K.Muthukumar	Dr.K.Sankaranarayanasa my	Mechanical Engineering
25.	PRZ0601	Senthil P.	Dr.T.Selvaraj	Production Engineering
26.	402108052	Srivastava Harsh Parmanand	Dr.G.Arthanareeswaran	Chemical Engineering
27.	CSZ0603	Ramasubramanian N.	Dr.N.Ammasai Gounden	Computer Science & Engg.
28.	407109005	Devi V.	Dr.K.Sundareswaran	Electrical & Electronics Engineering
29.	ICZ0602	S.Dharamalingam	Dr.M.Umapathy	Instrumentation & Control Engineering
30.	402108054	S.Senthil Kumar	Dr.H.J.Prabhu	Chemical Engineering
31.	403107051	Premalatha P.V.	Dr.P.Jayabalan	Civil Engineering
32.	413908052	Suresh K.	Dr.M.Umapathy	Physics
33.	409108051	Gokulnath A.	Dr.Sathiyaraj V.	Humanities
34.	415109002	C.Padmavathy	Dr.V.J.Sivakumar	Management Studies

35.	412108052	Thirumurugan M.	Dr.S.Kumaran	Metallurgical & Materials Engineering
36.	CSZ0304	P.Selvi	Dr.A.K.Banerjee	Computer Science & Engg.
37.	411109002	Christo Michael T.	Dr.AR Veerappan	Mechanical Engineering
38.	403107001	K.Chithira	Dr. K.Baskar	Civil Engineering
39.	PRZ0308	K.Kumar	Dr.S.Kumanan	Production Engineering
40.	412907051	Jerome S.	Dr.B.Ravisankar	Metallurgical & Materials Engineering
41.	412108053	Ramesh Kumar S.	Dr.B.Ravisankar	Metallurgical & Materials Engineering
42.	404107051	S.Naveenraj	Dr.S.Anandan	Chemistry
43.	407108057	Chandrasekaran K.	Dr. Sishaj P.Simon	Electrical & Electronics Engineering
44.	407107004	Alarmel Mangai M.	Dr.N.Ammasai Gounden	Electrical & Electronics Engineering
45.	407108051	S.Sreenath	Dr.M.P.Selvan	Electrical & Electronics Engineering
46.	EHZ0401	C.Indira	Dr.C.Meenakshisundaram	Humanities
47.	413108051	L.Balakrishnan	Dr.N.Gopalakrishnan	Physics
48.	407108053	A.Karthikeyan	Dr.C.Nagamani	Electrical & Electronics Engineering
49.	415908052	Jose Joy Thoppan	Dr.M.Punniyamoorthy	Management studies
50.	ENH0303	Shanmugasundaram S.	Dr.C.Meenakshisundaram	Humanities
51.	PHK0603	Micheal Sahaya Lucy Shanthi P.	Dr.M.Ashok	Physics
52.	MAZ0303	Tamil Selvi R.	Dr.R.Ponalagusamy	Mathematics
53.	CYK0402	Beatrice Valdaris	Dr. N.Sulochana	Chemistry
54.	CSK0601	K.Geetha	Dr.N.Ammasai Gounden	Computer Science & Engg.
55.	411108053	P.Velmurugan	Dr.L.A.Kumarasamy Das	Mechanical Engineering
56.	CVZ0306	P.Selvi	Dr.Samson Mathew	Civil Engineering
57.	407109001	B.Indurani	Dr.G.Saravana Ilango	Electrical & Electronics Engineering
58.	408107002	M.Santhi	Dr.G.Lakshminarayanan	Electronics & Communication Engineering

<b>M.S.(By Research)</b>				
1.	312109001	Vijaya Kumar C.	Dr.S.Muthukumaran	Metallurgical & Materials Engineering
2.	302909003	M.Lakshminarasimhan	Dr.J.Sarat Chandra Babu	Chemical Engineering
3.	311909008	C.Hemalatha	Dr.K.Sankaranarayanan	Mechanical Engineering
4.	306908001	Radha B.	Dr.S.Selvakumar	Computer Science & Engineering
5.	308109051	V.Maheswari	Dr.G.Lakshminarayanan	Electronics & Communication Engineering
6.	314909001	K.Pradeep	Dr.P.Asokan	Production Engineering
7.	307110008	K.Venkatraman	Dr.M.P.Selvan	Electrical & Electronics Engineering
8.	308110001	Deepa N.Sarma	G.Lakshminarayanan	Electronics & Communication Engineering
9.	310110004	Ashish Gupta	N.Sivakumaran	Instrumentation & Control Engineering
10.	307110004	G.Girsh	Dr.C.Nagamani	Electrical & Electronics Engineering
11.	308110002	Pravanjan Patra	Dr.B.Venkataramani	Electronics & Communication Engineering
12.	307110007	A.Deenadayalan	Dr.G.Saravana Ilango	Electrical & Electronics Engineering
13.	307110009	Namani Rakesh	Dr.N.Kumaresan	Electrical & Electronics Engineering
14.	306909002	M.K.Thanuja	Dr.C.Mala	Computer Science & Engg.
15.	303110001	K.S.Radhika	Dr. K.Baskar	Civil Engineering
16.	307110003	Glory Rebekha Selvamani D.	Dr. S.Arul Danial	Electrical & Electronics Engineering



# ARCHITECTURE

# ARCHITECTURE

## 1. Notable Achievements

### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization
1	Dept. Students' Work	NASA Reubens - Citation	NASA '13
2	Dept. Students' Work	NASA Convention Trophy - Citation	NASA '13
3	Mr.Saurabh Ojha (101108012) Ms. Swati Smiti Mohapatra (101109052) and Ms. Sindhu (101109059)	1 <sup>st</sup> Place – Aakrithi	PRAGYAN '13 NITT
4	Ms. Elizabeth Thomas and Mr. Sai Chakradhar	2 <sup>nd</sup> Place – Aakrithi	PRAGYAN '13 NITT
4	Ms.Reshma Iqbal (101109010) and Ms.G.Maanasa (101109014)	3 <sup>rd</sup> Place – Aakrithi	PRAGYAN '13 NITT
5	Ms.Monica, S. (101110018) and Mr. Naresh, S.E.C. (10111028)	1 <sup>st</sup> Place – Be Green	PRAGYAN '13 NITT
6	Mr. Ranjeet Kumar (101108024)	2 <sup>nd</sup> Place	Birla White Yuva Ratna Award, South Zone 2012
7	Mr. Ranjeet Kumar (101108024)	2 <sup>nd</sup> Place	Archcraft 2012, IIT Guwahati
8	Ms.Srilakshmi (101108037) and Ms.G.P.Harivallabi (101108007)	National Second Runner-up	Dalmia AIMA Aadhar Quiz 2012
9	Mr. Jegadeesh,A. (101108046) and Mr. D.Satish (101108038)	Jury commendation	IGBC Green Design Competition 2012

## 2. Conference / Seminars / Symposium / Special Lectures

### 2.2. Papers presented by the Faculty / Students

Author(s)	Details
1. Prof. P.Gopalakrishnan and Dr.T.Srinivas.	“Study of views and visual relationships of sacred monuments, settings and people”, Proceedings of the Young Researchers Workshop , 22nd IAPS - International conference, June 24-29, 2012, Glasgow, UK pp.375-376, ISBN 978-0-94-764988-3

2. Ms.C. Hannah, Dr. T. Srinivas and Dr. G. Subbaiyan	“The Spatial Dimension in Women’s Fear of Crime”, presented at the 2 <sup>nd</sup> International Conference of the South Asian Society of Criminology and Victimology (SASCV) conducted by the Department of Criminology and Criminal Justice, Manonmaniam Sundaranar University, from 11 to 13 January 2013 at Kanyakumari, Tamilnadu, India.
3. Prof. K.Premkumar	“Does Spatial Configuration and Physical Attributes of Class room Design Promote Participatory Learning among Students: An Empirical Investigation at College Level with Regional Context” presented at the International Seminar on Current Scenario of Ergonomics in Interiors, Organised by Sri Kanyaka Parameswari Arts and Science College for Women, Chennai from 15 <sup>th</sup> to 16 <sup>th</sup> February 2013.
4. Prof.P.Manickavachagam	“The Impact of Colour in Cognitive Ergonomics” presented at the International Seminar on Current Scenario of Ergonomics in Interiors, Organised by Sri Kanyaka Parameswari Arts and Science College for Women, Chennai from 15 <sup>th</sup> to 16 <sup>th</sup> February 2013.

### 2.3. Attended by the Faculty / Students

Faculty / Students	Details
Prof. P.Gopalakrishnan	22nd IAPS -International conference, June 24-29, 2012, Glasgow
Ms.C. Hannah (Research Scholar)	2 <sup>nd</sup> International Conference of the South Asian Society of Criminology and Victimology (SASCV) conducted by the Department of Criminology and Criminal Justice, Manonmaniam Sundaranar University at Kanyakumari, from 11 to 13 January 2013.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Prof. K. Premkumar	Earthquake Risk Management & Safety in Building Design for Architects (Sponsored by National disaster Management Division – under NPCBAERM)	1 <sup>st</sup> to 5 <sup>th</sup> October 2012

#### 3.2. Attended

Faculty	Details
Prof. L.saikala, Prof. G.sangeetha and Prof.D.Kannamma	‘Earthquake Risk Management & Safety in Building Design for Architects’ from 1 <sup>st</sup> to 5 <sup>th</sup> October 2012 at Department of Architecture, NIT, Tiruchirappalli

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Prof. Joseph Fernando	Delivered inaugural address and Chaired one Technical Session	One day Seminar on 'Traditional Architecture of Tamilnadu'	Tamil University, Thanjavur Nov 2012
Prof. Joseph Fernando	Vernacular Architecture & Earthquake Conscious Techniques	Workshop on 'Earthquake Risk Management & Safety in Building Design for Architects'	Architecture Department, NITT Oct. 2012
Prof.P.Manickavachagam	Seismic Threat to Cultural Canvas	Workshop on 'Earthquake Risk Management & Safety in Building Design for Architects'	Architecture Department, NITT Oct. 2012
Prof.P.Manickavachagam	Art and Architecture	Civil Engineers Forum	Thanjavur Oct. 2012

#### 7. Research Papers Published in National / International Journals

##### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1	A Study Of Association Between Fear Of Crime Of People At Bus Stops And Features Of Street Segments.	Dr. G.Subbaiyan and Prof.P.Gopalakrishnan	International Journal of Research in Social Sciences	May 2012 Volume-2, Issue-2
2	Revitalizing The Environs Of Historical Core Of Thanjavur	Prof.P.Gopalakrishnan and Dr. G.Subbaiyan	International Journal of Physical and Social Sciences	June 2012, Volume 2, Issue 6
3	Natural Surveillance for Perceived Personal Security: The Role of Physical Environment	Dr. G.Subbaiyan and Dr. Srinivas Tadeppalli	American Transactions on Engineering & Applied Sciences	July 2012 Volume 1, No.3

## 11. Other Important Points

### 11.1 Art Exhibitions:

<b>S.No.</b>	<b>Exhibition</b>	<b>Artist</b>	<b>Gallery/Place</b>	<b>Date/ Period</b>
1	Historic Paintings	Prof.P.Manickavachagam	Tiruchirappalli	11 <sup>th</sup> June 2013
2	Group Exhibition	Prof.P.Manickavachagam	Chitra Kala Academy	13 <sup>th</sup> Oct. 2012



# CHEMICAL ENGINEERING

## CHEMICAL ENGINEERING

### 1. Notable Achievements

#### 1.1. Faculty Members

S.No.	Name	Prizes/Awards	Organization
01	P.Kalaichelvi	NEN Entrepreneurship Educator	National Entrepreneur Network (NEN)

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised

S.No	Coordinator	Programme	Date
01.	P.Kalaichelvi and Dr.T.K.Radhakrishnan	Short term course on Experimental Design and Optimization Techniques”	10.09.2012 – 14.09.2012
02.	Dr. T.Sivasankar & Dr. S.Anandan	Conducted a short term course on “Ultrasound and Its Applications” during, in the Department of Chemical Engg., NIT Tiruchirappalli.	22.03.2013 – 23.03.2013

#### 2.2. Papers presented by the Faculty / Students

Author(s)	Title	Place & Date
K. Sriram, Y. Lukka Thuyavan, G. Arthanareeswaran, N. Anantharaman, Wirote Youravong,	Novel chicken egg white blend ultrafiltration membranes for fouling resistance	International conference on membrane science & technology: MST 2012 Sustainable Energy and Environment, 22.08.2012 – 23.08.2012, Bangkok, Thailand.
R. Saranya, G. Arthanareeswaran and M. Matheswaran	An integrated treatment system for the reuse of kraft paper mill effluent,	International conference on membrane science & technology: MST 2012 Sustainable Energy and Environment, 22.08.2012 – 23.08.2012, Bangkok, Thailand
N.Samsudeen, T.K.Radhakrishnan, M.Matheswaran, M.Amit Ranjan Verma	Electricity Production from Distillery Effluent Using Dual Chamber Microbial Fuel Cell (DCMFC): Effect of Membrane	MG. University, Kottayam, Kerala & 04.10.2012 – 09.10.2012
Saravanan, S., Sivasankar, T.	Colour Removal of an Azo Dye (Reactive Black 5) from Textile Wastewater using Ultrasound, Second International Conference on Advanced Oxidation Processes, AOP	05.10.2012 - 08.10.2012, Mahatma Gandhi University, Kottayam, Kerala, (India).

	2012	
Singh, R., Sivasankar, T.	Ultrasound assisted Adsorptive removal of Reactive Black 5 dye using Activated Carbon prepared from Mangosteen Fruit Peel, Bright International Conference and Events (BIOFEST 2012)	12.12.2012 – 13.12.2012 Hyderabad, (India).
Manjula. P, Kalaichevi. P, Annadurai. G and Dheenathayalan. K	Optimum Configuration of a Double Jet Mixer Using DOE	PSRC 2012 International Conference, Singapore 14.12.2012 - 15.12.2012
.Niju, S K.M.Meera S. Begum*, N.Anantharaman	Development of a cost effective heterogeneous catalyst for transesterification reaction	CHEMCON 2012 27.12.2012 – 30.12.2012 at NIT Jalandhar
M. Arivazhagan, Vijayageetha, V.T.Perarasu	Removal of Rhodamine B from synthetic waste water by electrocoagulation with and without adsorbent	International conference on Civil, Environmental and Chemical Engg., 2012, Bali, Indonesia
Chellamboli.C and Perumalsamy.M	Optimization of Scenedesmus abundans in Batch Culture System by using RSM	IIT, Kharagpur January 2013
Chellamboli.C and Perumalsamy.M*	OPTIMIZATION STUDIES ON MARINE AND FRESHWATER MICROALGAE	CHEMCON 2012, Jalandhar , Punjab
Manvendra Pratap Singh, N Samsudeen, M.Matheswaran, T.K.Radhakrishnan	Bioenergy Production From Bio electrochemical Cell Using Wastewater As Substrate: Effect Of Reactor Design	Arunai Engineering College 27.01.2013 - 30.01.2013
Ratnesh Yadav, N. Samsudeen , M.Matheswaran , T.K.Radhakrishnan	Electricity production from Biodegradation of Organic Effluent using Microbial Fuel Cell, Effect of Cathode Electrode	Arunai Engineering College, 27.01.2013 - 30.01.2013
Saurabh Dudeja, N. Samsudeen, M.Matheswaran, T.K.Radhakrishnan	Bioenergy production from treatment of Real Organic(Distillery) Wastewater using Bioelectrochemical System	Arunai Engineering College, 27.01.2013 - 30.01.2013
N.Samsudeen, M.Matheswaran, T.K.Radhakrinshan	Electricity production from distillery wastewater using triple chambered microbial fuel cell.	MNIT JAIPUR 21.02.2013 – 22.02.2013

### 2.3. Attended by the Faculty / Students

Faculty / Students	Title / Programme	Place & Date
C. Chellamboli	Writing Effective Conference Papers for Engineering/Science Teachers	Indian Institute of Technology, Bombay
C. Chellamboli	Technical Paper Preparation using LATEX Software	NITT

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
G. Arthanareeswaran	Short Term Course On Emerging Technologies for Biotechnology and Chemical Processes	29.08.2012 - 01.09.2012
Dr.N.Anantharaman & Dr. K. M. Meera S. Begum	Remediation for clean and Green environment	30.11.2012 -01.12.2012
Dr. A. Seshagiri Rao & Dr. A. Arunagiri	Advanced Tools for Wastewater Treatment	28.01.2013 -29.01.2013
Dr. A. Seshagiri Rao & Dr. A. Arunagiri	Gproms: Process modelling software	01.04.2013- 02.04.2013

#### 3.2. Attended

Faculty / Students	Title	Period
P.Kalaichelvi	NEN Faculty Development Course on "Building Technology Ventures"	16.08.2012 - 18.08.2012.
Dr. T.Sivasankar	DST-SERC short course on Air Quality (AQ) Management	06.12.2012 - 07.12.2012 at IIT Bombay
Dr. T.Sivasankar	workshop on Engineering Thermodynamics	11.12.2012 -21.12.2012
P.Kalaichelvi	Outbound Experimental Learning for team Building & Effective Group Dynamics	11.02.2013 - 12.02.2013
Dr. A. Seshagiri Rao, Dr. J. Sarat Chandra Babu	Academic Leadership Programme for TEQIP funded institutes	12.02.2013 -22.02.2013
Dr. A. Arunagiri	Computational Combustion Department of Aerospace Engineering, IIT Kanpur	28.02.2012 03.03.2012.
Keerthana, M , T.K. Radhakrishnan, N. Sivakumaran	"Recurrent Neural Network based Internal Model Controller design for pH neutralization process" 2 <sup>nd</sup> Annual International Conference on Control, Automation and Robotics (CAR 2012)	12.03.2012 - 13.03.2012, Bangkok, Thailand
K. Srinivasan, T.K.Radhakrishnan and S.Devi	'Recurrent Neural Network based Internal Model Controller Design for pH Neutralization Process', 2 <sup>nd</sup> Annual International Conference on Control, Automation and Robotics (CAR 2012)	12.03.2012 - 13.03.2012, Bangkok, Thailand

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr. N. Anantharaman	Options and need for Green energy	Green energy and prevention of nuclear hazards	28.02.2013, Tanjore
Dr. T.K. Radhakrishnan	Application of Soft Sensors in Control of a Process Intensification System	ICES – 2012	15.09.2012 SASTRA
	Model Analysis of Bioreactors	CSIR sponsored workshop on Process Modeling and Simulation	21.11.2012 - 22.11.2012 PRIST.
	Frequency Response Analysis for Chemical Process Systems	FDP on Process Instrumentation, Dynamics and Control	03.12. 2012 Anna University
	GOBF Modeling and Control	International Conference on Instrumentation, Control, Communication and Automation (ICICCA – 2013)	03.01.2013 - 05.01.2013 Kalasalingam Univ.
	Advanced Control Engineering	Certificate Course on Advanced Control Engineering for DRDL Scientists	21.01.2013 - 22.01.2013 and 28.02.2013 - 01.03.2013 DRDL, Hyderabad
G. Arthanareeswaran	Guest lecture for 250 faculty on Preparation & Approach to R&D Proposals	Organized by Department of Physics,	11.01.2013 Sathyabama University, Chennai
	Special Lecture on R&D proposals for Government funding agencies - Preparation and Approach	Organized by Centre for Nano Science and Nano Technology and Department of Physics	15.12.2012 Sathyabama University, Chennai
	Seminar on Future of membrane process for green technologies and water reuse	Workshop on Remediations for Clean and green environment	30.11.2012, NIT, Tiruchirappalli
	Key note address on Prospects of Membrane Science and Technology: Current	Short Term Course On Emerging Technologies for Biotechnology and Chemical Processes	01.09.2012 NIT, Tiruchirappalli

	Development in Chemical systems		
	Key note address on Membrane Separation Technologies, Application of Membranes to the Industrial Effluent Treatment	Short Term Training Programme (STTP) on Industrial Effluent Treatment - Emerging Trends & Challenges Ahead	15.06.2012 Annamalai University, Annamalai Nagar
Dr. A. Arunagiri	Cloud Point Extraction – Can be a separation tool	Recent Developments for Clean and Green Environment	30.11.2012 to 01.12.2012 Dept. of Chem. Engg, NIT, Trichy – 15
Dr. A. Seshagiri Rao	System Identification	Certificate Course on Advanced Control Engineering for DRDL Scientists	Hyderabad, February 08.02.2013 – 09.02.2013
	PID controller design: Recent developments	Symposium of EIE Department, Sastra University,	23.01.2013, Sastra Tanjore
Dr. T.Sivasankar	Sonochemical Engineering and its applications on Environmental pollution control	Short Term Course On Emerging Technologies for Biotechnology and Chemical Processes	31.08.2012 – 01.09.2012. Dept. of Chem. Engg, NIT, Trichy – 15
	Sonochemistry: From science to Engineering and Now an Emerging Greener Method for Wastewater Treatment”	Short Term Course On “Remediation for Clean and green environment”	30.11.2012 – 01.12.2012. Dept. of Chem. Engg, NIT, Trichy – 15
	Sonochemistry: Understanding the Mechanisms	Short Term Course On Ultrasound and Its Applications	22.03.2013 – 23.03.2013. Dept. of Chem. Engg, NIT, Trichy – 15,

### 5. Research Projects undertaken and status

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
Dr. K. M. Meera S. Begum & Dr. N. Anantharaman	Continuous Bio-diesel production using heterogeneous catalyst (Under progress)	CSIR	10.00

Dr. T.Sivasankar	Synthesis of Novel Nanosized Semiconductor Photocatalyst for Sonophotocatalytic Degradation of Organic Pollutants from industrial wastewater (Ongoing)	Ministry of Environment and Forests Govt. of India, (2012 – 2014)	24.81
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#### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1	GProms software	7.2
2	High Performance Liquid Chromatography	10.10

#### 7. Research Papers Published in National / International Journals

##### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1	Emulsion liquid Membrane pertraction of metal ions from Aqueous solutions and Electroplating effluent using Rotating Disc Contactor	K.M.MeeraSheriffa Begum, S. Venkatesan and N. Anantharaman,	Chemical Engineering Communications	199:1575-1595, 2012.
2	Anfis approach to the working of a compost-Heat Extractor"	ArulgnanarajRathinam , Ravichandran K S, AnantharamanNarayanan, MeeraSheriffa K M,	International Journal of Environment and Waste Management, Inderscience Publications.	Vol. 11, No. 1, 2013, 13-26
3	Design of internal model control based fractional order PID controller	T.Vinopraba, N.Sivakumaran, S. Narayanan, T.K.Radhakrishnan	J Control Theory Appl.,(Springer-Verlag)	10 (3) 297–302 (2012).
4	Recurrent Neuro Fuzzy and Fuzzy Neural Hybrid Networks: A Review	B. Subathra and T. K. Radhakrishnan	Instrumentation Science & Technology (Taylor & Francis)	40 (1), 29-50 (2012).
5	A comparative study of surface modification in carbonized rice husk by acid treatment	Sindhu. M., Meera S. Begum, K.M. and Sugashini	Desalination and water treatment	2012 45: 170-176.
6	Optimization using central composite design (CCD) for the biosorption of Cr (VI)	Sugashini S. and Meera S. Begum	Clean technologies and environmental policy	10.1007/s10098-012-0512-3

	ions by cross linked chitosan carbonized rice husk (CCACR)			
7	Column adsorption studies for the removal of Cr (VI) ions by ethylamine modified chitosan carbonized rice husk composite beads (EA-CRHCB)	Sugashini S. and Meera S. Begum	Journal of chemistry	10.1155/2013/460971
8	Experimental Analysis of mixing characteristics of carboxymethyl cellulose solution (0.5%) in a double jet mixer	Shankar P, Himanshu Vyas Vyas, Kalaichelvi Ponnusamy, Muthamizhi Karuppanan	International Journal of Chemical and Environmental Engineering	3(4), 2012
9	Heat Transfer Characteristics of TiO <sub>2</sub> /Water Nanofluid in a Coiled Agitated Vessel Provided with Disk Turbine Agitator	Perarasu V.T., M. Arivazhagan and P. Sivashanmugam	International Journal of Chemical Engineering Communications	200:6,783-797, Taylor & Francis, 2013
10	Heat Transfer Characteristics of TiO <sub>2</sub> /water Nanofluid in a Coiled Agitated Vessel fitted with Propeller	Perarasu V.T., M. Arivazhagan and P. Sivashanmugam	Journal of Hydrodynamics	Volume 24, Issue 6, 942-950, Publisher: Elsevier, 2012.
11	Preparation and Performance Evaluation of Nanokaolinite - Particle-Based Polyacrylonitrile Mixed-Matrix Membranes, A. Ananth,	R. Saranya, G. Arthanareeswaran, S. Sakthivelu, and P. Manohar	Industrial and Engineering Chemistry Research, ACS	51 (2012), pp 4942-4951
12	The influence of tetraethylorthosilicate and polyethyleneimine on the performance of polyethersulfone membrane	A. Ananth, G. Arthanareeswaran, Huanting Wang	Desalination Elsevier	287 (2012), 61-70
13	Performance enhancement of polysulfone ultrafiltration membrane by blending with polyurethane hydrophilic polymer	G. Arthanareeswaran, S. Velu	Journal of Polymer Engineering, Walter de Gruyter GmbH & Co. KG.	(2012)
14	Effect of silver loaded sodium zirconium phosphate (nanoAgZ)	Jian Huang, G. Arthanareeswaran, Kaisong Zhang	Desalination, Elsevier	285, (2012), 100-107

	nanoparticles incorporation on PES membrane performance			
15	Phase Behavior and Density for Binary and Ternary Solutions of PEG 4000 + Triammonium Citrate + Water Aqueous Two Phase Systems at Different Temperatures	Govindarajan, R.; Divya, K.; Perumalsamy, M	J. Chem. Eng. Data,	2013, 58 (2), pp 315–321.
16	Biodecolorization of a persistent organic dye from model wastewater using <i>Curvularia</i> spp	S.Senthilkumar M. Perumalsamy H.J. Prabhu	Desalination and Water Treatment	Volume 46, Issue 1-3, August 2012, pages 272-277
17	Studies on removal of Reactive blue Dye using Cloud Point Extraction	ARUNAGIRI. A, Kalaichelvi. P, Subbarao Chekkuri and Anuja Vijaya	International Journal of Chemical and Environmental Engineering	Vol-3, Issue 1, 2012
18	Modified Smith predictor design for unstable processes with step and periodic disturbances	K. Krishna Chaitanya, Selvanathan Sivalingam and A. Seshagiri Rao	Journal of Systems and Control Engineering	227(2), 146-160, 2013.
19	Visible light improved, photocatalytic activity of magnetically separable titania nanocomposite	Azrina Abd Aziz, Chee Kaan Cheng, Shaliza Ibrahim, M. Matheswaran, P. Saravanan	Chemical Engineering Journal	183: 349–356, 2012
20	Sonoelectrochemical Oxidation for Decolourization of Reactive Red 195	Anusha Somayajula, P. Asaithambi, Modepalli Susree, M. Matheswaran	Ultrasonics Sonochemistry	19: 803-811, 2012
21	Adsorption of Mercury (II) ion from aqueous solution using Low cost Activated Carbon Prepared from Mango kernel	Anusha Somayajula, Azrina Abd Aziz, Pichiah Saravanan, M. Matheswaran	Asia-Pacific Journal of Chemical Engineering,	(accepted)
22	Influence of experimental parameters in the treatment of distillery effluent by electrochemical oxidation	P. Asaithambi, Lakshminarayana Garlanka, N. Anantharaman, M. Matheswaran	Separation Science Technology	47(3): 470-481, 2012
23	Degradation of Methyl Orange using Sonochemical	Hemapriyamvadha, R., Sivasankar, T.	International Journal of Chemoinformatic	(accepted)

	Techniques and “Green” Nano Iron – A Synergistic Approach		s and Chemical Engineering	
24	Ultrasound Enhanced Degradation of Rhodamine B using a novel Fenton’s kind of Reagent: Kinetics and Mechanism	Kurukutla, A.B., Satishkumar, P., Anandan, S., Sivasankar, T.	Ultrasonics Sonochemistry	(accepted)
25	Influence of stack geometry and resonator length on the performance of thermoacoustic engine	N. M. Hariharan P. Sivashanmugam and S. Kasthuriangan	Applied Acoustics	73 (2012) 1052-1058
26	Optimization of thermoacoustic primemover using response surface Methodology	N. M. Hariharan P. Sivashanmugam and S. Kasthuriangan	Journal of HVAC&R Research	18:5,2012,890-903
27	Experimental and theoretical investigation of thermoacoustic prime mover	N. M. Hariharan P. Sivashanmugam and S. Kasthuriangan	Journal of HVAC&R Research	18:6, 2012,1112-1121
28	Heat transfer of TiO <sub>2</sub> /water nanofluid in a coiled agitated vessel with propeller	V.T.Perarasu, M.Arivazhagan., P.Sivashanmugam	Journal of Hydrodynamics	2012,24(6):942-950
29	Effect of resonator length and working fluid on the performance of twin thermoacoustic heat engine? Experimental and simulation studies, Computers and fluid	N. M. Hariharan P. Sivashanmugam and S. Kasthuriangan	Computers & Fluids	75 (2013) 51-55
30	Equilibrium phase behavior of the Poly (ethylene glycol) PEG 4000 and Biodegradable salts at Temperatures of (20°C, 30°C and 40°C).	D. Ramyadevi, A. Subathira and S.Saravanan	Journal of Chemical Engineering Data.	Vol. 57, 2012, 1112-1117.
31	Liquid-Liquid equilibria of Aqueous Two-Phase Systems Containing Poly (ethylene glycols) of Different Molecular Weight and potassium Citrate.	D. Ramyadevi, A. Subathira and S.Saravanan	International Journal of Chemical Sciences.	Vol. 10, 2012, 365-376.
32	Central Composite Design Application for Optimization of Aqueous two phase extraction of	D. Ramyadevi, A. Subathira and S.Saravanan	Journal of Chemical and Pharmaceutical Research.	Vol. 4, 2012,

	protein from shrimp waste.			2087-2095.
33	Aqueous Two-Phase Poly (Ethylene Glycol) – Maltodextrin System for Protein Partitioning from shrimp waste: Influence of Molecular Weight and pH.	D. Ramyadevi, A. Subathira and S.Saravanan	International Journal of Environmental Sciences.	Vol. 2(4), 2012, 2462-2469.
34	Use of response surface methodology to evaluate the extraction of Protein from Shrimp Waste by Aqueous Two-Phase system (Polyethylene glycol and ammonium citrate).	D. Ramyadevi, A. Subathira and S.Saravanan	Journal of Environmental Research and Development.	Vol. 6 (4), 2012, 997-1003.
35	Protein partitioning in polyethylene glycol – Maltodextrin aqueous two-phase system: statistical modelling of the experimental results.	D. Ramyadevi, A. Subathira and S.Saravanan	International Journal of Chemical Science and Technology.	Vol. 2(2): 2012; 38-43.
36	Phase Compositions of Aqueous Two-Phase Systems Formed by Poly (Ethylene Glycol) and Maltodextrin at Different Temperatures.	D. Ramyadevi, A. Subathira and S.Saravanan	International Journal of Chemical Sciences and Applications.	Vol. 3(2), 2012, 289-292.
37	Potential recovery of protein from shrimp waste in aqueous two phase system.	D. Ramyadevi, A. Subathira and S.Saravanan	Research Journal of Chemical Sciences.	Vol. 2(7), 2012, 47-52.
38	Aqueous Two-Phase (Polyethylene glycol + Sodium citrate + Water) System: Influence of pH, Molecular weight of PEG on binodal curve at 30°C.	D. Ramyadevi, A. Subathira and S.Saravanan	International Journal on Applied Bioengineering.	Vol. 5(2), 2011, 25-28.

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide(s) / Supervisor(s)	University / Institute
1	Harsh Srivatsava	Dr. G.Arthanareeswaran and Dr. N.Anantharaman	NITT
2	S.Senthilkumar	Dr. H. J. Prabhu Dr. M. Perumalsamy	NIT Trichy

## 9. Details of Book authored by faculty

G. Arthanareeswaran, Radhe Shyam Thakur, Effect of inorganic particle on the performance of polyethersulfone-cellulose acetate ultrafiltration membranes, Sustainable Membrane Technology for Energy, Water and Environment, John Wiley and Sons (2012) edited by Professors Takeshi Matsuura and Ahmad Fauzi Ismail.

### Other Important Points: Chemical Engineering Association Activities: 2012-13

S. No	Date	Activity
1	09/08/2012	Inaugural function & First Year Induction Programme Chief Guest Lecture: Dr. S. Joseph Antony, Associate Professor, Department of Chemical Engineering, Institute of Particle Science & Engineering, School of Process, Environmental and Materials Engineering, University of Leeds, Leeds, UK will deliver Lecture on "Micro and Nano Particulate mechanics with relevance to fabrication of materials and structures in inter-disciplinary applications: Research, Teaching and Learning.
2	10/10/2012	Student Internship Talk: 1. Ms. Vandana Swaminathan, Final Year B. Tech Topic: Modeling, control and drop size distribution of liquid-liquid systems under DAAD-WISE scholarship at Germany 2. Ms. Akanksha Gupta, Final Year B. Tech Topic: Synthesis of Ru-Cu nanoparticles using microwave reduction under Mitacs, Canada at INRS, Canada
3	31/10/2012	Student Internship Talk: 1. Mr. Vinod Elangovan, Final Year B. Tech Topic: Artificial Intelligence in the GCV Calculation of Biofuels at NCL Pune 2. Mr. Hari Kumaran Babu, Final Year B. Tech Topic: Mathematical Model in Estimating the Evaporation Losses from Algal Ponds under Reliance Internship 3. Mr. Rudra, Final Year B. Tech Topic: Biosorption of Cu ions from Waste Water using Peanut Husk at UICT, Mumbai
4	17/01/2013	PCRA sponsored Lecture on "Energy" which cover the topics like Introductions and role of PCRA, Energy Scenario in our country, Energy Conservation, Energy Savings, Energy Efficient Drives and controls, Energy Efficiency and Demand Side Management etc on behalf of Chemical Engineering Association by PCRA accredited resource persons Mr. P.Kothandaraman and Mr. S. Mahadevan
5	08/03/2013	1. Mr.A.K.Pandian, Vice President of process and operations NOCL, graced the occasion and gave an informative lecture on "REFINERY WATER CONSUMPTION & CONSERVATION". 2. Simulation workshop Aspen by Dr. A. Kannan, Prof, IIT Madras 3.Video lecture from Dr.Prasath Dhurjati, Professor, Chemical & Biomolecular Engg, University of Delaware on The Human Body as a System of Interconnected Reactors: PharmacoKinetic Estimation of the Dosage of Medicine
6	09/03/2013	1. Prof. Shekhar Garde, Elaine and Jack S. Parker Professor & Department Head, Department of Chemical & Biological Engineering, Rensselaer Polytechnic Institute, has delivered video informative lecture on

		<p>Water, Proteins and interfaces – A new molecular perspective.</p> <ol style="list-style-type: none"><li>2. Dr A. Seshagiri Rao, Assistant Professor, NIT, Trichy conducted the MATLAB workshop</li><li>3. Mr. S. Anand, 1981 Batch Chemical Engineering of REC Trichy delivered Dr.S.H.Ibrahim Memorial Lecture on Water.</li><li>4. Dr. Pogaku Ravindra, University of Malaysia Sabah, delivered on Green Energy on 19/03/2013.</li></ol>
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**In addition to this, Monthly Newsletter on Chemical Engineering by ChEA provides the opportunity to the students to express their views.**

## ANNEXURE







# CHEMISTRY

# CHEMISTRY

## 1. Notable Achievements

### 1.1. Faculty Members

S.No.	Name	Details of Prizes/Awards	Organization
1	Dr. R. Karvembu	UKIERI Staff Exchange Fellowship	Visited University of Glasgow, UK

### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization
1	N. Selvakumaran	International Travel Grant, CSIR	To present paper in 40 <sup>th</sup> International Conference on Coordination Chemistry held at University of Valencia, Spain
2	S. Ganesamoorthy	International Travel Grant, DST	To present paper in 40 <sup>th</sup> International Conference on Coordination Chemistry held at University of Valencia, Spain
3	S. Suganya	Best Oral Presentation Award – I prize	For the paper presented in the National Conference on Luminescence and its applications held on Jan 8-10, NCLA-2013 organised by PES institute of Technology, Bangalore
4	S. Suganya	Best Oral Presentation Award – I prize	Recent Applications of nanomaterials in chemistry and environmental research” (RANCER 2012) on July 20 & 21, 2012 at Department of Chemistry, Kongu Engineering College, Perundurai, Erode – 638 052.

5	D. Udhayakumari	Best Poster Award	National Conference on Luminescence and its applications held on Jan 8-10, NCLA-2013 organised by PES institute of Technology, Bangalore
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## 2.2. Papers presented by the Faculty / Students

Author(s)	Details
A. Sreekanth, R. Karvembu, N. Selvakumaran and S.L. Ashok Kumar	"Spectroscopic and advanced surface characterization studies on inhibition in mild steel involving Schiff bases" 26 <sup>th</sup> International Conference on Surface Modification Technologies (SMT 26) held at Ecole Centrale, Lyon, France, during June 20-22, 2012.
S. Ganesamoorthy, M. Muthu Tamizh, G. Manickam, K. Shanmugasundaram, and R. Karvembu	"Recyclable silica supported palladium catalyst for Suzuki-Miyaura cross-coupling reaction in water" 40 <sup>th</sup> International Conference on Coordination Chemistry held at University of Valencia, Spain from September 9 to 13, 2012.
N. Selvakumaran, A. Pratheepkumar and R. Karvembu	"Metallamacrocyclic complexes of Cu(II) and Zn(II) with 3,3,3',3'-tetraaryl/alkyl-1,1'-isophthaloylbis (thiourea)" 40 <sup>th</sup> International Conference on Coordination Chemistry held at University of Valencia, Spain from September 9 to 13, 2012.
S. Ganesh Babu and R. Karvembu	"Heck coupling of styrene with aryl halides-catalyzed by CuO on aluminosilicate in water" 2 <sup>nd</sup> International Indo-German Symposium on Green Chemistry and Catalysis held at Institute of Chemical Technology, Mumbai during October 29-31, 2012.
K. Jeyalakshmi and R. Karvembu	"Synthesis of copper(II) guanidine complexes for superoxide dismutase (SOD) activity" 15 <sup>th</sup> CRSI National Symposium in Chemistry held at Banaras Hindu University, Varanasi from February 1 to 3, 2013.
M. Mary Sheeba and R. Karvembu	"Chiral Ru(II) complexes as catalyst for asymmetric transfer hydrogenation of ketones" 15 <sup>th</sup> CRSI National Symposium in Chemistry held at Banaras Hindu University, Varanasi from February 1 to 3, 2013.
S. Anandan	"Synthesis of Conjugated Perylene Diimide-based Copolymer with 5,5'-Bis(4-aminophenyl)-2,2'-bifuryl Moiety as an Active Material for Organic Photovoltaics" INDO-GERMAN Workshop on Advanced Materials for Future Energy Requirements - 2012 Conference" at Delhi University, India, during 29-30 November, 2012.
S. Velmathi and V. Reena	"Synthesis, Characterization and Investigation on the Third Order Nonlinear Optical Properties of Pyrrole Schiff Bases" International Conference on Key Engineering materials ICKEM 2012, held at Singapore Feb 26-28, 2012

S. Suganya, D. Renuga and S. Velmathi	"Colorimetric and Fluorescent probe for the naked eye detection of cations by pyrrole based thiosemicarbazone" Recent Applications of nanomaterials in chemistry and environmental research (RANCER 2012) on July 20 & 21, 2012 at Department of Chemistry, Kongu Engineering College, Perundurai, Erode – 638 052.
D. Udhayakumari and S. Velmathi	"A Highly Sensitive Salophen Based Colorimetric Anion Sensor for Fluoride and Acetate in Aqueous Medium" Recent Applications of nanomaterials in chemistry and environmental research (RANCER 2012) on July 20 & 21, 2012 at Department of Chemistry, Kongu Engineering College, Perundurai, Erode – 638 052
N S Sanjini and S Velmathi	"Photocatalytic degradation of dyes over Cobalt incorporated mesoporous KIT-6" Advances in Materials and Processing Challenges and Opportunities (AMPCO 2012) 2-4 November 2012. AMPCO -2012 organised by Department of Metallurgical and Material Engineering, Indian Institute of Technology, Roorkee
S. Suganya and S. Velmathi	"Azo linked salicylaldehyde as a cation sensor towards transition metal ions" 12 <sup>th</sup> International Conference on sensing technology, International Conference on sensing Technology-2012, (ICST) Organized by CDAC, Kolkata, India and Massey University, New Zealand. Dec18- 21, 2012
N.S. Sanjini, K. Dhanalakshmi and S. Velmathi	"Structural, Optical and Photocatalytic Properties of Wide Band Gap CuO Nanoparticles Synthesized By Microwave- Assisted Quick Precipitation Method" International Conference on Emerging Advanced Nano-materials (ICEAN2012) 22-25 October 2012 organised by The University of Queensland, Australia
S. Saravanamoorthy and S. Velmathi	"Environment Friendly Ring-Opening Polymerization of $\epsilon$ -Caprolactone Using Zinc Complex derived from salicylaldehyde and 2-aminobenzoic acid" 2nd International Indo-German symposium on Green chemistry and catalysis for sustainable development Organised by the Institute of Chemical Technology, Mumbai and Leibniz Institute for catalysis Germany on October 29-31, 2012
D. Udhayakumari and S. Velmathi	"Simple Imine Based Highly Sensitive fluorescent Fe <sup>3+</sup> and Sn <sup>2+</sup> ions sensor" National Conference on Luminescence and its applications held on Jan 8-10, 2013 organised by PES institute of Technology, Bangalore
S. Suganya and S. Velmathi	"Anthraquinone Based Chromophores as Colorimetric and "turn-off" Fluorometric Sensor for Cations in Aqueous Medium" National Conference on Luminescence and its applications held on Jan 8-10, 2013 organised by PES institute of Technology, Bangalore

G. Balamurugan and S. Velmathi	"Axially chiral R-BINAM-salen based heterobimetallic catalysts for asymmetric Michael reaction" Chennai Chemistry Conference -2013 held at CLRI, Chennai-20 from Feb 8-10, 2013
N.S. Sanjini and S.Velmathi	"Synthesis of Gallium doped mesoporous KIT-6 for the photocatalytic degradation of dyes" International Conference of Nanomaterials and their applications Organised by Department of Physics, SRM University, Chennai on March 18-20, 2013.
Vinu Mohan A.M, Aswini K.K. and V.M. Biju	"Voltammetric Behaviour of Electrodeposited Terbium Hexacyanoferrate Film on Glassy Carbon Electrode", RASS 2013, February 14-15,2013, Gandhigram Rural Institute, Dindigul.
D. Karunanithi, A. Radhakrishna and V.M. Biju	"Comparative study of fatty acids and sialic acid in milk, milk products and infant food products", International conference on Food and Nutrition Technology for Public health care, May 04-05, 2012, Jawaharlal Nehru University, New Delhi.
Vinu Mohan A.M, Aswini K.K. and V.M. Biju	"Electrochemical Detection of Nitric Oxide Using Benzyl Imidazol Derivative Modified Glassy Carbon Electrode", Fifth ISEAC Triennial International Conference on Advances and Recent Trends in Electrochemistry, January 16-20, 2013, Hyderabad, India.
Aswini K.K., Vinu Mohan A.M, and V.M. Biju	"Electrochemical Detection of Cysteine Using Carbon Paste Electrode Modified With Molecular Imprinted Polymer" Fifth ISEAC Triennial International Conference on Advances and Recent Trends In Electrochemistry, January 16-20, 2013, Hyderabad, India.
Vinu Mohan A.M, Aswini K.K., and V.M. Biju	"Voltammetric Behaviour of Electrodeposited Terbium Hexacyanoferrate Film on Glassy Carbon Electrode" 10 <sup>th</sup> International symposium on Advances in Electrochemical Science and Technology, (iSAEST-10), Jan 28-30, 2013, Chennai, India.
Aswini K.K., Vinu Mohan A.M, and V.M. Biju	"Molecular Imprinted Polymer/MWCNT Modified Carbon Paste Electrode for the Electrochemical Detection of Cysteine", 10 <sup>th</sup> International symposium on Advances in Electrochemical Science and Technology, (iSAEST-10), Jan 28-30, 2013, Chennai, India.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Dr. R. Karvembu & Dr. A. Sreekanth	Short term course on computational methods in chemistry	23-27 July 2012
Dr. R. Karvembu & Dr. A. Sreekanth	Short term course on new avenues in chemical sciences research	18-22 March 2013

Dr. S. Anandan	Electrochemistry – Energy and Environment applications	2 days
Dr. S. Velmathi	Short Term course on Chromatographic Techniques	5-6 Dec 2012

### 3.2. Attended

Faculty / Students	Details
Dr. S. Anandan	First International Winter School on Industrial Biotechnology at Cairo, Egypt organized by NAM S&T Centre, New Delhi and NRC, Cairo during December 2-6, 2012.

### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr. R. Karvembu	Ruthenium- and enzyme-catalyzed dynamic kinetic resolution of alcohols and amines: A novel approach for chiral synthesis	Invited Lecture	Department of Chemistry, University of Glasgow, Scotland, UK, 15.06.2012
Dr. R. Karvembu	Transition metal complexes with simple ligands: Interesting structures and efficient catalysis	Rev. Fr. Mathew Molel endowment lecture	St. Joseph's College, Trichy, 30.08.2012
Dr. R. Karvembu	Atomic structure, periodic table, bonding, states of matter, crystal systems, crystal defects & grain boundary	Materials Awareness Programme	DRDL, Hyderabad, 15.10.2012
Dr. R. Karvembu	Inhibitors and their functions in corrosion control	Two-day short term course on Corrosion Control and Surface Engineering	NIT, Trichy, 19.10.2012
Dr. R. Karvembu	Transition metal complexes with simple ligands: Interesting structures and efficient catalysis	Refresher course in chemistry for university and college teachers	UGC Academic Staff College, Bharathidasan University, Trichy, 03.12.2012
Dr. R. Karvembu	Transition metal complexes with simple ligands: Interesting structures and efficient catalysis	Regional Science Congress on science for shaping the future of India	Indian Science Congress Association and Kongunadu Arts and

			Science College in Coimbatore, 15.12.2012
Dr. R. Karvembu	Applications of nanomaterials in catalysis	National Seminar on Current Trends in Material Science & Nanostructured Materials	Cauvery College for Women in Trichy, 22.01.2013
Dr. R. Karvembu	Transition metal complexes with simple ligands: Interesting structures and efficient catalysis	National Conference on New Vistas and Challenges in Chemistry	by Sathyabama University, Chennai, 25.01.2013
Dr. R. Karvembu	Applications of nanomaterials in catalysis	Refresher course in materials science for university and college teachers	UGC Academic Staff College, Pondicherry University, Puducherry, 02.02.2013.
Dr. R. Karvembu	Nanomaterials in catalysis	DBT star college lecture	Department of Chemistry, Jamal Mohamed College, Trichy, 14.02.2013
Dr. R. Karvembu	Ruthenium- and enzyme-catalyzed dynamic kinetic resolution of alcohols: A novel approach for chiral synthesis	DBT star college lecture	Department of Chemistry, PSG College of Arts and Science, Coimbatore, 14.03.2013
Dr. R. Karvembu	Transition metal complexes with simple ligands: Interesting structures and efficient catalysis	Short term course on new Avenues in Chemical Sciences Research	Department of Chemistry, NIT, Trichy, 19.03.2013
Dr. S. Anandan	Metal-Semiconductor Nanoparticles for Solar Energy Conversion Applications	Invited Lecture	Institute of Physical Chemistry, University of Alicante, Spain, on June 29, 2012
Dr. S. Anandan	Hybrid Nanomaterials for Electrochemical Applications	Invited Lecture	Institute of Physical Chemistry,

			University of Alicante, Spain, on July 10, 2012
Dr. S. Anandan	Metal-Semiconductor Nanoparticles for Solar Energy Conversion Applications	Invited Lecture	Department of Chemistry, Karunya University, Coimbatore, on August 7, 2012
Dr. S. Anandan	Nano-Bio-technology-Excitement & its Opportunities	State Level Seminar on Promises and Challenges of Using Nanomaterials in Clinical Applications	Department of Bio-Chemistry, Seethalakshmi Ramaswami College, Trichy, India, on August 29, 2012
Dr. S. Anandan	Synthesis of Nanophotocatalysts for the Degradation of Environmental Pollutants	Short term course on Emerging Technologies for Biotechnology and Chemical Processes	Department of Chemical Engineering, National Institute of Technology, Trichy, India, on August 31, 2012
Dr. S. Anandan	Nano-Bio-technology-Excitement & its Opportunities	National Symposium on Emerging Horizons in Biotechnology-Challenges and Prospects	Department of Bio-Technology, Alpha Arts and Science College, Chennai, India, on September 21, 2012
Dr. S. Anandan	Nanomaterials - Excitement & Opportunities	Invited Lecture	Urumu Dhanalakshmi College, Trichy, on October 11, 2012
Dr. S. Anandan	Sonochemistry – An Emergent Technology	Refresher Course in Chemistry	UGC-Academic Staff College and Department of Chemistry, Bharathidasan University, Trichy, on 20 <sup>th</sup> November, 2012

Dr. S. Anandan	Binding of Serum Albumins With Bioactive substances – Nanoparticles To Drugs	Invited Lecture	National Research Council, Cairo, on December 2, 2012
Dr. S. Anandan	Need of Ultrasound and its Applications	Refresher Course in Chemistry	UGC-Academic Staff College and Department of Physics, Pondicherry University, Pondicherry, on 2 <sup>nd</sup> February, 2013
Dr. S. Anandan	Effects put forth to enhance the efficiency in dye-sensitized nanostructured solar cells	Refresher Course in Chemistry	UGC-Academic Staff College and Department of Physics, Pondicherry University, Pondicherry, on 2 <sup>nd</sup> February, 2013
Dr. S. Velmathi	Presented invited talk on Synthesis of chromogenic receptors for cation/anion recognition in the	Research Collaboration visit	Department of Organic and Polymer Materials, Dong-A University, Busan, Korea on January 8th 2013
Dr. V.M. Biju	Corrosion Engineering	Visiting Faculty Scheme (VFS) by AICTE	11-15, February, 2013 in Govt. Engg. College, Wayanad, Kerala.

#### 5. Sponsored Projects undertaken.

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
Dr. S. Anandan (Co-PI)	Synthesis of Novel Nanosized Semiconductor Photocatalyst for Sonophotocatalytic degradation of Organic pollutants from industrial wastewater.	Ministry of Environment & Forest	Rs.25 lakhs

## 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S. No	Equipment	Amount (Rs. in Lakhs)
1	FT-IT Spectrophotometer	9.72
2	UV-Visible Spectrophotometer	7.35
3	Diode Array Spectrophotometer	12.5

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1	The catalytic effect of MnO <sub>x</sub> and CoO <sub>x</sub> on the decomposition of nitrobenzene in a non-thermal plasma reactor	J. Karuppiah, R. Karvembu and Ch. Subrahmanyam	Chem. Eng. J.	180, 39-45 (2012)
2	Tris-chelate complexes of cobalt(III) with N-[di(alkyl/aryl)carbamothioyl] benzamide derivatives: Synthesis, crystallography and catalytic activity in TBHP oxidation of alcohols	N. Gunasekaran, P. Jerome, S. W. Ng, E. R. T. Tiekink and R. Karvembu	J. Mol. Catal. A: Chem.	353-354, 156-162 (2012)
3	Preparation and characterization of nickelaluminosilicate nanocomposites for transfer hydrogenation of carbonyl compounds	N. Neelakandeswari, G. Sangami, P. Emayavaramban, S. Ganesh Babu, R. Karvembu and N. Dharmaraj	J. Mol. Catal. A: Chem.	356, 90-99 (2012)
4	Ruthenium(II) carbonyl complexes containing 'pincer like' ONS donor Schiff base and triphenylphosphine as catalyst for selective oxidation of alcohols at room temperature	M. Muthu Tamizh, K. Mereiter, K. Kirchner and R. Karvembu	J. Organomet. Chem.	700, 194-201 (2012)
5	Copper(II) complexes with ONS donor ligand and triphenylphosphine: Synthesis, characterization and catalytic applications	S. Priyarega, M. Muthu Tamizh, S. Ganesh Babu, R. Karvembu and K. Natarajan	Indian J. Chem.	51A, 453-457 (2012)
6	Copper ion mediated selective cleavage of C-S bond in ferrocenylthiosemicarbazone forming mixed geometrical [(PPh <sub>3</sub> )Cu(μ-S) <sub>2</sub> Cu(PPh <sub>3</sub> ) <sub>2</sub> ] having Cu <sub>2</sub> S <sub>2</sub> core: Toward a new avenue in copper-sulfur chemistry	R. Prabhakaran, P. Kalaivani, S.V. Renukadevi, R. Huang, K. Senthil Kumar, R. Karvembu and K. Natarajan	Inorg. Chem.	51(6), 3525-3532 (2012)

7	Mesoporous nickel hydroxyapatite nanocomposite for microwave-assisted Henry reaction	N. Neelakandeswari, G. Sangami, P. Emayavaramban, R. Karvembu, N. Dharmaraj, H.Y. Kim	Tetrahedron Lett.	53(24), 2980-2984 (2012)
8	Chemical and physical interactions of 1-benzoyl-3,3-disubstituted thiourea derivatives on mild steel surface – Corrosion inhibition in acidic medium	M. Gopiraman, N. Selvakumaran, D. Kesavan and R. Karvembu	Ind. Eng. Chem. Res.	51(23), 7910-7922 (2012)
9	Cu/Al(O)OH-Catalyzed formation of $\beta$ -enamino ketones and esters under solvent, ligand and base free conditions – Experimental and computational studies	S. Ganesh Babu, Brijith Thomas, A. Nijamudeen, A. Datta and R. Karvembu	Catal. Sci. Technol.	2(9), 1872-1878 (2012)
10	Nonthermal plasma assisted photocatalytic oxidation of dilute benzene	J. Karuppiah, L. Sivachandiran, R. Karvembu and Ch. Subrahmanyam	J. Chem. Sci.	124(4), 841-845 (2012)
11	Physicochemical studies of 4-substituted N-(2-mercaptophenyl)-salicylideneimines: Corrosion inhibition of mild steel in acid medium	D. Kesavan, M. Muthu Tamizh, M. Gopiraman, N. Sulochana and R. Karvembu	J. Surfact. Deterg.	15(5), 567-576 (2012)
12	Synthesis of triethylphosphite complexes of Ni(II) and Pd(II) with tridentate Schiff base ligand for catalytic application in carbon-carbon coupling reactions	M. Muthu Tamizh and R. Karvembu	Inorg. Chem. Commun.	25(1), 30-34 (2012)
13	Abatement of mixture of volatile organic compounds (VOCs) in a catalytic nonthermal plasma reactor	J. Karuppiah, E. Linga Reddy, P. Manoj Kumar Reddy, B. Ramaraju, R. Karvembu and Ch. Subrahmanyam	J. Hazard. Mat.	237-238(1), 283-289 (2012)
14	2-[(E)-{(1S,2R)-1-Hydroxy-1-phenylpropan-2-ylimino}methyl]phenol for inhibition of acid corrosion of AISI 1010 steel	D. Kesavan, M. Muthu Tamizh, N. Sulochana and R. Karvembu	J. Surfact. Deterg.	15(6), 751-756 (2012)
15	3-Benzoyl-1-(2-methoxyphenyl)thiourea	N. Selvakumaran, M. Mary Sheeba, R. Karvembu, S.W. Ng and E.R.T. Tiekink	Acta Cryst. E	68(12), o3259 (2012)
16	1-Benzoyl-3-(4-chlorophenyl)thiourea dichloromethane hemisolvate	N. Selvakumaran, M. Mary Sheeba, R. Karvembu, S.W. Ng and E.R.T. Tiekink	Acta Cryst. E	68(12), o3313 (2012)

17	Palladium(II) complexes with salicylideneimine based tridentate ligand and triphenylphosphine: Synthesis, structure and catalytic activity in Suzuki-Miyaura cross coupling reaction	M. Muthu Tamizh, B F T. Cooper, C L B. Macdonald and R. Karvembu	Inorg. Chim. Acta	394(1), 391-400 (2013)
18	Theoretical and experimental studies on the structures and spectroscopic properties of Ni(II) complexes of the type [Ni(L)(PPh <sub>3</sub> )] [H <sub>2</sub> L = 5-methyl- <i>N</i> -(2-mercaptophenyl)salicylideneimine and 5-chloro- <i>N</i> -(2-mercaptophenyl)salicylideneimine]	M. Muthu Tamizh, K. Senthilkumar, B.F.T. Cooper, C.L.B. Macdonald and R. Karvembu	J. Mol. Struct.	1037, 367-375 (2013)
19	Room temperature Ullman type C–O and C–S cross coupling of aryl halides with phenol/thiophenol catalyzed by CuO nanoparticles	S. Ganesh Babu and R. Karvembu	Tetrahedron Lett.	54(13), 1677-1680 (2013)
20	Remarkable catalytic activity of [PdCl <sub>2</sub> (CH <sub>3</sub> CN) <sub>2</sub> ] in Suzuki-Miyaura cross coupling reaction in aqueous media under mild conditions	S. Ganesamoorthy, K. Shanmugasundaram and R. Karvembu	J. Mol. Cat. A: Chem.	371, 118-124 (2013)
21	Mesoporous nickel-aluminosilicate nanocomposite: A solid acid catalyst for ether synthesis	N. Neelakandeswari, R. Karvembu and N. Dharmaraj	J. Nanosci. Nanotechnol.	13, 2853-2863 (2013)
22	Synthesis of Perylene bisimide based acceptor conjugated polymer for photovoltaic applications	Rubyraj M, Anandan S, Soloman RV, Venuvanalingam P, Iyer SSK, Ashokkumar M	Journal of Photochemistry and Photobiology A-Chemistry	2012, 247, 52-62
23	Preparation of Jeffamine based quaternary ammonium iodide melt for dye-sensitized solar cells	Sivakumar R, Anandan S	Journal of Molecular Liquids	2012, 172, 8-11
24	Ultrasound-assisted Ullmann reaction of alkyl and aromatic amines with substituted benzoic acids using copper catalyst	Rubyraj M, Arun K, Ashokkumar M, Anandan S	Organic Preparations & Procedures International	2012, 44, 271-280
25	Synthesis of D-(□-A) <sub>2</sub> organic chromophores for dye-sensitized solar cells	Ramkumar S, Manoharan S, Anandan S	Dyes & Pigments	2012, 94, 503-511
26	Pyrrole based Schiff Bases as Colorimetric and Fluorescent Chemosensors for Fluoride and Hydroxide Anions	Velmathi S, Reena V, Suganya S, Anandan S	Journal of Fluorescence	2012, 22, 155-162

27	Hydrodynamic Cavitation as an Advanced Oxidation Technique for the Degradation of Acid Red 88 dye	Saharan V, Pandit AB, Sathishkumar P, Anandan S	Industrial & Engineering Chemistry Research	2012, 51, 1981-1989
28	Ultrasound assisted synthesis of hybrid phosphomolybdate-polybenzidine containing silver nanoparticles for electrocatalytic detection of chlorate, bromate and iodate ions in aqueous solutions	Manivel A, Sivakumar R, Anandan S, Ashokkumar M	Electrocatalysis	2012, 3, 22-29
29	Sonochemical synthesis of Bi <sub>2</sub> CuO <sub>4</sub> Nanoparticles for catalytic degradation of Nonylphenol Ethoxylate	Anandan S, Lee GJ, Yang CK, Ashokumar M, Wu JJ	Chemical Engineering Journal	2012, 183, 46-52
30	Binding interaction between serum albumins and Perylene-3,4,9,10-tetracarboxylate- A spectroscopic investigation	Naveenraj S, Rubyraj M, Anandan S	Dyes & Pigments	2012, 93, 330-337
31	Spectral interaction between silica coated silver nanoparticles and serum albumins	Manivel A, Anandan S	Colloids and Surfaces A- Physicochemical and Engineering Aspects	2012, 395, 38-45
32	Synthesis of ZnO and Au Tethered ZnO Pyramid-like Microflower for Photocatalytic Degradation of Orange II	Chen PK, Lee GJ, Anandan S, Wu JJ	Materials Science and Engineering B	2012, 177, 190-196
33	The contribution of nanotechnology for removal of water pollutants	Anandan S	Material Science Forum	2012, 712, 1-24
34	Sonochemical synthesis of CuO Nanostructures with different morphology	Anandan S, Lee GJ, Wu JJ	Ultrasonics Sonochemistry	2012, 19, 682-686
35	Investigation on photocatalytic potential of Au-Ta <sub>2</sub> O <sub>5</sub> semiconductor nanoparticle by degrading methyl orange in aqueous solution by illuminating with visible light	Anandan S, Pugazhenthiran N, Selvamani T, Hsieh SH, Wu JJ	Catalysis Science & Technology	2012, 2, 2502-2507
36	One-step sonochemical synthesis of reduced graphene oxide/Pt/Sn hybrid materials and their electrochemical properties	Anandan S, Manivel A, Ashokkumar M	Fuel Cells	2012, 12, 956-962
37	Photocatalytic degradation of ternary dye mixture in aqueous environment using gold nanoparticles loaded amino and mercapto functionalized TiMCM-41 nanocatalysts in the presence of visible light	Sathishkumar P, Mangalaraja R V, Anandan S, Ashokkumar M	Separation and Purification Technology	2013, 102, 67-74
38	Performance of dye-sensitized solar cells fabricated with extracts	Vinoth S, Manoharan S,	Spectrochimica Acta Part A-	2013, 104, 35-

	from fruits of ivy gourd and flowers of red frangipani as sensitizers	Anandan S, Murugan R	Molecular and Biomolecular Spectroscopy	40
39	Binding of Serum Albumins with Bioactive Substances - Nanoparticles to Drugs	Naveenraj S, Anandan S	Journal of Photochemistry and Photobiology C-Review	2013, 14, 53-71
40	Tuning of Chalcogenide Nanoparticles Fluorescence by Schiff bases	Naveenraj S, Anandan S, Velmathi S, Asiri AM, Ashokkumar M	Journal of Photochemistry and Photobiology-A Chemistry	2013, 254, 12-19
41	Current Perspective of Semiconductor and its Composites with unusual surfaces for the use of Photocatalysis	Selvamani T, Anandan S	Material Science Forum	2013, 734, 138-185
42	Facile one-step synthesis of hollow polydiphenylamine	Rubyraj M, Anandan S, Zhou M, Ashokkumar M	International Journal of Polymeric Materials	2013, 62, 23-27
43	CoFe <sub>2</sub> O <sub>4</sub> /TiO <sub>2</sub> nanocatalysts for the photocatalytic degradation of Reactive Red 120 in aqueous solutions in the presence and absence of electron acceptors	Sathishkumar P, Mangalaraja R V, Anandan S, Ashokkumar M	Chemical Engineering Journal	2013, 220, 302-310
44	Synthesis of bianchored metal free organic dyes for dye sensitized solar cells	Ramkumar S, Anandan S	Dyes & Pigments	2013, 97, 397-404
45	Enhanced Visible Light Photodegradation of Water Pollutants over N-, S-doped Titanium dioxide and n-Titanium dioxide in the presence of Inorganic Anions	Asiri AM, Al-Amoudi MS, Bazaid SA, Adam AA, Alamry KA, Anandan S	Journal of Saudi Chemical Society	2013
46	HPA immobilized on the functionalized Ti-MCM-41 nanochannels for photocatalytic degradation of ternary azo dye effluents	Pugazhenthiran, N, Sathishkumar P, Maruthamuthu P, Anandan S	Journal of Porous Materials	2013
47	ZnO supported CoFe <sub>2</sub> O <sub>4</sub> nanophotocatalysts for the mineralization of Direct Blue 71 in aqueous environments	Sathishkumar P, Pugazhenthiran N, Mangalaraja R V, Asiri AM, Anandan S	Journal of Hazardous Materials	2013
48	One-pot synthesis of metal free organic dyes containing different acceptor moieties for fabrication of dye sensitized solar cells	Manoharan S, Ramkumar S, Elumalai P, Anandan S	Tetrahedron Letters	2013
49	Spectral, electrochemical, luminescence and dye sensitized solar cell studies of mono and d-f	Vijayaraj A, Prabu R, Suresh R, Manoharan S,	Turkish Journal of Chemistry	2013

	hetero binuclear cryptates	Anandan S, Narayanan V		
50	Photovoltaic Studies of Perylene diimide-based copolymers containing electronic Push-Pull Chromophores	Rubyraj M, Ramkumar S, Anandan S	RSC Advances	2013
51	Flower-like hierarchical h-MoO <sub>3</sub> : A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation	A. Chithambararaj, N. S. Sanjini, A. Chandra Bose, and S. Velmathi	Catal. Sci. Technol.	In press 2013
52	Thiosemicabazone Based Fluorescent Chemosensor for Transition Metal ions in aqueous medium	D.Udhayakumari, S. Suganya and S. Velmathi	J. Luminescence	In press 2013
53	Simple azo based salicylaldimine colorimetric and fluorescent probe for detecting anions in semi aqueous medium	S. Suganya, S. Velmathi	J. Molecular Recognition	In press 2013
54	Chirally functionalized SBA-15 as efficient heterogeneous catalyst for asymmetric ketone reduction	U. Balakrishnan, S. Velmathi	J. Nanosci. Nanotechnol.	In press 2013
55	Asymmetric Henry reaction catalysed by transition metal complexes-A short review	N. Ananthi, S. Velmathi	Indian Journal of Chemistry B	52 B, 87- 108, 2013
56	A Simple, Colorimetric Turn Off and Fluorescent Turn-On Probe for Detecting Hg <sup>2+</sup> in Semi Aqueous Medium	D. Udhayakumari, S. Velmathi	J. Luminescence.	136, 2013, 117-121
57	Tuning of Chalcogenide Nanoparticles Fluorescence by Schiff bases	S.Naveenraj, S. Anandan, S. Velmathi, A.M. Asiri, M. Ashokkumar.	J. Photochem. Photobiol. A Chemistry	2013, 254, 12- 19
58	Novel thiophene based colorimetric and fluorescent receptor for selective recognition of fluoride ions	D. Renuga, D. Udhayakumari, S. Suganya, S. Velmathi	Tetrahedron Letters	2012, 53, 5068- 5070
59	Colorimetric and Fluorescent sensing of Transition Metal ions in aqueous medium by Salicylaldimine Based chemosensors.	D. Udhayakumari, S. Saravanamoorthy, S. Velmathi	Materials Science and Engineering C	32, 1878- 1882, 2012
60	Immobilization of Chiral Amide Derived from (1R,2S)-(-)-Norephedrine over 3D nanoporous Silica for the Enantioselective Addition of Diethylzinc to Aldehydes	U. Balakrishnan, N. Ananthi, S. Velmathi, S. Naidu Salem, S. Aldeyab, K. Ariga, A. Vinu	Microporous and Mesoporous Materials	40-46, 155, 2012
61	Colorimetric And Fluorescent Sensing of Multi Metal Ions and Anions by Salicylaldimine Based	S. Prabhu, S. Saravanamoorthy, M. Ashok,	J. Luminescence	132, 979- 986, 2012

	Receptors.	S. Velmathi		
62	Synthesis, Characterization and Investigation on the Third Order Nonlinear Optical Properties of Pyrrole Schiff Bases.,	S. Velmathi, V. Reena	Adv. Mat. Res.	488-489, 2012, 377-382
63	Synthesis and Characterization of new salen type chiral ligands from L-Valine in asymmetric Henry reaction	N. Ananthi, S. Velmathi	Adv. Sci. Lett.	17, 233-237 (2012)
64	Amperometric detection of glucose using Prussian blue – graphene oxide modified platinum electrode	Vinu Mohan A. M., Aswini K. K, Maria Starvin A and V.M. Biju	Analytical Methods	5 (2013) 1764-1770.
65	1, 5-Bis (2-hydroxyacetophenone) thiocarbohydrazone: A Novel Colorimetric and Fluorescent Dual-mode Chemosensor for the Recognition of Fluoride	S. L. A. Kumar, M. S. Kumar, R. P. John, P. T. Muthiah, A. Sreekanth	Mat. Sci. Engg. C	2013, In press
66	An efficient triazole-based fluorescent turn-on chemosensor for naked-eye recognition of F <sup>-</sup> and AcO <sup>-</sup> : UV-visible, Fluorescence and <sup>1</sup> H NMR studies	S. L. A. Kumar, M. S. Kumar, A. Sreekanth	Spectrochim. Acta A	2013, In press
67	Synthesis, Spectral and Structural characterization of Bisthiocarbohydrazone Derivatives	S. L. A. Kumar, M. S. Kumar, S. J. Jenniefer, P. T. Muthiah, A. Sreekanth	Phosphorus Sulfur Silicon Relat. Elem.	2013, In press

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1	N. Gunasekaran	Dr. R. Karvembu	NIT-Trichy
2	M. Muthu Tamizh	Dr. R. Karvembu	NIT-Trichy
3	A. Manivel	Dr. S. Anandan	NIT-Trichy
4	S. Naveenraj	Dr. S. Anandan	NIT-Trichy



# CIVIL ENGINEERING

## CIVIL ENGINEERING

### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization
1.	Mr. Senthilkumar, K (PhD Scholar)	First Prize – Best Paper Award	Care School of Engineering, Trichy.
2.	T.S.Anantha Singh Dr. S. T. Ramesh	Best Paper Award	Central Electrochemical Research Institute (CECRI), Karaikudi
3.	P. Saranya Dr. S. T. Ramesh	Best Poster Award	Central Electrochemical Research Institute (CECRI), Karaikudi
4.	Ms. Devikavenu and Dr. R. Gandhimathi	Best Poster Award	Central Electrochemical Research Institute (CECRI), Karaikudi
5.	Manohar D (203211020)	3 <sup>rd</sup> Prize in Weightlifting(2013)	NIT, Trichy
6.	Resmi G (203211006)	2 <sup>nd</sup> Prize in National conference “ KEYNOTE 2013”	Care School of Engineering, Trichy.
7.	Dhanya J (203211011), Sanuja D V(203211012), Susanta Kumar Sethy(203211013) & Muthukumar S (203211015)	1 <sup>st</sup> Prize in Earthquake Engineering Quiz (2012)	NICEE- Literature survey for PG students in IIT, Kanpur.
8.	Subramanian.S (103109087)	Cleared regional round of Civil Engineering Quiz	Ultra Tech Cement Ltd.
9.	Bipul Saha (103109022)	Cleared regional round of Civil Engineering Quiz	Ultra Tech Cement Ltd.
10.	Adwait Singh Chouhan (103109005)	Cleared regional round of Civil Engineering Quiz	Dalmia Cement Ltd.
11.	Prateek Bajpai (103110057)	First Prize (iPhone 4S) - Ideation Challenge	Verizon India
12.	Ashish Tayal (103110014)	Best Business Report Award	Chartered Institute of Management Accountants (CIMA)
13.	Akshay Singh Rathore (103110004) Bimlesh Kumar	1st Prize - Technical Quiz	Anna University

(103110015) Manish Kumar (103110043)		
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## 2. Conference / Seminars / Symposium / Special Lectures

### 2.1. Organised

S.No	Coordinator	Programme	Period
1.	Dr.K. Baskar	3-Day Short Course on Finite Element method, Lectures delivered by Dr. J. N. Reddy, Professor, Texas A&M, USA	21 <sup>st</sup> -23 <sup>rd</sup> March 2013
2.	Dr. S. T. Ramesh	Special Lecture : Role of civil engineers in agricultural sector and in the food processing facilities Dr. K. Alagusundaram, Director, Indian Institute of Crop Processing Technology, Thanjavur	03.10.2012
3.	Dr. S. T. Ramesh	Special Lecture : New dimensions in civil and infra structural engineering Dr. A. Rajaraman Visiting Faculty Department of Civil Engineering IIT Madras, Chennai - 36	10.10.2012
4.	Dr. S. T. Ramesh	Special Lecture : Indoor Air quality Dr. S. M. Sivanagendra Assistant Professor Environmental and Water Resources Engineering Division Department of Civil Engineering IIT Madras, Chennai - 36	16.10.2013
5.	Dr. S. T. Ramesh	Special Lecture : Congestion Ahead! Plunge Right In! Don't Take Diversion! Dr. Gitakrishnan Ramadurai Assistant Professor Department of Civil Engineering IIT Madras, Chennai - 36	21.01.2013
6.	Dr. S. T. Ramesh	Moments'13	March 6-7, 2013
7.	Dr. S. T. Ramesh	Special Lecture : Fundamentals of Concrete Technology Mr. K. Balasubramanian Managing Director, Hi-tech concrete Solutions, Chennai	06.03.2013
8.	Dr. S. T. Ramesh	Special Lecture : Bio refinery for the sequential production of bio diesel, bio ethanol, bio hydrogen and bio methane from leather fleshing,	06.03.2013

		fat liquor , Chamois leather effluent for power generation, CDM and ZLD / ZSB Dr, P. Shanmugam Scientist E-II, Department of Environmental Technology Central Leather Research Institute, Adyar, Chennai – 600 020	
9.	Dr. S. T. Ramesh	Special Lecture: Earthquake resistant structures Dr. N. Lakshmanan Project Advisor, Former Director (SERC) CSIR - Structural Engineering Research Centre (CSIR-SERC), Chennai, CSIR Campus, Taramani, Chennai – 600 113.	07.03.2013
10.	Dr. S. T. Ramesh	Special Lecture : Road safety management using science and data: State of research, recent applications, and international transferability Dr. Bhagwant Persaud Professor, Department of Civil Engineering, Ryerson University	13.03.2013

## 2.2. Papers presented by the Faculty / Students

Author(s)	Details
J. Ronald Aseer, K. Sankaranarayanan and P.Jayabalan	“Morphological, Physical- Mechanical and Thermal properties of banana fibers (Musa sapientum)” Third International Conference on Natural Polymers (ICNP 2012), October 26-28, 2012, Mahatma Gandhi University, Kottayam, Kerala, India.
Arif Ashraf, Dr.Nisha Radhakrishnan, Dr. Samson Mathew, Dr. S. Moses Santhakumar	“Urban Speed Management using ITS”, National Conference on Urban Mobility – Challenges, Solutions and Prospects, IIT Madras, July 13-14, 2012
S. Naveen Kumar, Dr. S. Moses Santhakumar, Dr. Samson Mathew	“Traffic Signal Co-ordination as an ITS Measure for Urban Arterials in Chennai City”, National Conference on Urban Mobility – Challenges, Solutions and Prospects, IIT Madras, July 13-14, 2012
Arif Ashraf, Dr.Nisha Radhakrishnan, Dr. Samson Mathew, Dr. S. Moses Santhakumar	“Speed Detection and Management – ITS Application, India Geospatial Forum”, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013
M.Murugan, C.Natarajan and K.Muthukkumaran	“Behaviour of interfaces between glass fibre reinforced polymer and sandy soil” Pre Workshop cum National Conference on Geosynthetics: Present and Future Perspectives, February 3-4, 2012, Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu, India.

M.Murugan, C.Natarajan and K.Muthukkumaran	“Behaviour of interfaces between carbon fibre reinforced polymer and sandy soil” National Conference on Recent Advancements in Geotechnical Engineering (NCRAG’12), 20 <sup>th</sup> April, 2012, Government college of Technology, Coimbatore, Tamil Nadu, India
A.Rajaramam and C.Natarajan	“Seismic Structural Needs”, Proceedings of the ISET Golden Symposium , IIT Roorkee,at Roorkee,20-21, October 2012.
M.Murugan, C.Natarajan and K.Muthukkumaran	“Behavior of interfaces between glass fibres reinforced polymer and gravel soil ” Proceedings of the Indian Geotechnical Conference, 2012 at New Delhi, 12-14,December , 2012, pp 588-591.
A.Abraham, N.Lakshmanan, S.Arunachalam, G.M. Samuel Knight, M.Banu, J.P.Jincy and C.Natarajan	“Computation of Peak Load effects on Low rise Buildings- mA Simple Method ” Proceedings of the National Conference on Wind Engineering, 2012 at New Delhi, 14-15,December , 2012, pp 249-258.
K.Baskar and K.S.Radhika	“Bond Stress Characteristics on Circular Concrete Filled Steel Tubular Columns incorporating Metakaoline”, International Conference on Advances in Engineering and Technology”, E.G.S.Pillay Engineering College, Nagapattinum, March 28 <sup>th</sup> and 29 <sup>th</sup> 2012.
Senthilkumar, K. and Baskar, K.	“Compressive Strength Behavior of Concrete made Using E-Plastic Waste”, International Conference on Advanced Materials for Energy Efficient Buildings, organized by CSIR-CBRI (Roorkee), New Delhi, India, pp 76-77, Feb.13-15, 2013.
Senthilkumar, K. and Baskar, K.	“Use of Plastic Waste as Aggregate in Concrete: A Review”, Third National Conference – KEYNOTE’2013, CARE School of Engineering, Trichy, 7 <sup>th</sup> & 8 <sup>th</sup> February 2013.
Jeyashree, T.M. and Baskar, K.	“A study on Reinforced Concrete Structures under Carbonation Attack”, Third National Conference – KEYNOTE’2013, CARE School of Engineering, Trichy, 7th & 8th February 2013.
Dhanya, J and Baskar, K.	“Displacement and Distribution of Moments in Steel Skew Highway Bridge Girders”, Third National Conference – KEYNOTE’2013, CARE School of Engineering, Trichy, 7th & 8th February 2013.
Resmi, G. and Baskar, K.	“Multi criteria Approach of Damage Assessment in Laterally Restrained Steel beams”, Third National Conference – KEYNOTE’2013, CARE School of Engineering, Trichy, 7th & 8th February 2013.
Muthukumar, S. and Baskar, K.	“Ultimate Load Behavior of Plate Girder Supported at Different Levels”, Third National Conference – KEYNOTE’2013, CARE School of Engineering, Trichy, 7th & 8th February 2013.

T.S.Anantha Singh, Dr. S. T. Ramesh	“Comparison of electrocoagulation using iron and aluminum electrodes for the removal of Reactive Blue 25 dye from aqueous solution”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 14.
Seena Mithra S, Dr. S. T. Ramesh,	“Electrocoagulation: An Experimental Study of Phosphate Removal from Aqueous Solution Using Aluminium Electrode”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 15.
Nimisha Tiwari, Dr. S. T. Ramesh	“Effectiveness of low strength wastewater treatment using Anaerobic Sequential Batch Reactor at ambient temperature”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 18.
Shweta Gupta, Dr. S. T. Ramesh	“Performance of Halotolerant Marine Cultures on Organic Removal from Saline Wastewater”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 37.
P. Saranya, Dr. S. T. Ramesh	“Effectiveness of alginate as potential coagulant for the treatment of turbid water”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 42.
M. S. Keerthana Rani, Dr. S. T. Ramesh	“Treatment of paint wastewater by electocoagulation using aluminum electrodes”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 61.
Femina. G. M, Dr. S. T. Ramesh	“Kinetics and equilibrium of fluoride sorption on laterite”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 69.
Adarsh, P. R., Muthukkumaran, K.,	“Effect of wheel load on underground tunnels”, RDCE 12, March 21-22, 2012, SRM University, Chennai
Adarsh, P. R., Muthukkumaran, K.,	“Experimental study of wheel load over tunnels”, NCRAG’12, April 20 2012, GCT, Coimbatore. pp 40-41.
Jegatheeswaran, B., Muthukkumaran, K.,	“Effect of length and diameter on the lateral capacity of pile in cohesive and cohesionless soils”, RDCE 12,

	March 21-22, SRM University, Chennai.
Jegatheeswaran, B., Muthukkumaran, K.,	“Behaviour of a pile with lateral and surcharge loading”, NCRAG’12, April 20 2012, GCT, Coimbatore. pp 25
Veeravisagan, B., Muthukkumaran, K.,	“Simulation of geotechnical properties of lunar soil”, NCRAG’12, April 20 2012, GCT, Coimbatore. pp 32-33
Sugali Sreenivasulu and S. Jayalekshmi	“Characterisation and Shear Strength Investigations on a Lunar Simulant”, National Conference on New, Trends in Civil Engineering and Earth Sciences(NTCE-2013), 5-6 February 2013 (Sponsored by TEQIP-II), Vasavi College of Engineering, Ibrahimbagh, Hyderabad
Nidheesh P. V, R. Gandhimathi	“Removal of Rhodamine B from Aqueous Solution by Electro-Fenton Process”, 2 <sup>nd</sup> International Conference on Advanced Oxidation Processes, School of Environmental Studies, M.G. University Kottayam, 5-8 October 2012. P. 221
Nidheesh P V, R. Gandhimathi	“Review, Analysis and Validation on pH Dependence of Fenton Processes”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 33.
Abhishek Anand, R. Gandhimathi	“Forecasting air quality parameters using artificial neural network modelling”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 29.
Mithun C, R. Gandhimathi	“Use of prosopis juliflora as a natural coagulant in treatment of turbid water”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 36.
Devika Venu, R. Gandhimathi	“Removal of COD from landfill leachate by peroxicoagulation process”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 54.
Shilpa Xavier, R. Gandhimathi	“Removal of Magenta MB by Fenton process”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 25.
Stephy Jacqueline George, R. Gandhimathi	“Removal of salicylic acid from aqueous solution by electro Fenton process”, National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup>

	February 2013, pp 19.
Dwithiya Chandrasekhar, R. Gandhimathi	“Municipal wastewater treatment by subsurface vertical flow constructed wetland”, Proc. National level Techosium, SELECT – X3 (Seminar on Electrochemical and Chemical Technology), Central Electrochemical Research Institute (CECRI), Karaikudi, 15 <sup>th</sup> and 16 <sup>th</sup> February 2013, pp 58.
Ankit Pachori, Nisha Radhakrishnan	“GEOSPATIAL BASED TRAVEL TIME AND DELAY ANALYSIS ALONG TIRUCHIRAPPALLI ROAD NETWORK”, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
Sivaprakash G, Nisha Radhakrishnan	“TRAVEL DEMAND FORECASTING FOR TIRUCHIRAPPALLI DISTRICT (TAMIL NADU)”, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
Subha Nair, Sathees Kumar, Nisha Radhakrishnan, Samson Mathew	“Origin Destination Matrix using Bilevel Programming”, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
Manjula Renganthan Sannasiraj S.A and Palanichamy K	Paper titled “Deflection of slender cylindrical member under breaking wave impact” published in Twenty second(2012) International offshore and Polar Engineering Conference, Rhodes, Greece, June 17-22,2012
R. Manjula, S.A. Sannasiraj and K. Palanichamy	Paper titled ”Breaking wave impact on a slender vertical cylinder”, published in 8 <sup>th</sup> International conference on coastal and port engineering in Developing countries, 2012, IITMadrass, Chennai, 20-24, Feb 2012
Samson Mathew and V. Sunitha	“Urban Pavement Maintenance Management Systems (UPMMS)”, National Conference on Urban Mobility – Challenges, Solutions and Prospects, IITM, Chennai, July 13 – 14, 2012.
S. Saravanan	“Remote GIS and Remote sensing Assisted Rainfall-Runoff Simulation for Amarawathi River Basin, Tamilnadu”, School of Geosciences, Bharathidasan University, 1-2 March, 2013

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Dr. S. Moses Santhakumar Dr. Samson Mathew Prof. R. Jayasankar	PMGSY Workshop on Rural Road Planning and Design for AEEs of RD Dept and ADEs of NH Dept	22.02.2013
Dr. S. T. Ramesh Dr. P. Jayabalan	Workshop on “AutoCAD”	October 08-10, 2012
Dr. S. T. Ramesh	Short term Course on Forensic Engineering	December

Dr. C. Natarajan	Practice	14-18, 2012
Dr. S. T. Ramesh Dr. P. Jayabalan	Workshop on Bridge design, Fabrication and Testing	March 4-5, 2013
S. Saravanan	NNRMS/DOS/UGC/CIET/ IIRS sponsored satellite based distance learning program on “Advance course on GEOWEB Services and Applications” at NITT Trichy	11 <sup>th</sup> Feb to 15 <sup>th</sup> March, 2012

### 3.2. Attended

Faculty / Students	Details
Dr.P.Jayabalan	3-days short course on “Finite Element Methods” by Prof.J.N.Reddy during 21 <sup>st</sup> -23 <sup>rd</sup> March 2013
Dr.K.Baskar	3-days short course on Finite Element Method, at IIT Hyderabad, AP, during 19 <sup>th</sup> to 21 <sup>st</sup> December 2012
Dr.K.Baskar	Two day National Workshop on Supercritical Technology for Power Sector, 3 <sup>rd</sup> & 4 <sup>th</sup> Feb 2012, Engineering Staff College, Hyderabad.
Dr.SJayalekshmi & Mr.S.Sreenivasulu	One week Q.LP. short term course on Self-Awareness and Higher Goals in Education (SAHGE 2012) conducted by Centre for Continuing Education, LLT., Madras from June 12-16,2012 at I.LT., Madras.
Dr.S.Jayalekshmi	Two-days Faculty Orientation Programme on-Class room Management and Communication, 5 <sup>th</sup> to 6 <sup>th</sup> October 2012 at Hotel Sangam, Thanjavur, organised by N.I T., Tiruchirappalli.
Dr.S. Jayalekshmi	Q.LP. Short term Course on Numerical and Experimental Modeling in Geotechnical Engineering, 4 <sup>th</sup> - 9 <sup>th</sup> February 2013, conducted by the Department of Civil Engineering, I.I.T., Kanpur.
Dr.J.Karthikeyan	3 days In-house training programme on STRUDS V 11.2 Software held on 20 to 22 February 2013 at CSG Head office, Pune.
Dr.J.Karthikeyan	5 days short-term course on Numerical and Experimental Modelling in Engineering held on 4 to 9 February 2013 at IIT-Kanpur.
Dr.J.Karthikeyan	3 days Faculty training programme on Teaching Learning Methodologies organised by Teaching Learning Centre, Centre for Continuing Education, IIT-Madras from 20 to 22 August 2012.
S. Saravanan	ECV Soil moisture, A background and user guide to the ECV Soil Moisture product, Institute of Photogrammetry and Remote sensing, Vienna University of technology, Vienna,
S. Saravanan	DST Sponsored Training program on Hyperspectral Remote sensing for Agriculture conducted by Indian Agriculture Research Institute New Delhi, 18 <sup>th</sup> to 27 <sup>th</sup> Feb 2013.

S. Saravanan	Fourth workshop of Edusat Outreach Programme in combination with IIRS User Interaction Meet (IUIM-2013) conducted by ISRO and NRSC at Indian Institute of Remote Sensing, Dehradun, March 11 to 14, 2013.
Pratap K V(203211003) Resmi G (203211006) Jeyashree T M (203211007) Dhanya J (203211011) Sanuja D V(203211012) Susanta Kumar Sethy (203211013) Muthukumar S (203211015) Alaguvel S(203211017) Sukanya G(203211025)	“Earthquake Engineering Literature workshop for PG Students” conducted by NICEE at IIT Kanpur.

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr. S. Moses Santhakumar	Road Safety with Emphasis on Non-Motorised Traffic	67 <sup>th</sup> Meeting of the Highway Research Board, 73 <sup>rd</sup> Annual Session of the Indian Roads Congress	Coimbatore 08.01.2013
Dr.C. Natarajan	Forensic Engineering Practices	Key note address in the Fourth National conference on innovative Practices in Construction and Waste Management	Sri Ramakrishna Institute of Technology , Coimbatore, 3 April, 2013
Dr.C. Natarajan	Precast Construction Practice	Technical Meet	Thanjavur, organised by Ultra Tech Cement Ltd., 8, January, 2013
Dr.C. Natarajan	Precast Construction	General body meeting of the Builders’ Association of India	Tricity 23, Nov, 2012
Dr.C. Natarajan	Inaugural Address	Inauguration of Civil Engineering Association	Tiruchirappalli 25, July, 2012
Dr. Samson Mathew	Facilities for Pedestrians / Physically	67 <sup>th</sup> Meeting of the Highway Research Board, 73 <sup>rd</sup> Annual	Coimbatore 08.01.2013

	Challenged Persons /Passengers	Session of the Indian Roads Congress	
Dr.K.Baskar	Introduction to Finite Element Methods	Two Day Workshop on Finite Element Analysis using Ansys	Oxford Engineering College, 2&3 <sup>rd</sup> March 2012
Dr.K.Baskar	Design of Steel Structures using IS800-2007	AICTE sponsored FDP	Oxford Engineering college
Dr. S. T. Ramesh	Hazard Identification, Risk Assessment And Control Measures For Major Hazard Facilities	Training programme on “Health and safety aspects for ETP / CETP / STP Operators”	Tamilnadu Pollution Control Board, Trichy, 13 <sup>th</sup> March 2012.
Dr. S. T. Ramesh	Opportunities in Civil Engineering	National level Technical symposium	MRK Institute of Technology, Kattumannarkoil, 14 <sup>th</sup> March 2012.
Dr. S. T. Ramesh	Opportunities in Civil Engineering	National level Technical symposium	Vickram College of Engineering, Madurai 16 <sup>th</sup> March 2012
Dr. S. T. Ramesh	Municipal solid waste composting: biological processing	DRDO Sponsored Workshop on Integrated Solid Waste Management	Sri Krishna College of Technology, Coimbatore, 28 <sup>th</sup> March 2012.
Dr. S. T. Ramesh	Energy recovery Municipal solid waste	CSIR Sponsored National Conference on Power Generation using Municipal Solid Waste	The Kavery engineering college, Mecheri, Salem. 9 <sup>th</sup> August 2012
Dr. S. T. Ramesh	Conversion of Biomass into useful energy	National workshop on Energy conservation technologies for Global sustainability	K.S.R College of Technology, Tiruchengode. 24 <sup>th</sup> August 2012
Dr. S. T. Ramesh	Electronic waste - an emerging risk?	Engineers day celebration	Oxford Engineering College 14 <sup>th</sup> September 2012
Dr. S. T. Ramesh	An overview for exploring the possibilities of energy generation from	MNRE sponsored Two Days Workshop on “Municipal Solid Waste For	Centre for Climate Change, Periyar Maniammai University,

	municipal solid waste (MSW)	Renewable Energy Production”	Vallam, Thanjavur 20 <sup>th</sup> November 2012
Dr. S. T. Ramesh	Municipal Solid Waste Management - Overview of Indian Scenario / Issues	Workshop on “Remediation for Clean and green environment”	Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli, 1 <sup>st</sup> December 2012.
Dr. S. T. Ramesh	Environmental Impact Assessment	Invited lecture	DoMS, National Institute of Technology, Tiruchirappalli, 22 <sup>nd</sup> January 2013.
Dr. S. T. Ramesh	Optimization of the dose of alginate as a potential coagulant for the Coagulation–flocculation of suspended particles in turbid water	Key note address	National Conference on Green Technologies for Conservation of Biodiversity (GTCB 2013), SRIET, Coimbatore-110, 16 <sup>th</sup> February, 2013.
Dr.K.Muthukkumaran	Foundation Piling-Sustainable Construction	Workshop on Sustainable Construction Technology (key note speaker)	JJ College of Engineering and Technology, Trichy (25 <sup>th</sup> January 2012)
Dr.K.Muthukkumaran	Recent advancement in ground improvement techniques	Intl. workshop on Recent Advances in Civil Engineering-2012 (key note speaker)	Noorul Islam Univesrity, Inida (27.09.2012)
Dr.K.Muthukkumaran	Performance of lateral pile under Earthquake induced lateral soil movement	4 <sup>th</sup> International joint Conference on Advances in Civil, Electrical and Mechanical Engineering (key note speaker)	Sun College of Engineering and technology, Erachakulam, Kanyakumari (20 <sup>th</sup> February 2013)
Dr. R. Gandhimathi	Occupational Health Hazards	Training programme on “Health and safety aspects for ETP /	Tamilnadu Pollution Control Board, Trichy, 13 <sup>th</sup> March 2012.

		CETP / STP Operators”	
Dr. R. Gandhimathi	Municipal solid waste composting: biological processing	DRDO Sponsored Workshop on Integrated Solid Waste Management	Sri Krishna College of Technology, Coimbatore, 28 <sup>th</sup> March 2012.
Dr. Nisha Radhakrishnan	Application of GPS in Deformation Monitoring	Summer Training Programme on Geospatial Technologies and Applications under NRDMS Programme DST,	Dept. of Geography, Bharathidasan University, Trichy, May 16, 2012
Dr. Nisha Radhakrishnan	Introduction to Surveying	Oxford College of Engineering Student Cell	Oxford College of Engineering, Tiruchirappalli, August 8, 2012.
Dr. Nisha Radhakrishnan	Remote Sensing	Oxford College of Engineering Student Cell	Oxford College of Engineering, Tiruchirappalli, August 8, 2012.

#### 5. Sponsored Projects undertaken.

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
Dr. Samson Mathew Dr. S. Moses Santhakumar Ms. V. Sunitha	Coir Geotextiles Reinforced Low Volume Rural Road Pavement Performance Studies in Tamilnadu and Puducherry	Coir Board, Government of India	12.5
Dr. S. Moses Santhakumar Dr. Samson Mathew Dr. Nisha Radhakrishnan	Urban Speed Management using ITS	Centre of Excellence (CoE) in Urban Transport (Sponsored by MoUD), IITM, Chennai	15.0
Dr. Samson Mathew Ms. V. Sunitha	Urban Pavement Maintenance Management System (UPMMS)	Centre of Excellence (CoE) in Urban Transport (Sponsored by MoUD), IITM, Chennai	10.0
Dr. Samson Mathew Dr. S. Moses	Pavement Performance Studies on Coir Geotextile Reinforced Rural	Coir Board, Government	419.87

Santhakumar Ms. V. Sunitha	Roads in Tamilnadu	of India	
Dr.K.Muthukkumaran	Study on External Dump Slope Stabilization/ Drainage System for Mine – II, NLC	NLC, Neyveli	12.75
Dr.K.Muthukkumaran	Slope stability analysis and design for Mine-1A, NLC	NLC, Neyveli	6.50
Dr. Nisha Radhakrishnan	“Land use and Land cover Assessment along Tiruchirappalli City using High Resolution Remote Sensing Images”	SERB	15.94 Lakhs

## 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1.	Portable HAZ-DUST Environmental Particulate Air Monitor	5.51

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Ultimate strength of uniaxially compressed mild steel plate at elevated temperatures	Innasi Raja, V., Suneel Kumar, M., and Jayabalan, P.	Journal of Structural Fire Engineering	In Press
2.	Editorial :First Indian –US Forensic Engineering workshop	S.E.Chen, R.Schmidt, R. Janardhanam and Natarajan, C	Int.Journal of Forensic Engineering	Accepted
3.	Behaviour of Reinforced concrete slab subjected to fire	Sangluaia C M K Haridharan, Dr C Natarajan & Dr A Rajaraman	International Journal of Computational Engineering Research	2013, Vol. 3 Issue. 1 Pg 195-206
4.	Strength, Economic and Sustainability characteristics of coal ash-GGBS based Geopolymer Concrete	Bennet Jose Mathew, M Sudhakar & Dr C Natarajan	International Journal of Computational Engineering Research	2013, Vol. 3 Issue. 1 Pg 207-212
5.	Progressive	Sukanya G ,	International	2013,

	Collapse Analysis of RC Beams	Dr C Natarajan & Dr A Rajaraman	Organisation of Scientific Research-Journal of Mechanical and Civil Engineering	Vol. 5 Issue. 4 Pg 55-67
6.	Behaviour of Interfaces Between Glass Fibre Reinforced Polymers and Sandy Soils	M.Murugan, C.Natarajan and K.Muthukkumaran	International Journal of Earth Sciences and Engineering	Accepted ISSN 0974-5904
7.	Compressive Behavior of Concrete Cylinders Confined with Glass and Carbon Fibre Reinforced Polymers	M.Murugan, C.Natarajan and K.Muthukkumaran	International Journal of Structural and Civil Engineering Research	Accepted ISSN 2319-6009
8.	Compressive Behavior of Concrete Cubes Confined with Glass and Carbon Fibre Reinforced Polymers	M.Murugan, C.Natarajan and K.Muthukkumaran	International Journal of Engineering & Science Research	Accepted ISSN 2277-2685
9.	Bond stress characteristics on circular concrete filled steel tubular columns using mineral admixture metakaoline	Radhika, K.S. and Baskar, K.	International Journal of Civil and Structural Engineering	Vol.3., No.1, pp1-8, 2012, ISSN 0976-4399
10.	Influence of Mineral admixture on Compressive Strength of Concrete	Radhika, K.S. and Baskar, K.	Journal of Construction Engineering, Technology and Management	Vol.2., Issue 3, Nov. 2012, ISSN 2249-4723.
11.	Bond stress characteristics on circular concrete filled steel tubular columns using mineral admixture Silicafume	Radhika, K.S. and Baskar, K.	International Journal of Earth Science and Engineering, ISSN0974-5904	Feb.2013
12.	Experimental and Numerical	Chithira, K. and Baskar, K.	International Journal of Earth	Vol.5, No.1 Feb.2012,

	Investigation on Circular CFT Columns under Eccentric Load Condition with and without Shear Connectors		Science and Engineering, ISSN0974-5904	pp169-179
13.	Cross sectional Analysis of Circular Concrete Filled Steel Tube	Chithira, K. and Baskar, K.	International Journal of Earth Science and Engineering, ISSN0974-5904	Vol.5, No.4, Aug.2012, pp792-801
14.	Kinetics And Equilibrium Studies For The Removal Of Heavy Metals In Both Single And Binary Systems Using Hydroxyapatite	S. T. Ramesh, N. Rameshbabu, R. Gandhimathi, P. V. Nidheesh and M. Srikanth Kumar.	Applied Water Science	2012, 2, 187–197
15.	Batch and Column Operations for the Removal of Fluoride from Aqueous Solution Using Bottom Ash	S. T. Ramesh, R. Gandhimathi, P. V. Nidheesh, Manoj Taywade	Environmental Research, Engineering and Management	2012, 2(60), 12-20.
16.	Equilibrium, Kinetics and Breakthrough Studies for Adsorption of Copper onto Low Cost Biosorbent 'Cyperus Rotundus'	S.T. Ramesh, R. Gandhimathi, J. Hamoneth Josen and P.V. Nidheesh	Electronic journal of Environmental, Agricultural, and Food Chemistry	2012, 11 (6), 638-648
17.	A Novel Agricultural Waste Adsorbent, Watermelon Shell for the Removal of Copper from Aqueous Solutions	Koel Banerjee, S. T. Ramesh, R. Gandhimathi P. V. Nidheesh	Iranica Journal of Energy and Environment	2012. 3 (2), 143-156
18.	Treatment of wastewater using geotextiles baffles attached with biomass	S. T. Ramesh, R. Gandhimathi, P. V. Nidheesh and P. Satyanarayana Rao	International Journal of Research in Chemistry and Environment	2012, 2 (3), 88-94.

19.	Adsorption - Desorption Characteristics and Mechanism of Crystal Violet in Bottom Ash Column	P. V. Nidheesh, R. Gandhimathi, S. T. Ramesh and T. S. Anantha Singh	Journal of Urban and Environmental Engineering	2012, 6 (1), 18-29.
20.	Kinetic Analysis of Crystal Violet Adsorption on to Bottom Ash	P. V. Nidheesh, R. Gandhimathi, S. T. Ramesh and T. S. Anantha Singh	Turkish Journal of Engineering and Environmental Sciences	2012, 36 (2012), 249 – 262.
21.	Modelling of Crystal Violet Adsorption on Bottom Ash Column	P. V. Nidheesh, R. Gandhimathi, S. T. Ramesh and T. S. Anantha Singh	Water Environment Research	2012, 85, 1-8.
22.	Biosorption of crystal violet (a basic dye) from aqueous solution by citrullus lanatus (water melon rind),	K. S. Bharathi, S. T. Ramesh	Journal of Environment research and development	2012, 7(1A), 321-329.
23.	Adsorptive removal of Pb(II) from aqueous solution using nano-sized hydroxyapatite	S. T. Ramesh, N. Rameshbabu, R. Gandhimathi, M. Srikanth Kumar and P. V. Nidheesh	Applied Water Science	2013, 3: 105-113
24.	Use of Furnace Slag and Welding Slag as a Replacement for Sand in Concrete	S. T. Ramesh, R. Gandhimathi, P. V. Nidheesh, S. Rajakumar, S. Prateepkumar	Int. J. Energy and Environment	2013, 4:3, 1-6.
25.	A Novel Agricultural Waste Adsorbent, Cyperus Rotundus for the Removal of Heavy Metal Mixtures from Aqueous Solutions	S.T. Ramesh, R. Gandhimathi, J. Hamoneth Josen and P.V. Nidheesh.	Environmental Engineering science	2013 30(2), 74-81.
26.	Biosorption of Cu (II) and Zn (II) Ions from Aqueous Solution by Water Hyacinth (Eichhornia Crassipes)	R. Gandhimathi, S. T. Ramesh, V.M. Arun and P. V. Nidheesh	International Journal of Environmental Waste Management	2013, 11 (4), 365 – 386

27.	Degradation of dyes from aqueous solution by Fenton processes: a review	P. V. Nidheesh, R. Gandhimathi, S. T. Ramesh	Environmental Science and Pollution Research	2013, DOI 10.1007/s11356-012-1385-z
28.	Three dimensional analysis of piles on sloping ground subjected to passive load induced by surcharge	Muthukkumaran, K. and Gokul Krishnan.	International Journal of Engineering and Technology Innovation,	2012, Vol 2, No 3, pp 31-47.
29.	Effect of slope and loading direction on laterally loaded piles in cohesionless soil” , ,	Muthukkumaran, K.	International Journal of Geomechanics, ASCE	2013, (Paper No. 389). (In Press)
30.	Effect of length and diameter on the lateral load capacity of piles ” ,	Muthukkumaran, K. and Jegatheeswaran, B.	Journal of The Institution of Engineers (India): Series A	(Paper No. IEIA-D-12-00128), in Press
31.	Addition of Fly Ash on Temperature Differential and Warping Stresses in Rigid Pavements	S.Sreenivasulu, S.Jayalekshmi and RJayasankar	Journal of Engineering Studies, ISSN 0975-6469	Number 2, 2012 pp.97-112
32.	Studies on Polymer Based Chemical Treated Clay Soil	SJayalekshmi and Methku Anvesh Reddy	International Journal of Engineering Research and Technology(IJERT) ISSN 2278-0'81	Vol.1, Issue 10, December 2013 1-3
33.	Development of New Lunar Simulant from Terrestrial Soil - A Comparative Study	S.Jayalekshmi, Sugali Sreenivasulu and D.Saravanakumar	Engineering Science and Technology: An International Journal (ESTIJ), e-ISSN, 2250 - 3498	Vol. II, No. VI, 2012
34.	Trends in Electro-Fenton process for Water and Wastewater	P. V. Nidheesh and R. Gandhimathi	Desalination	2012, 299,1–15

	Treatment: An Overview.			
35.	Assessment of heavy metal contamination in soil due to leachate migration from an open dumping site	S. Kanmani and R. Gandhimathi	Applied Water Science	2013 3:193–205
36.	Investigation of physicochemical characteristics and heavy metal distribution profile in groundwater system around the open dump site	S. Kanmani and R. Gandhimathi	Applied Water Science	DOI 10.1007/s13201-013-0089-y
37.	Groundwater Vulnerability Assessment Using SINTACS Model	Sathees Kumar, D.Thirumalaivasan, Nisha Radhakrishnan, Samson Mathew	Geomatics, Natural Hazards and Risk	Accepted for publication
38.	GIS Based Assessment of Groundwater Vulnerability using DRASTIC Model	Sathees Kumar, D.Thirumalaivasan, Nisha Radhakrishnan	Arabian Journal of Science and Engineering	Accepted for publication
39.	Comparative Study of Structural Design and Cost Analysis for Storage Container Circular and Square shapes	Rajiv Gandhi.K and J.Karthikeyan	International Journal of Scientific Research	1 (6), 52-54
40.	Breaking Wave Impact Pressure on a Slender Vertical Cylinder	R. Manjula, S.A.Sannasiraj, K. Palanichamy	International Journal of Civil Engineering and Applications	2012, vol (2), pp. 1-11
41.	Cluster-based pavement deterioration models for low-volume rural roads	Sunitha, V., A. Veeraragavan, K. K. Srinivasan, and S.Mathew	ISRN Civil Engineering	2012, Vol.2012, Article ID 565948, 8 pages
42.	Application of Factor Analysis in maintenance	Sunitha, V., A. Veeraragavan, K. K. and Srinivasan,	International Journal of Pavement Research	2013, Vol (6), No.2, pp. 130-135

	management of low volume roads.	S. Mathew	and Technology	
43.	Identification of Artificial Recharge sites in a hard rock terrain using remote sensing and GIS	Saravanan. S,	International Journal of Earth sciences and Engineering	Vol-5(6), 877-883 (ISSN 0974-5904), 2012.
44.	Multivariate analysis and quality assessment of irrigation water in coastal areas of Chidambaram Taluk	Sartiyamurthi, S. and S.Saravanan	International Journal of Earth sciences and Engineering	Vol-6(1), 877-883 (ISSN 0974-5904), 2012.

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	Mrs. P.V.Premalatha	Dr. P. Jayabalan & Dr. K. Muthukkumaran	NIT Trichy
2.	K. Chithira	Dr.K.Baskar	NIT Trichy

### 9. Details of Book any authored by faculty.

<p>Dr.C.Natarajan The chapter titled “Vulnerability of Reinforced Concrete Structures subjected to Flood” in the book “Natural Disasters- Causes, Effects and Mitigation” published by In Tech – Open Science publisher, Shanghai.</p>
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### 11. Other Important Points

<p>The MHRD has sanctioned a Centre of Excellence in Transportation Engineering to the Department of Civil Engineering, N.I.T., Tiruchirappalli. The total grant amounts to Rs. 2.5 crores.</p> <p>One M.S. thesis completed under the guidance of Dr. K. Baskar</p> <p>Dr.S.T. Ramesh reviewed manuscripts for the following journals Clean Technologies and Environmental Policy Institution of Engineers International Journal of Green Energy International Journal of Environment and Waste Management (IJEWM). Journal of Water Sustainability. Basic Research Journal of Soil and Environmental Science (BRJSES)</p>
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International Journal of Environment and Waste Management  
Sky Journal of Journal of Soil Sciences and Environmental Management  
(SJSSEM)

Dr.R. Gandhimathi reviewed manuscripts for the following journals

Journal of Hazardous Materials  
Chemical Engineering Journal  
Desalination  
Desalination and Water Treatment  
Environmental Technology  
Journal of Industrial and Engineering Chemistry

All M.Tech. Structural Engineering students attended the short term (3 days) course on “Introduction to Forensic Engineering & Failure Analysis” by Shen En Chen in Dec 2012

Few M.Tech. Structural Engineering students attended 3 days short course on “Finite Element Methods” by Prof.J.N.Reddy during 21<sup>st</sup> -23<sup>rd</sup> March 2013







# COMPUTER SCIENCE AND ENGINEERING

## COMPUTER SCIENCE & ENGINEERING

### 1. Notable Achievements

#### 1.2. Students – Academic/Cultural Activities

Sl. No.	Name	Activity
1.	B. Vignesh	Research internship at the University of Konstanz, Germany as part of the DAAD WISE Scholarship during May-July 2013 (Photo-1 in Annexure)
2.	B. Vignesh, Jalandhar Singh, Sriram, M., Dinesh Prasanth, S.H., and Priya Sree, S.	NITTFEST'12 Core Team (Photo-2 in Annexure)
3.	Utkarsh Jaiswal	<ul style="list-style-type: none"> <li>• Headed the Media Relations team of Festember '12</li> <li>• Graduate admit - Master of Science in Computer Science at the University of California, Los Angeles (UCLA)</li> </ul>
4.	Amritha Raghunath	<ul style="list-style-type: none"> <li>• Graduate admit at Stanford UCSD, University of Wisconsin, Madison</li> </ul>
5.	V. Sreevatsan	<ul style="list-style-type: none"> <li>• Graduate admit at NCSU and TAMU</li> </ul>
6.	Layamrudhaa, R. V.	<ul style="list-style-type: none"> <li>• Graduate admit at UCSD, UT Austin, and Wisconsin</li> </ul>
7.	Sashank, M. V.	<ul style="list-style-type: none"> <li>• Publicity Head for Festember'12</li> <li>• Conducted a 'GreEndeavour' rally at Marina beach</li> </ul>
8.	Janani Venkataraman	Chairperson of Pragyam 2013 (Photo-3 in Annexure)
9.	Jeh Krishna Agarwal	<ul style="list-style-type: none"> <li>• Awarded the prestigious Schneider Electric India Foundation Scholarship</li> <li>• Head of the Workshops team of Festember 2012</li> <li>• Core member of the Festember 2012 team</li> </ul>
10.	Jeh Krishna Agarwal, Arvind Muthukumar, and Anant Agarwal	<ul style="list-style-type: none"> <li>• Head of the Google Developer Group NIT Trichy</li> <li>• Conducted DevFest Trichy</li> <li>• Conducted workshops on Android Development and Open Source development during Vortex 2013</li> <li>• Organised PenguFest, an open source symposium during Pragyam 2013</li> </ul>
11.	Anant Agarwal, Ranjith, S., Ajit Kumar	<ul style="list-style-type: none"> <li>• Participated in ACM ICPC Programming Contest 2013</li> <li>• Secured Rank-19 out of 260</li> </ul>

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.2. Papers presented by the Faculty / Students

Sl. No.	Author(s)	Details
1.	Ravi Kumar and	Paper title: Client Side Prevention of DDoS Attack through

Sl. No.	Author(s)	Details
	S. Selvakumar	Prevention of Buffer Overflow Attack Presented at: International Conference on Electrical Engineering and Computer Science (ICEECS-2012), 28 July 2012, Goa
2.	K. John Paul and S. Selvakumar	Paper title: Symptoms Based Detection and Removal of Bot Processes Presented at: International Conference on Recent Trends in Computing (ICRTC 2012), SRM University, NCR Campus, Delhi, India, 4-5 October 2012
3.	B.Nithya, C. Mala, Vijay Kumar, B., and N. P. Gopalan	“ Dynamic DCF Backoff Algorithm(DDBA) for Enhancing TCP Performance in Wireless Ad Hoc Networks ” -ICCSEA - 2012 ,Springer, Delhi, May 25-27, 2012
4.	M. Sridevi, C. Mala, and Siddhant Sanyam	“Comparative Study of Image Forgery and Copy-Move Techniques”- ICCSEA - 2012 ,Springer, Delhi, May 25-27, 2012
5.	M. Sridevi, C. Mala, and S. Sandeep	“Copy – Move Image Forgery Detection in a Parallel Environment” - SIPM 2012, CS&IT Series. Chennai, July 14-15, 2012.
6.	Ahtesham Akhtar Patel, S. Jaya Nirmala. S. Mary Saira Bhanu	“Security and Availability of the data in the cloud”, International Conference on Network Security and Applications(CNSA'12), July 15th -17th, 2012
7.	Kunwar Singh, C. Pandurangan, A. K. Banerjee	Adaptively Secure Efficient Lattice (H)IBE in Standard Model with Short Public Parameters. SPACE 2012: 153-172.
8.	Prashant Kumar Mishra, Kunwar Singh, Sudhanshu Baruntar	ID-Based Threshold Signcryption and Group Unsigncryption. SNDS 2012: 35-44.
9.	B.Nithya, C.Mala ,Vijay Kumar B and N.P.Gopalan	“ Dynamic DCF Backoff Algorithm(DDBA) for Enhancing TCP Performance in Wireless Ad Hoc Networks ” -ICCSEA - 2012 ,Springer, Delhi, May 25-27, 2012
10.	A.Santhana Vijayan and S.R.Balasundaram	“Effective Web Service discovery using k-means clustering”, 9 <sup>th</sup> International Conference on Distributed Computing and Internet Technology (ICDCIT-2013), LNCS 7753, pp. 455–464, 2013. KIIT University, Bhubaneswar, India, Feb 05 - 08,2013.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
C. Mala	Support Vector Machines (SVM)	8, June 2012
C. Mala	Technical Paper Presentation using LATEX software	5-6, July 2012

#### 3.2. Attended

Faculty / Students	Details
C. Mala	Introduction to Research Methodologies - Under the National Mission on Education through ICT(MHRD, Govt. of India), 25th June- 4th July 2012.
S. Jaya Nirmala	Writing Effective Conference Papers, NMEICT, Sastra University, Tanjore, Feb 18 <sup>th</sup> , 2012

<b>Faculty / Students</b>	<b>Details</b>
S. Jaya Nirmala	Introduction to Research Methodologies, NMEICT, NITT, June 25 <sup>th</sup> – July 4 <sup>th</sup> , 2012
S. Jaya Nirmala	PSG ACM workshop on Distributed systems - Research Challenges, April 30 - May 6, 2012.
S. Jaya Nirmala	Cloud Computing and Web services Workshop, CIT, Coimbatore, August 8th -10th , 2012
B. Nithya	Seminar on Support Vector Machines, 8.06.2012
B. Nithya	Workshop on Introduction to Research Methodologies, 25.06.2012 to 4.7.2012
B. Nithya	Workshop on Technical Paper Preparation using LATEX Software, 5.7.2012 to 6. 7. 2012
B. Nithya	Workshop on Nuances of Support Vector Machines, 5.12.2012 to 7.12.2012
M. Sridevi	Seminar on Support Vector Machines, 8.06.2012
M. Sridevi	Workshop on Introduction to Research Methodologies, 25.06.2012 to 4.7.2012
M. Sridevi	Workshop on Technical Paper Preparation using LATEX Software, 5.7.2012 to 6. 7. 2012
M. Sridevi	Workshop on Nuances of Support Vector Machines, 5.12.2012 to 7.12.2012
A.Santhana Vijayan	Seven Days FDP on Service Oriented Architecture at Anna University, Chennai, 21-05-2012 to 27-05-2012
A.Santhana Vijayan	Three Days Indo-US workshop on cloud computing and web services (CCWS'12), CIT-Coimbatore. 08-08-2012 to 10-08-2012

#### 4. Invited / Guest Lectures Delivered by the Faculty

<b>Faculty</b>	<b>Topic</b>	<b>Programme</b>	<b>Place &amp; Date</b>
S. Selvakumar	Evolution of ICT towards Better City and Better Life	Symposium on Computer Sciences	Fathima College, Madurai 04, March'13
S. Selvakumar	Futuristic Research Challenges in Cyber Security	National Workshop on Cyber Security – Issues and Challenges	VIT, Vellore 02, March'13

#### 5. Sponsored Projects Submitted

<b>Co-ordinator</b>	<b>Name of the Project</b>	<b>Sponsor</b>	<b>Amount (Rs. in Lakhs)</b>
S. Selvakumar	Integrated Framework for Cyber Space Security (IFCSS)	DST, New Delhi	13.03/-

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

Sl. No.	Title	Author(s)	Journal	Year Vol. (No) Page
1	Avoidance of Security Breach through Selective Permissions in Android Operating System	Lakshmi Priya, S., Vinitha Reddy, G., and S. Selvakumar	ACM SIGSOFT Software Engineering Notes	Volume 37 Issue 5, Sept. 2012, pp. 1-9
2	Detection of distributed denial of service attacks using an ensemble of adaptive and hybrid Neuro-fuzzy systems	P. Arun Raj Kumar and S. Selvakumar	International Journal of Computer Communications, Elsevier Publications	Vol. 36, Issue No. 3, Feb.'13, pp. 303-319
3	Threshold Based Kernel Level HTTP Filter (TBHF) for DDoS Mitigation	Mohamed Ibrahim, A. K., Lijo George, Kritika Govind, and S. Selvakumar	International Journal of Computer Network and Information Security, MECS Publishers, Hong Kong	Vol. 12, pp. 31-39
4	Prevention of XSS Attacks Using STCD: Server Side Tagging and Client Side Differentiation	Siva Brahmasani, S. Selvakumar, and E. Sivasankar	ACM SIGSOFT Software Engineering Notes	Volume 37, Issue 6, November 2012
5	A Comparative Study of the Secret Sharing Algorithms for Secure Data in the Cloud	Ahtesham Akhtar Patel, S. Jaya Nirmala. S. Mary Saira Bhanu	International Journal on Cloud Computing: Services and Architecture (IJCCSA)	volume 2, Number-4, August 2012
6	Fault tolerant workflow scheduling based on replication and resubmission of tasks in Cloud Computing	S.K. Jayadhivya, S. Jaya Nirmala. S. Mary Saira Bhanu	International Journal on Computer Science and Engineering (IJCSE)	2012 4(6), pp 996 - 1006.
7	Lattice Based Forward-Secure Identity Based Encryption Schemes with Shorter Ciphertext	Kunwar Singh, C. Pandu Rangan, A. K. Banerjee	Journal of Information Science and Information security ( JISIS )	vol. 3, no. 1, 2013
8	Lattice Based Forward-Secure Identity Based Encryption Schemes	Kunwar Singh, C. Pandu Rangan, A. K. Banerjee	Journal of Information Science and Information security ( JISIS )	volume 2, number 3/4, November 2012

## 8. Ph.D. Awarded

Sl. No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	K.R. Udaya Kumar Reddy (Awarded)	K. Viswanathan Iyer	NIT, Tiruchirappalli
2.	N. Ramasubramanian (Awarded)	N. Ammasai Gounden	NIT, Tiruchirappalli
3.	P. Arun Raj Kumar (Thesis submitted)	S. Selvakumar	NIT, Tiruchirappalli
4.	P. Venkata Subba Reddy (Thesis submitted)	K. Viswanathan Iyer	NIT, Tiruchirappalli

## 9. Details of Book any authored by faculty.

Wiener Index of Graphs - Graph Theoretical and Computational Aspects  
Lambert Academic Publishers AG & Co. March 2012. by K. Viswanathan Iyer

## 11. Other Important Points

- Ms. Radha Balasundaram awarded M. S. (by research) degree under the guidance of Prof. S. Selvakumar.
- Ms. Kritika Govind supervised by Dr. S. Selvakumar has submitted her thesis for award of M. S. (by Research) degree.

## ANNEXURE



Photo 1. B. Vignesh (Left bottom) with Prof. Ulrik Brandes and his interns at Germany



Photo-2. NITTFEST'12 Core Team. (From Left) Sriram, Dinesh, Priya, Vignesh, and Jalandhar



Photo-3. Janani Venkataraman (Extreme Left), Chairperson, Pragyan 2013



# COMPUTER APPLICATIONS

## COMPUTER APPLICATIONS

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised

S.No	Coordinator	Programme	Period
1.	S. Nickolas, S. Mary Saira Bhanu, Sriram Kumar	Research Issues and Challenges in Social Network Computing	4/05/2012
2.	S. Nickolas, A. Vadivel, S. Mary Saira bhanu	Data Management on Cloud Computing Platforms,	1/08/2012

#### 2.2. Papers presented by the Faculty / Students

Author(s)	Details
S.Nickolas, R.Eswari	International Conference on Soft Computing, Intelligent Systems and Information Technology, at Bali, Indonesia, 24-25 <sup>th</sup> May 2012.
A.Saravanan and S.R.Balasundaram	Paper entitled "Pruning Strategies to Refine Resource List for NN Queries in Location Based Services" in the 2nd Intl. Conf. on Communication, Computing & Security (ICCCS 2012), 6-8 October 2012 held at NIT Rourkela. Elsevier Proc. Vol.6.pp.598-605 (2012).
K.Nandhini and S.R.Balasundaram	Paper entitled "Significance of Learner Dependent Features for Improving Text Readability using Extractive summarization" in the 4th Intl. Con. on Intelligent Human Computer Interaction" held at IIT Kharagpur during Dec.27-29, 2012.
S.Akhilan and S.R. Balasundaram	Paper entitled "Personalization of Automobile News Documents Using Genetic Algorithm Model" in the Procedia Eng., Vol.38, Issue (2012),p.2930-2938, Elsevier Science.
P Shanmugavadivu, P Sumathy, A.Vadivel	Image Retrieval from WWW using Attributes in HTML TAGs, In Proc. Of International Conference on Communication computing and Security in NIT Rourkela, India, 06-08 October 2012, Procedia Technology, Volume 6, issue (2012), pp. 509-516, ISSN: 2212-0173, Elsevier Science.
R Vishnupriya and A Vadivel	(2012), Incremental Indexing for High-Dimensional Data using Tree Structure, In Proc. Of International Conference on Communication computing and Security in NIT Rourkela, India, 06-08 October 2012, Procedia Technology, Volume 6, issue (2012), pp. 540-547, ISSN: 2212-0173 Elsevier Science.
Shaila S. G, A Vadivel, R. Devi Mahalakshmi, J. Karthika	DwCB – Architecture Specification of Deep web Crawler Bot with Rules based on FORM values for Domain Specific Web Site, Lecture Notes in Computer Science and Technology (LNICST), SPIT 2012, - Passent Elkafrawy (Ed.), pp. 188–193, 2012.

Shaila S.G , A Vadivel, R. Devi Mahalakshmi, J. Karthika,	“N-Grams Corpus Generation from Inverted Index for Query Refinement in Information Retrieval Applications”, In the Proc. on IEEE International Conference on Emerging Trends in Science and engineering and Technology, December 2012 (Accepted).
G.G.Lakshimi Priya and S.Domnic	A Probabilistic Classifier for Evaluating the Effects of Various Features for Medical Video - Shot Boundary Detection,” ICGVIP-MedImage-2012, Dec 16-19, IIT-B, 2012, India.
R. Eswari and S. Nickolas	“Solving Multi-Objective Task Scheduling for Heterogeneous Distributed Systems using Firefly Algorithm”, Proceedings of the Fourth International Conference on Advances in Recent Technologies in Communication & Computing (ARTCom 2012), Bangalore, India, LNEE, pp. 97-103, Springer-Verlag Berlin Heidelberg, Oct. 19-20, 2012
Sangeetha. S, Michael Arock	Event Detection within Text documents using MaxEnt Classification”, Proceedings of 3rd International conference on Advanced Topics in Artificial Intelligence ATAI 2012, Singapore, Oct 22-23, 2012, GSTF, pp.1-5.
Sangeetha. S, Michael Arock	Event Coreference Resolution using Mincut based Graph Clustering”, Proceedings of International workshop on Natural Language Processing NLP 2012, Coimbatore, India. Oct 26-28, 2012, CSCP, pp. 253-260

### 2.3. Attended by the Faculty / Students

Faculty / Students	Details
S.Nickolas	Indo-US workshop on Cloud Computing and Web Services, 9-10, August 2012, CIT, Coimbatore.
Dr.S.Domnic	ICGVIP 2012, Dec 16-19, IIT-B, 2012, India.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
S.R. Balasundaram	"Content Management System"	Sep. 8, 2012
S.R. Balasundaram	ISTE Workshop on "Aakash for Education"	Nov.10&11, 2012
S.R. Balasundaram	MHRD Sponsored Workshop on "NMEICT"	Feb.11 &12, 2013

#### 3.2. Attended

Faculty / Students	Details
S.R. Balasundaram	First NKN Annual Workshop "The e-Infrastructure of India", on November 2nd, 2012, conducted by National Informatics

	Centre (NIC) and Indian Institute of Technology (IIT), Bombay.
Dr.S.Domnic	ICGVIP-MedImage Workshop 2012, Dec 16-19, IIT-B, 2012, India
R.Eswari	Attended a workshop on “Distributed Systems – Research Challenges”, organized by Department of Computer Science and Engineering & ACM Professional Chapter, PSG College of Technology, Coimbatore, from 3rd to 6th May 2012
R.Eswari	Attended a Short Term Course on “Application of Biologically Inspired Algorithms for Power System and Power Electronics Engineering”, organized by Department of EEE, NIT, Trichy, on 28th July 2012
R.Eswari	Attended a Short Term Course on “Engineering Optimization and Approaches”, organized by Department of Production Engineering, NIT, Trichy, from Aug. 24-25, 2012

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
S.R. Balasundaram	"Web Services"	DRDO sponsored Two Days National Level Seminar on "Web Services"	Md. Sathak Engg. College, Kilakarai 20-21 September 2012
S.R. Balasundaram	"E-Learning"	AICTE Sponsored Staff Development Programme on "E-Learning and Web Services"	Dr.Mahalingam College of Engg. & Tech., Pollachi May 14-27,2012

#### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1.	Sixty personal computers	Rs. 27,63,720.00
2.	Intel Xeon E5645 processor	Rs 5,93,659.11

#### 7. Research Papers Published in National / International Journals

##### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Integrated location aware medical care services.	Saravanan, A., and S. R. Balasundaram.	Electronic Markets - Intl. Journal of Networked Business, Springer	Vol.23 (1) : pp.5-14 (2013).
2	“A Fuzzy Rule Based Approach for	Vadivel A and Surendiran B,	”, In International Journal on Computer	2013, 43, PP. 59-267

	Characterization of Mammogram Masses into BI-RADS Shape Categories		in Biology and Medicine, Elsevier Science,	
3	“Architecture Specification of Rule Based Deep Web Crawler with Indexer”, In	Shaila S.G and A Vadivel,	“ International Journal of Knowledge and Web Intelligence, InderScience –	Accepted.
4	"Partition based Sorted Prefix tree construction using global list to mine maximal patterns with incremental and interactive mining	R.Vishnu Priya, A.Vadivel,	" In: International Journal of Knowledge Engineering and Data Mining(IJKEDM), Inderscience,	Vol. 2 (2/3), 2012, pp. 137-159.
5	“Capturing Semantics of Web Page using Weighted Tag- tree for Information Retrieval ”	R.Vishnu Priya and A.Vadivel,	In: International Journal of Asian Business and Information Management, IGI Global, ISSN: 1947-9638,	Vol. 3(4), 2012, pp.7-24.
6	" Dynamically Reorganized Pattern Mining using Fast CP-Tree for Knowledge Discovery",	R.Vishnu Priya and A.Vadivel,	In: International Journal of Information Systems & Social Change (IJSSC), IGI Global,	Vol. 3(1), pp. 62-80, Jan-Mar 2012.
7	"Mammogram Mass Classification using Various Geometric Shape and Margin Features for Early Detection of Breast Cancer,	B.Surendiran, A.Vadivel,	", International Journal of Medical Engineering and Informatics, Inderscience	Vol 4, No. 1, pp:36-54, 2012.
8	“User Behaviour Pattern Mining from Weblog”,	R.Vishnu Priya, A.Vadivel,	In: International Journal of Data Warehousing and Mining (IJDWM), IGI Global,	8(2), pp. 1-22, Apr-Jun 2012
9	Locally Global Codebook for Image Retrieval and Clustering using Vector Quantization	Janet B., A.V. Reddy and S. Dominic	ICTACT Journal On Image And Video Processing	2012, May, 2 (4), 397-404
10	Effective Task Scheduling for Heterogeneous Distributed Systems using	R. Eswari and S. Nickolas	Intl. Journal of Computational Science and	Accepted (2012)

	Firefly Algorithm		Engineering (IJCSE), Inderscience	
11	Recognizing sentence similarity using similitude and Dissimilarity features'	Sangeetha, S. and Arock, M.	Int. J. Advanced Intelligence Paradigms, Inderscience	2012 Vol. 4, No. 2, pp.120–131.

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	S Saravanakumar	Dr. A Vadivel	NIT Trichy
2.	B. Janet	Dr. A. V. Reddy	NIT Trichy



# ELECTRICAL AND ELECTRONICS ENGINEERING

## Electrical and Electronics Engineering

### 1. Notable Achievements

#### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization
1.	T.Aswini	First Prize in Technical Quiz Third Prize in paper presentation.	Narayana Engineering college on behalf of IEI of students
2.	Duggineni Giri Babu	Won first prize in “quiz” in sparx-2012, a national level technical symposium held at sri venkateswara university college of engineering, Tirupati.	SVUCE
3.	S.Dhivya	Cash Prize Of Rs.1500	For securing school second in higher secondary and for centum in mathematics and french Pondicherry engineering college,puducherry
4.	S.Dhivya	Eight Gram Gold Coins	For securing school second in higher secondary and for centum in mathematics and french Amalorpavam higher secondary school
5.	B.Balaganesh	Swimming 4*100m relay Third place	District Athletic Association
6.	Inthumathi Chandrasekaran	Rolling Cup For Mathematics In Standard X	Good shepherd Matriculation HSS school.
7.	Richu Sebastian C	1. Won Second Prize For The Best Innovative Project Called ‘3g Controlled Robot’,From IIT Madras During The Technical Fest Called SHAASTRA. 2. Won Third Prize From NIT Calicut For The Project ‘3G Controlled Robot’. 3. Have Implemented Flood fill Algorithm In Swarm	IITM

		Robotics As Our Final Year Project.  4. Have won consolation prize for reaching finals of circuit debugging contest, held at ies engineering college.	
8.	Sreevatsav.R.S.S.D	1.Won First Prize In “Maze Solving” Contest Held At Gokaraju Rangaraju institute of engineering and technology, hyderabad.  2.Won First Prize In Regional Round Of Roboliga-2010, A National Level Robotic Competition Held At Nit, Warangal.  4.Won First Prize In Technical Quiz Competition In Eloquence-'10, A National Level Student Technical Symposium.	1. GRIET  2. ROBOLIGA  3. ELOQUENCE
9.	Harini M	Op Jems Scholarship	Op Jindal Group
10.	Team 1 Vivekanandan b Kishore p Sethu chidambaram Manikandan ananth  Team 2 Kowshick b Dinesh p Ramesh k govindarajan Pankaj raghav  Arjun prasath Sandeep david Suryanarayanan Sachin p santhosh	The two teams of students are the winners of first phase of texas instruments india analog design contest.  The two teams are amongst the top 23 teams from a total of 400 participating teams all over india.  Winners of Sangam 2013 In The Circuital Category.	Texas Instruments India.  Pragyan, NIT Trichy.
11.	Varun R Sekar	Won First Place In 'Think Quest' - An International Level Website Making Competition	NIT-T
12	Abhishiekh	Won Third Place In	NIT-T

		Sanrachana; Pragyana Third Place In Sangam ; Pragyana	
13	R. Anusha, irin jose and niranjan kumar	Members Of The Dance Troupe Of Nitt Which Has Won Accolades From All Across The Country Volleyball(Runners)- Saurya(IIT-KGP),	NIT-T  IIT-KGP
14	Ilangovan, syed md. Sadiq	Handball(Winners): Inter-Nit,	NIT-T
15	Krishna Kumar	Volleyball(Winners)- Inter- Nit (Surat)	NIT (SURAT)
16	Sant Kumar Bagri	Handball (Winners): Inter- NIT	NIT-T

## 2. Conference / Seminars / Symposium / Special Lectures

### 2.2. Papers presented by the Faculty / Students

Author(s)	Details
K. Sudareshwaran ,Hariprasad B, P. Sankar, P.Srinivasa Rao Nayak and S. Sankar	“A Voltage Constrained Time Sharing Switching Scheme for Dual Input Buck Converter,” presented in the IEEE International conference on Power Electronics, Drives and Energy Systems (PEDES 2012), CPRI, Bangalore.
K. Sundareshwaran, P.Sankar, and P.Srinivasa Rao Nayak,	“Analysis on the Failure of Dynamic Braking of Capacitor-Run Induction Motor Supplied from Half-Controlled Converter,” presented in the IEEE International conference on Power Electronics, Drives and Energy Systems (PEDES 2012), CPRI, Bangalore.
K. Sundareshwaran, S.Sankar, P.Srinivasa Rao Nayak	“Feedback controller Design for a Buck-boost Converter through Evolutionary Algorithms,” presented in the IEEE International conference on Power Electronics, Drives and Energy Systems (PEDES 2012), CPRI, Bangalore.
N.Kumaresan, Namani Rakesh, S. Senthil Kumar and M. Subbiah	“Performance predetermination of variable speed wind-driven grid-connected SEIGs”, Proceedings of the IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012), 16 <sup>th</sup> – 19 <sup>th</sup> December 2012, Bangaluru, India.
N. Kumaresan, Namani Rakesh, S. Senthil Kumar and M. Subbiah	“Major methods of steady-state analysis of three-phase SEIGs-A summary”, Proceedings of the 3rd IEEE International Conference on Sustainable Energy Technologies (IEEE ICSET 2012), 24 <sup>th</sup> – 27 <sup>th</sup> September 2012, Kathmandu,

	Nepal, pp. 415-419.
N. Kumaresan, A. Arjun, B.Vinod, D.R. Binu Ben Jose	“A Power Electronic controller for PV-tied Grid-Connected system with single parameter sensing for MPPT using Boost Converter and Line-Commutated Inverter”, Proceedings of the 3 <sup>rd</sup> IEEE International Conference on Sustainable Energy Technologies (IEEE ICSET 2012), 24 <sup>th</sup> – 27 <sup>th</sup> September 2012, Kathmandu, Nepal, pp.36-40.
M.Rajasekaran & M.Venkata Kirthiga	“A Modern Self-Defined Extinction Advance Angle Controller for CCC based Hybrid HVDC Systems “ –at the third International Conference on Computing and Control Engineering (ICCCE 2012), Chennai, 12 & 13 April, 2012 – student presented the paper.
M.Rajasekaran & M.Venkata Kirthiga	“Investigations on Modern Self-Defined Extinction Advance Angle Controller for CCC based HVDC Systems “ –at the International Conference on Control, Communication and Power Engineering, April 27 <sup>th</sup> – 28 <sup>th</sup> in Bangalore organized by Springer, pp 490-495, 2012.(presented the paper).
PramodkumarMuppiddi & M.Venkata Kirthiga	“Line contingency ranking based on detection of accidental islands for autonomous micro-grids”, at the third International Conference on Control, Communication and Power Engineering, April 27 <sup>th</sup> – 28 <sup>th</sup> in Bangalore organized by Springer, pp 485-489, 2012. (presented the paper).
Purna Chandra Rao Thota & M.Venkata Kirthiga	“Optimal siting and sizing of Distributed Generators in Micro-grids”, at the IEEE INDICON 2012, in Kochi, India, during 7 <sup>th</sup> -9 <sup>th</sup> December 2012. (presented the paper).
N. Kumaresan, S. Senthil Kumar, and T. Karthikeyan	“A Simple Analog Voltage Controller for Three-Phase Single Switch Boost Rectifier”, Proceedings of 10th International Conference on Environment and Electrical Engineering (EEEIC- 2011), 8-11, May 2011,Rome, Italy.
N. Kumaresan, Namani Rakesh,S. Senthil Kumar & M. subbiah,	“Performance predetermination of variable speed wind-driven grid-connected SEIGs”, Proceedings of the IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012), 16 <sup>th</sup> – 19 <sup>th</sup> December 2012, Bangaluru, India.
Vinothkumar, K. & Selvan, M.P.,	“DG Planning Method for Enhancement of Voltage Stability Margin in Distribution System”, IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012), 16-19 December, 2012, CPRI Bangalore, INDIA, pp. 1-6.
Lalit Negi & Selvan, M.P.	“Maximum Penetration Ranking based Siting and PSO Assisted Goal Programming based Sizing of DG units in Radial Distribution

	System”, National Power Systems Conference (NPSC 2012), 12-14 December, 2012, IIT-BHU, Varanasi, INDIA.
Srinath, S., Anu G. Kumar and Selvan, M.P.	“Experimental Verification of Unified Power Quality Conditioner with Transformation Less Combined Mode Control”, National Power Systems Conference (NPSC 2012), 12-14 December, 2012, IIT-BHU, Varanasi, INDIA.
Srinath, S., Anu G. Kumar and Selvan, M.P.	“Simulation and Experimental Verification of Transformationless Control of Series Active Filter for Mitigating Load Voltage Harmonics”, National Power Systems Conference (NPSC 2012), 12-14 December, 2012, IIT-BHU, Varanasi, INDIA.
Ranjith Kumar, S., Raja, P. and Selvan, M.P.	“Virtual Laboratory Environment using MATLAB GUI for Teaching of Induction Generators” IEEE International Conference INDICON-2012, 7-9 December, 2012, Cochin, INDIA, pp. 676-681.
Selvan, M.p, Vinothkumar .k	DG planning method for enhancement of voltage stability margin in distribution system, IEEE International Conference on power electronics, drives and energy systems (PEDES2012), 16 <sup>th</sup> -19 <sup>th</sup> December, 2012, CPRI Bangalore, pp.1-6
Rao, V M Sandeep, Natarajan Aravind, Moorthi, S. & Selvan. M.P.	“Real-time Object Tracking in a Video Stream using Field Programmable Gate Array” IEEE International Conference INDICON-2012, 7-9 December, 2012, Cochin, INDIA, pp. 167-170.
Selvan, M.P. and Chiranjeevi, V	“A Method for Siting of STATCOM and SSSC for Power Transfer Capacity Enhancement” IEEE International Conference INDICON-2012, 7-9 December, 2012, Cochin, INDIA, pp. 367-372.
Venkatraman, K., Aasish, T.R., Selvan, M.P. and Moorthi, S.	“Experimental Verification of FPGA Controller based Series Active Filter” IEEE Asia Pacific Conference on Postgraduate Research (PRIMEASIA-2012), 5-7 December, 2012, Hyderabad, INDIA, pp. 197-200.
P. Gopakumar, M. Jaya Bharata Reddy, D. K. Mohanta,	Renewable Energy Utilization using Low Power Micro grid System, IEEE international conference on power, energy and control (ICPEC’13) , February 6-8, 2013, Tamil Nadu, INDIA.
P. Gopakumar, G. Surya Chandra and M. Jaya Bharata Reddy,	"Optimal placement of phasor measurement units for Tamil Nadu state of Indian power grid", IEEE International conference on Environment and Electrical Engineering, (EEEIC-2012), 18-25th May 2012, Venice (DOI: 10.1109/EEEIC.2012.6221549).

Ashwini Devendran G , Jaikumar M and P.Raja	“A Simple Methodology for the Steady State Analysis of Doubly Fed Induction Generator”, Proceedings of the IEEE India Conference (INDICON 2012), 7-9 December 2012, Kerala, India.
Sree Ramya and P.Raja	“Estimation and Performance Evaluation of an Induction Machine using Optimization Techniques”, Proceedings of the IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012), 16 <sup>th</sup> – 19 <sup>th</sup> December 2012, Bangaluru, India.
Surendhar, S. , S.Ranjith Kumar and P.Raja	“Assessment and Comparison of Different Neutral Current Compensation Techniques in Three-Phase four-wire Distribution System”, 3rd IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 2012, 25-28 June 2012, Aalborg, Denmark.
G.Saravanan Ilango,A.Deenadayalan	Position Sensorless Sliding Mode Observer With Sigmoid Function For Brushless Dc Motor,International Conference On Advances In Power Conversion And Energy Technologies(Apcet),Pp.1-6,2 <sup>nd</sup> -4 <sup>th</sup> Aug2012
S.Moorthi,Gauri Shankar Singh,Devesh Singh	low power low jitter phase locked loop for high speed clock generaion,IEEE-premeasia2012,dec5th-7 <sup>th</sup> ,2012
Dinesh.P.Kishore.P,Vivekanandan.B,Moorthi.S	RFID Based Navigation System Or Unmanned Material Handling Vehicles Using Fpga,Ieee Conference On Intelligent Systems And Signal Processing(Issp2013),1rst-2 <sup>nd</sup> ,March,2013,Gcet
Venkatraman K, T.R. Aashish, Selvan MP, S. Moorthi,	“Experimental verification of FPGA Controller Based Series Active Filter”, IEEE-PRIMEASIA 2012 December 5-7, 2012.
Duggineni Giri Babu	Presented a paper on "Maglev Train" in Sparx-2012, a national level technical symposium held at Sri Venkateswara University College of Engineering, Tirupati.
P.Ramesh, S.Sai Sandeep	Mitigation of Harmonics In Statcom Making Use Of Multilevel Inverter Topology.
P.ramesh, S.Sai Sandeep.	Power Quality And Improvement
Periyaasamy.A,Murali.K, Balaji.K.M	Real Time Dynamic Economic Dispatch Of Generators With Non Smooth Cost Function
Febi C	“ A multilevel Inverter Topology Based On

	Multiwinding Multitapped Transformer For Improved Wave Shape Requirements”
Ranjith Kumar S.; Surendhar, S.; Negi, A.; Raja, P	"Zig Zag Transformer performance analysis on harmonic reduction in distribution load"  IEEE International Conference on Electrical, Control and Computer Engineering (INECCE), June 2011, Malaysia
Ranjith Kumar S.; Surendhar, S.; Negi, A.; Raja, P	“Assessment and comparison of different neutral current compensation techniques in three-phase four-wire distribution system”  3 <sup>rd</sup> International Conference on Power Electronics and Distributed Generation( PEDG 2012), IEEE, June 2012, Denmark
Ranjith Kumar S; Raja. P; Selvan .M .P	“Virtual Laboratory Environment using MATLAB-GUI for Teaching of Induction Generators”  International Conference on Innovation in Social and Humanitarian Engineering, IEEE INDICON, Dec 2012, India
S.Ranjith Kumar, M.P. Selvan, P. Raja and K. Vinothkumar	“GUI Supported Distributed Generation Planning Tool for Smart Grid Application in Distribution System”(Submitted for Power Grid Conference 2013, India)
Ranjith Kumar S; Mahesh Kumar M	“Analysis of User Defined Constant Frequency Switching in Four-Leg inverters”(Submitted for review)
Anish NK, Deepak Krishnan, S.Moorthi, M.P.Selvan	FPGA Based Microstepping Scheme for Stepper Motor in Space-Based Solar Power Systems at ICIIS-2012, IIT-Madras
Sree Ramya A(107110091) P Raja(Assistant Professor, EEE Dept)	Presented paper “Estimation and Performance Evaluation of an Induction Machine using Optimization Techniques” in Power Electronics, Drives and Energy Systems(PEDES) IEEE International Conference in IISc Bengaluru in December 2012.
Ashwini Devendran G(107110019) Jaikumar M P Raja(Assistant Professor, EEE Dept)	Presented paper “A Simple Methodology for the steady state Analysis of Doubly fed Induction Generator” for IEEE Conference, Indicon, 2012.

### 2.3. Attended by the Faculty / Students

Faculty / Students	Details
N. Kumaresan	3 <sup>rd</sup> IEEE International Conference on Sustainable Energy Technologies (ICSET'12) held in Kathmandu, Nepal on 24 – 27 September 2012
N. Kumaresan	Chaired a technical session in IEEE International Conference on Power, Energy & Control (ICPEC'13), organized by PSNA, Dindigul, during 6-8 February 2013.
M.Venkata Kirthiga	Chaired one technical session in the IEEE International Conference on Power, Energy and Control (ICPEC'13) during February 6-8, 2013
S.Senthil Kumar	“Performance predetermination of variable speed wind-driven grid-connected SEIGs”, Proceedings of the IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012), 16 <sup>th</sup> – 19 <sup>th</sup> December 2012, Bangaluru, India.
P.Srinivasa Rao Nayak	Attended Pre- conference tutorial conducted during the IEEE international conference “Power Electronics, Drives and Energy Systems” Organized by CPRI, Bangaluru, INDIA on 16 <sup>th</sup> December 2012.
Anish NK, Deepak Krishnan, S. Moorthi, Selvan MP	“FPGA Based Microstepping Scheme for Stepper Motor in Space-Based Solar Power Systems”, Seventh International Conference on Industrial and Information Systems, IEEE-ICIIS 2012, IIT Madras, Chennai, INDIA, 06-09 August 2012.
Sandeep Rao, Aravind Natarajan, S. Moorthi, Selvan MP,	“Real Time Object Tracking in a Video Stream using FPGA”, IEEE-INDICON 2012, December 7-9, 2012.
B.Balaganesh	Soft Computing Techniques In Power Electronics Systems
Roshima.T.V	HVDC Seminar
Dinesh P (107110059) Kishore P (107110060) Vivekanandan B (107110103)	Attended an IEEE International Conference on Intelligent Systems and Signal Processing (ISSP 2013) held in Anand City, Gujarat to present a paper titled – “RFID based Navigation System for Unmanned Material Handling Vehicles using FPGA”, March, 2013.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Dr. N. Ammasaigounden & Dr. N. Kumaresan	Short-term training program on “PIC microcontroller applications in Power Electronic circuits”, Under the Self-Financed Category	23 <sup>rd</sup> June 2012
Dr. N. Kumaresan & Dr. N. Ammasaigounden	Short-term training program on “Wind Energy Electric Conversion Systems (WEECS)”, Under the Self-Financed	4 <sup>th</sup> – 5 <sup>th</sup> January 2013

	Category	
Dr. N. Ammasaigounden & Dr. N. Kumaresan	Short-term training program on “Solar PV Electric Conversion Systems (SPVECS)”, Under the Self-Financed Category	18 <sup>th</sup> – 19 <sup>th</sup> January 2013
Dr.K.Sundareswaran Dr. Sishaj P.Simon Mr. P.Srinivasarao Nayak	One day Short-Term Course on,Application of Biologically Inspired Algorithms for Power System and Power Electronics Engineering Under the Self-Financed Category	28 <sup>th</sup> July 2012
M.Venkata Kirthiga	Two day short term course on “High Voltage DC Transmission”, under Self financed scheme at the National Institute of Technology Tiruchirapalli.	17 <sup>th</sup> – 18 <sup>th</sup> August 2012
S.Senthil Kumar and G.Saravana Ilano	Modeling of Electrical Systems Using Matlab/Simulink	21 <sup>st</sup> & 22 <sup>nd</sup> July 2012
S.Mageshwari and S.Moorthi	Short term course on MSP430 Microcontroller	February 23 <sup>rd</sup> & 24 <sup>th</sup>
P.Raja	Short-Term Course on “Power system Protection issues with Distributed Generators”	3 <sup>rd</sup> & 4 <sup>th</sup> August 2012
Moorthi S	FPGA Based System Design	13 <sup>th</sup> – 14 <sup>th</sup> July 2012
S. Mageshwari S. Moorthi	MSP 430 Microcontroller Based System Design	23 <sup>rd</sup> – 24 <sup>th</sup> February, 2013

### 3.2. Attended

Faculty / Students	Details
Dr. N. Kumaresan	Tutorial on “Grid Integration of Renewable Energy Sources and Electric Vehicles”, delivered by Associate Prof. Udaya K. Madawala, The University of Auckland, New Zealand and Associate Prof. Mahinda Vilathgamuwa, Nanyang Technological University, Singapore during The 3rd IEEE International Conference on Sustainable Energy Technologies (ICSET’12) held in Kathmandu, Nepal on 24 – 27 September 2012
Mr. P.Srinivasarao Nayak	Short-Term Course on “MSP 430 Microcontroller based system Design” Organized by the Department of EEE, NIT Trichy, 23 <sup>rd</sup> – 24 <sup>th</sup> February 2013.
Mr. P.Srinivasarao Nayak	Short-Term Course on “PIC microcontroller applications in Power Electronic Circuits” Organized by the Department of EEE, NIT Trichy, 22 <sup>nd</sup> -23 <sup>rd</sup> June 2012.
M.Venkata Kirthiga	Three day Faculty Training programme on Teaching Methodologies, organized by the Indian Institute of Technology Madras, Chennai, from 20 <sup>th</sup> – 22 <sup>nd</sup> August 2012.
Aswini ,Ramya	Science Fair
Duggineni Giri Babu	Attended a workshop on "Robotics" held at Anna University,

	Chennai.
B.Balaganesh	Central Workshops, Southern Railway, Ponmalai, Trichy.
Periyasamy A	Embedded Engineering Solutions For Automation
Roshima.T.V	MSP 430 Microcontroller Workshop Conducted By Electrical Dept-NITT
Kiran Kamini Gautam	MSP 430 Microcontroller Workshop Conducted By Electrical Dept-NITT
Asha Radha Krishnan	MSP 430 Microcontroller Workshop Conducted By Electrical Dept-NITT
Inthumathi Chandrasekaran	Workshop On Robotics Orientation Programme
Inthumathi Chandrasekaran	Workshop On Renewable Sources Of Energy
Inthumathi Chandrasekaran	Weeklong Implant Training In Electrical Installations At Chennai Airport
Richu Sebastian C	<ul style="list-style-type: none"> <li>• Attended workshop on microcontroller(MSP430 series) from TEXAS INSTRUMENTS</li> <li>• Attended a workshop on robotics at CUSAT university.</li> </ul>
Sreevatsav.R.S.S.D	<ul style="list-style-type: none"> <li>• Attended a workshop on MATLAB and LABVIEW held at International Institute of Information Technology, Pune.</li> <li>• Attended a workshop Logitrix, on Advanced Autonomous Robotics held at Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad.</li> </ul>
Ranjith Kumar .S	Summer Research Assistantship under Dr. Mahesh Kumar M in Indian Institute of Technology Madras, during May 2012 to July 2012“ <b>Virtual Laboratory to Enhance Learning of Power Distribution Systems</b> ”
Anish. N .K	Attended workshop on Wireless Embedded Systems conducted by IISc, Bangalore and FICE during December 2012.

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr. N. Kumaresan	Operational aspects of Induction Generators & Reactive power Control in Induction Generators	Short term Course on Power Electronics in Micro/Mini Hydropower Generation (PEMHG-12)	Dept. of Water Resources Development and Management & Continuing Education Centre, Indian Institute of Technology, Roorkee, during Nov. 29 – Dec. 01, 2012.
Dr. N. Kumaresan	Operational aspects of	DST, Govt. of India and Entrepreneurship	EEE, Arunai College of

	Induction Generators	Development Institute of India sponsored Faculty development programme on Renewable Energy Sources Technology and Applications	Engineering, Tiruvennamalai during 3-15, December 2012.
Dr. K. Sudareswaran	Fuzzy systems	National conference, 2/3/2013	JJCET, Trichy
Dr. M.P. Selvan	Soft Computing Applications to FACTS	AICTE sponsored staff development programme on Soft Computing Techniques in Electrical Systems & Control	Government College of Technology, Coimbatore on 18 <sup>th</sup> May 2012
Dr. M.P. Selvan	Distributed Generation Planning for Smart Grid	CSIR sponsored two day workshop on “Smart Grids”	Anna University of Technology Madurai, on 28 <sup>th</sup> July 2012
Dr. M.P. Selvan	Power Electronic Applications in Wind Turbine Generator Systems	TEQIP sponsored faculty development programme on Power Electronic Controllers for Renewable Energy Resources	A.C. College of Engineering and Technology, Karaikudi on 10 <sup>th</sup> November 2012
M.Venkata Kirthiga	Genetic Algorithm and Particle Swarm Optimization Algorithm	National level workshop on “Advanced Techniques in Electrical Systems”, on 31 <sup>st</sup> August 2012.	KINGS College of Engineering, Tanjavur
M.Venkata Kirthiga	HVDC and FACTS	In October 2012	Anna University – Ramnad Campus
V. Sankaranarayanan	Nonlinear control	Course on advanced control techniques	DRDL – Hyderabad

### 5. Sponsored Projects undertaken.

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
Dr. M. Jaya Bharata Reddy	Development of Micro grid Test-Bed for Renewable Energy Management System	Department of Science and Technology, Gov. of India	21

### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1	Power World Simulator Software	8.88
2	PSim Software	8.14

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S.No	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Operation of inverter assisted wind-driven slip-ring induction generator for stand-alone power supplies	K. Vijayakumar, N. Kumaresan and N. Ammasaigounden	IET Electr. Power Appl.	Accepted for publication
2.	Wind-driven SEIGs for supplying isolated loads employing DSP based power electronic controllers	S.Senthil Kumar, N.Kumaresan, N. Rakesh, K. Vijayakumar and M. Subbiah	International journal of Wind Engineering	Vol.36 , No.6, 2012, pp.739-757
3.	Analysis and control of wind-driven self-excited induction generators connected to the grid through power converters	S.Senthil Kumar, N. Kumaresan, N. Ammasai Gounden, Namani Rakesh	Frontiers in Energy	Vol.6, issue.4, 2012, pp.403–412
4.	A Closed Loop System for Inverter Assisted Wind Driven Induction Generators for Supplying Isolated Loads	P. Raja, N. Kumaresan and M. Subbiah	International Review of Automatic Control (Theory and Applications)	Vol.5, No.4, July 2012, pp.
5.	A Methodology for Transforming an Existing Distribution Network Into a Sustainable Autonomous Micro-Grid	M.Venkata Kirthiga, S.Arul Daniel and S.Gurunathan	IEEE Transactions on Sustainable Energy	2013, vol. 4, Issue – 1, pp. 31-41.
6.	Studies on battery storage requirement of PV fed wind-driven induction generators	S.Arul Daniel, MM.Rajan singaravel	Energy conversion and management(Elsevier)	67(2013)34-43,December 2012
7.	“Wind-driven SEIGs for supplying isolated loads employing DSP based power electronic controllers”,	S.Senthil Kumar, N.Kumaresan, N. Rakesh, K. Vijayakumar and M. Subbiah,	International journal of Wind Engineering,	Vol.36, issue.6, 2012, pp.739–758.
8.	Performance Analysis of UPQC with Heterogeneous Control during Load Power Factor Variation	Srinath, S. and Selvan, M.P.	European Transactions on Electrical Power	Vol. 22, October 2012, pp. 937-960.
9.	UPS Mode Operation of UPQC with Mixed Mode Control	Srinath, S. and Selvan, M.P.	International Review of Automatic Control	Vol. 5, No. 3, May 2012, pp. 342-348
10.	Performance Comparison of FACTS Devices for Steady	Sreejith, S., Sishaj P. Simon and	International Review of Modelling and	Vol. 5, No. 2, April 2012, pp. 576-588

	State Power Flow Control	Selvan, M.P.,	Simulations	
11.	Optimal Location of Interline Power Flow Controller in a Power System Network using DE Algorithm	Sreejith, S., Sishaj P. Simon and Selvan, M.P.	International Review of Modelling and Simulations	Vol. 5, No. 2, April 2012, pp.690-701
12.	Distributed Generation Planning- A New Approach based on Goal Programming	Vinoth Kumar, K. and Selvan, M.P.	Electric Power Components and Systems	Vol. 40, No. 5, March 2012, pp. 497-512
13.	"Ant colony based feedback controller design for soft-starter fed induction motor drive "	Dr.K.Sundareswaran, P.S.Nayak,	Applied Soft Computing, Elsevier	Vol. 12, No. 5, May 2012, pp. 1566-1573.
14.	"Feedback controller Design for a Buck Converter Through Evolutionary Algorithms"	Dr.K.Sundareswaran, Devi V, S. Sankar, P. Srinivasa Rao Nayak, A. Chandra sekar,	Australian Journal of Electrical & Electronics Engineering.	Accepted for publication
15.	Optimal Deviation based Firefly Algorithm Tuned Fuzzy Design for Multi-Objective UCP	K. Chandrasekaran, Sishaj P Simon	IEEE Transaction of Power System	Jan 2013
16.	Multi-Objective UCP with Reliability Function using Fuzzified Binary Real Coded Artificial Bee Colony Algorithm	K. Chandrasekaran, Sishaj P Simon	IET Generation, Transmission and Distribution	Vol. 6, Issue 10, pp. 1060–1073, June 2012
17.	Thermal unit commitment using binary/real coded artificial bee colony algorithm	K. Chandrasekaran, S. Hemamalini, Sishaj P Simon and N.P. Padhy	Electric Power Systems Research, Elsevier publications	Vol. 84, No. 1, pp. 109– 119, 2012
18.	Multi-objective scheduling problem: Hybrid approach using fuzzy assisted cuckoo search algorithm	K.Chandrasekaran and Sishaj P Simon	Swarm and Evolutionary Computation, Elsevier publications	Vol. 5C, pp. 1-16, 2012
19.	Network and Reliability Constrained Unit Commitment Problem using Binary Real Coded Firefly Algorithm	K.Chandrasekaran, Sishaj P Simon	Electrical Power and Energy Systems, Elsevier publications	Vol. 43, No. 1, pp. 921-932, 2012
20.	Nodal ant colony optimization for solving profit based unit commitment problem for GENCOs	C. Christopher Columbus ,K. Chandrasekaran, and Sishaj P. Simon	Applied Soft Computing, Elsevier publications	Vol. 12, No. 1, pp. 145–160, 2012
21.	Firefly Algorithm for Reliable/Emission/Economic Dispatch Multi Objective Problem	K.Chandrasekaran, Sishaj P Simon	International Review of Electrical Engineering (I.R.E.E.), Praise Worthy Prize Publication	Vol. 7, No. 1, Part A, pp. 199-210, 2012
22.	Unit Commitment Problem	K Chandrasekaran,	Lecture Notes in	Vol.9, pp. 380-386,

	for Hybrid Power System Using Binary/Real Coded PSO	Sishaj P Simon	Information Technology, Information Engineering Research Institute USA	2012
23.	Artificial Bee Colony Algorithm Tuned Weighted Function Method for Distributed Generation Planning	K Chandrasekaran, Sishaj P Simon	Lecture Notes in Information Technology, Information Engineering Research Institute USA	Vol.9, pp. 387-394, 2012
24.	Emission Constrained Economic Dispatch with Valve-Point Effect Using Maclaurin Series Based Lagrangian Method	S Hemamalini and Sishaj P. Simon	International Journal of Power and Energy Conversion, , Inderscience Publishers Ltd	Vol. 3, Nos. 1/2, 2012
25.	Performance Comparison of FACTS Devices For Steady State Power Flow Control	S.Sreejith, Sishaj P Simon, M.P.Selvan	International Review on Modeling and Simulations	Vol:5, April 2012,pp: 576-588
26.	Optimal Location of IPFC based on Installation Cost in a Power System Network using ABC Algorithm	S.Sreejith, Sishaj P Simon, M.P.Selvan	Trends in Electrical Engineering	Volume 2, Issue 1, April 2012, pp: 1-20
27.	Profit based unit commitment for GENCOs using Parallel PSO in a shared memory model	C. Christopher Columbus and Sishaj P Simon	Lecture notes on Information Technology, Information Engineering Research Institute, USA	vol. 9, 2012, pp 359-365
28.	A Parallel Artificial Bee Colony Algorithm for Security Constrained Economic Dispatch in a Distributed Cluster	C. Christopher Columbus and Sishaj P Simon	Lecture notes on Information Technology, Information Engineering Research Institute, USA	vol. 9, 2012, pp 352-358
29.	Parallel Hybrid Enhanced Inherited GA based SCUC in a Distributed Cluster	C. Christopher Columbus and Sishaj P Simon	Artificial Intelligence Research	December 2012, Vol. 1, No. 1. pp 96-106
30.	Wind-Thermal Integrated Power System Scheduling Problem Using Cuckoo Search Algorithm	K. Chandrasekaran, Sishaj P Simon	International Journal of Operations Research and Information Systems, IGI Publishing, USA	2012
31.	Multi Objective Unit Commitment Problem Using Cuckoo Search Lagrangian Method	K.Chandrasekaran, Sishaj P Simon	International Journal of Engineering, Science and Technology, Multi Craft Limited	2012, August
32.	A hybrid artificial bee colony approach for security constrained unit	C. Christopher Columbus and Sishaj P Simon	International Review of Electrical Engineering	Jul/Aug2012, Vol. 7 Issue 4, p5155

	commitment			
33.	Optimal Location of IPFC using ABC Algorithm	S.Sreejith, Sishaj P Simon, M.P.Selvan	Achieves in Electrical Engineering	Vol 2, No.1, 2012
34.	Profit based unit commitment for GENCOs using Parallel NACO in a distributed cluster	C. Christopher Columbus and Sishaj P Simon	Swarm and Evolutionary Computing, Elsevier Publications	2013, January
35.	Development of Sustainable Energy on Generation System Leads to Eco-Friendly Society	K.Chandrasekaran, Sishaj P Simon	Sustainable Cities and Society, Elsevier publications	2012, December
36.	Nodal based ant colony optimization for profit maximization of GENCOs in a distributed cluster model	C. Christopher Columbus and Sishaj P Simon	Applied Artificial Intelligence: An International Journal, Taylor and Francis	Volume 27, Issue 2, 2013
37.	A New Spike Based Neural Network for Short-Term Electrical Load Forecasting	Santhosh Kulkarni and Sishaj P Simon	Computational Intelligence and Communication Networks (CICN). IEEE Explore conference publication	2012. pg 804-808
38.	A Spike Train Neural Network Model for Short-term Electricity Load Forecasting	Santhosh Kulkarni and Sishaj P Simon	Proceedings of ICINC	Aug. 2012, pp.171-176
39.	Condition Monitoring of 11 kV Distribution System Insulators Incorporating Complex Imagery Using Combined DOST	M. Jaya Bharata Reddy, Karthik Chandra B and D. K. Mohanta	IEEE Transactions on Dielectrics and Electrical Insulation,	accepted for publication
40.	Robust Transmission Line Fault Classification Using Wavelet Multiresolution Analysis	M.Jaya Bharata Reddy, D.Venkata Rajesh and D.K.Mohanta	Computers and Electrical Engineering (Elsevier publication)	accepted for publication
41.	Power quality analysis using Discrete Orthogonal S-transform (DOST)	M. Jaya Bharata Reddy, Rama Krishnan Raghupathy, K.P. Venkatesh and D.K. Mohanta	International Journal of Digital Signal Processing (Elsevier Publication)	Vol.23, Issue 2 pp. 616-626,2013, March 2013
42.	Optimal Placement of PMUs for the Smart Grid Implementation in Indian Power Grid - A Case Study	P. Gopakumar, G. Surya Chandra, M. Jaya Bharata Reddy and D. K. Mohanta	Frontiers in Energy (Springer publication)	accepted for publication
43.	An aggregate marker for bandwidth fairness in Diffserv”,	S.Sudha, N.Ammasai gounden,”	Journal of Network and Computer Applications (Elsevier),	Vol 35, Issue 6, 2012, pp. 1973–1978
44.	"A Unified Power Electronic Controller for Wind Driven Grid Connected Wound	Binu Ben Jose.D.R and N. Ammasaigounden,	Frontiers in Energy -	March,2013

	Rotor Induction Generator using Line Commutated Inverter",			
45.	Subspace-Based Clustering and Retrieval of 3-D objects, Computers and Electrical Engineering	Alarmel Mangai, M. and Ammasai Gounden, N.,	, Elsevier,	accepted for publication
46.	"PCA-Based Learning for Preceding Vehicle Recognition",	Alarmel Mangai, N. Ammasai Gounden,	IET Intelligent Transport Systems	Accepted for publication.
47.	, "A DSP based closed loop controller for power smoothing operating of wind-driven WRIG systems",	K. Vijayakumar, N. Kumaresan, K. Amara Bhagavan and N. Ammasaigounden	International Review on Modelling and Simulations,	Vol. 5, No. 1, 2012, pp. 185-192.
48.	"Operation and closed-loop control of wind-driven stand-alone DFIGs using single inverter-battery system",	K. Vijayakumar, N. Kumaresan and N. Ammasai gounden,	IET Electr. Power Appl.,	Vol. 6, Issue. 3, 2012, pp. 162-171.
49.	"a power flow management system for photovoltaic systems feeding DC/AC loads	B.Indurani ,G.Saravananilango, C.Nagmani	Elsevier renewable energy	July 2012
50.	Sregth assessment using destructive testing on MAIB welded alloy steel tubes and subsequent tecno-economical evaluation	G.Nagamani,Arugalai Vndhan,S.Manoharan, S.Buvanashkaran	Journal of manufacturing processes	August2012
51.	A versatile rotor position computation algorithm for the power control of a grid-connected doubly fed induction generator	G.Nagamani, G.Saravananilango, A.Karthikeyan	IEEE transaction on energy conversion	Vol:27 issue:3,sep 2012,pp697-706
52.	Modified sliding mode observer for wide speed rag operation of brushless DC motor	G.Saravananilango, A.Deenadayalan,chintala dhananjai	Frontiers of EEE,higher education press and springer verlag berlin heidelberg	2012
53.	Improved neural network algorithm with time varyingwindrow-hoff learning rule	S.Moorthi,B.Vasumathi	Australian journal of EEE	Vol.9,no.4,2012
54.	Enhanced power generation from PV array under partial shading conditions by shade dispersion using su do ku configuration	B.Indurani ,G.Saravananilango, C.Nagmani	IEEE transactions on sustainable energy	Vol.4.issue.1,2013
55.	An active islanding detection technique for current controlled inverter	B.Indurani ,G.Saravananilango, C.Nagmani	Elsevier renewable energy	Vol51,2013,pp.189-196

56.	Control strategy for power flow management in a PV system supply Dc loads	B.Indurani ,G.Saravananilango, C.Nagmani	IEEE Transactions on industrial electronics	Accepted for publication.
57.	Voltage control Scheme for a Single Phase Voltage Source Inverter (VSI) using FPGA	Naizath Amirtharaj J., K. Siddharth, <b>S. Moorthi</b> , N. Kumaresan,	Australian an Journal of Electrical and Electronics Engineering	Vol. 9, No. 2, July 2012.
58.	Implementation of hybrid ANN–PSO algorithm on FPGA for harmonic estimation	B. Vasumathi andnd <b>S. Moorthi</b>	Engineering Applications of Artificial Intelligence, Elsevier Ltd.,	April 2012

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	Dr.N.Ramasubramanian	Dr. N. Ammasaigounden	NIT-TRICHY
2.	Dr.M.Alarmel Mangai	Dr. N. Ammasaigounden	NIT-TRICHY
3.	Dr.K.Geetha	Dr. N. Ammasaigounden	NIT-TRICHY
4.	Dr.V.Devi	Dr. K. Sudareswaran	NIT-TRICHY
5.	Dr.A.Karthikeyan	Dr.C.Nagamani	NIT-TRICHY
6.	Dr.K.Vinothkumar	Dr.M.P.Selvan	NIT-TRICHY
7.	Dr.K. Chandrasekaran	Dr.Sishaj P Simon	NIT-TRICHY

### 11. Other Important Points

S.Dhivya(PG)	Cleared An All India Examination Conducted By Staff Selection Commission ( Junior engineer) With An All India Rank Of 5.
Kiran Kamini Gautam(PG)	Worked as a Trainee Project Engineer(process control) at SOFTCON SYSTEMS PVT. Ltd, Pune for 5 months.
T. Aswini (PG)	Got Gold medal in Graduation
Richu Sebastian C(PG)	Have experience in working on microcontrollers of ATMEL family. Have participated in various ROBOTICS competitions.
Sreevatsav.R.S.S.D(PG)	Trained in Soft Skills by Infosys under “Campus Connect” program
Ranjith Kumar S	Selected for All India Final Round of Innovation Challenge 2012, Schneider Electrics Member of WebTeam for IEEE Education society Region 10
Anish N K	1. Selected for internship at Qualcomm Inc. and subsequently offered full-time job offer.  2. Got invitation to be part of technical review committee for IEEE Tencon Spring-2013, Sydney,Australia.
Dr.K.Vinothkumar	He has been selected among the top 15 candidates from all over India for the POSOCO power systems awarded based on his PhD thesis under the guidance of Dr.M.P.Selvan ASST prof EEE department.



# ELECTRONICS AND COMMUNICATION ENGINEERING

## ELECTRONICS AND COMMUNICATION ENGINEERING

### 1. Notable Achievements

#### 1.1. Faculty Members

S.No.	Name	Details of Prizes/Awards	Organization
1.	E.S.Gopi	“Shiksha rattan puraskar” by Former Governor of Tamil Nadu and Assam, Dr.B.N.Singh at India international centre on 9 <sup>th</sup> Feb 2013	India international friendship society (IIFS)

#### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization
1.	S. Issac Niwas	‘International Travel Grant’ to present a paper in the 15th International conference on Medical Image computing and computer assisted intervention (MICCAI-2012) held at Nice, France during Oct 1st – 5th, 2012.	Uppsala University, Sweden.
2.	Varun P. Gopi	‘Best Paper Award’ for the paper ‘Capsule Endoscopic colour image denoising using complex wavelet transform’, presented in the 6th International Conference on Information processing (ICIP) held at Bangaluru, Aug. 10th -12th, 2012.	The society of Information Processing and University Visvesvaraya College of Engineering, Bangalore.

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.2. Papers presented by the Faculty / Students

Author(s)	Details
E.S.Gopi and P.Palanisamy	“Formulating Particle Swarm Optimization based Generalized Kernel Function for Kernel-Linear Discriminant Analysis”, in the 2nd international conference on Communication, Computing & Security during 6th to 8th october 2012 at National Institute of Technology Rourkela.
N. Gunavathi, D.Sriramkumar, Uma Shrestha	“Sleeve Monopole Antenna for WiMAX Applications”, INDICON-2012, Kerala, India, Dec’7-9, 2012.
R. Pandeewari, Singaravelu Raghavan, and Keloth Ramesh	“A Compact Split Ring Resonator Loaded Antenna”, PIERS 2012, MOSCOW, Russia, August 19-23, 2012.
R. Pandeewari, Singaravelu Raghavan, Amrit Krishnan, and Priyank Jain	“Artificial Neural Network Model for MNG-Metamaterial Spiral Resonator”, PIERS 2012, MOSCOW, Russia, August 19-23, 2012.
R.Pandeewari, Dr S.	“A Compact Multi Split Ring Resonator Loaded

Raghavan, Pravin A Bagde and Ananda Kumar chittipothul	Antenna, IEEE International Conference on Communication and Signal Processing”, ICCSP13, April 3-5, 2013, Melmaruvathur, Tamilnadu, India, registered.
Dr.R.Malmathanraj, M.Arun	“A Distributed E-Healthcare System for Patient Monitoring and Diagnosis”, 2012 IEEE International Conference on Advanced Communication Control and Computing Technologies (ICACCCT), Syed Ammal Engg college , Ramanathapuram.
Manikandan and B.Venkataramani	“Hardware Implementation of Voice Operated Robot using Support Vector Machine Classifier”, IEEE- Fourth International Conference on Advanced Computing, ICoAC 2012 MIT, Anna University, Chennai. December 13-15, 2012.
V.Naresh , B.Venkataramani and R.Raja	“An area efficient multiplexer based CORDIC” International Conference on Computer Communication and Informatics (ICCCI -2013), Jan. 04 – 06, 2013, Coimbatore, INDIA.
A. Subbarao, S. Raghavan, Ch. Anandkumar, M. Ramaraj, and R. Pandeewari	“A Compact Ultra Wideband EBG Antenna with Band Notched Characteristics”, PIERS 2012, Moscow, Russia, August 19-23, 2012.
A. Subbarao, S. Raghavan	“Compact UWB Monopole Antenna with Tapered Ground Plane”, PIERS 2013, Taipei, Mar 25-28.
M. Ramaraj and Singaravelu Raghavan	“An Overview of Microwave Imaging towards for Breast Cancer Diagnosis”, PIERS 2012, Moscow, Russia, August 19-23, 2012.
M. Ramaraj, Singaravelu Raghavan, Sumanta Bose, and Swadhyaya Kumar	“Elliptical Split Ring Resonator: Mathematical Analysis, HFSS Modeling and Genetic Algorithm Optimization”, PIERS 2012, Moscow, Russia, August 19-23, 2012.
V. Rajeshkumar and Singaravelu Raghavan	“An Overview of Metamaterials in Biomedical Applications”, PIERS 2013, Taipei, Mar 25-28.
A. Nutan Reddy, S. Raghavan	“Split ring resonator and its evolved structure over past decade”, IEEE international conference in emerging trends in Computing, Communication and Nanotechnology, Tuticorin, 25-26 March, 2013.
Anoop Jayaram and Singaravelu Raghavan	“Metamaterial Loaded Wideband Patch Antenna”, PIERS 2013, Taipei, Mar 25-28.
Sumanta Bose, M. Ramaraj, S. Raghavan	“Design, Analysis and Verification of Hexagon Split Ring Resonator based Negative Index Metamaterial”, IEEE India Annual Conference 2012, INDICON 2012, Kochi, India, December 2012.
Sumanta Bose, S. Raghavan	“Theoretical Investigations of a N-sided Regular Polygon Split Ring Resonator with Skew Rotation”, The Sixth International Congress on Advanced Electromagnetic Materials in Microwaves and Optics 2012, Metamorphose VI (Metamaterials 2012), St. Petersburg, Russia, September 2012.
Sumanta Bose, M. Ramaraj, S.	“Mathematical Modeling, Equivalent Circuit

Raghavan, S. Kumar	Analysis and Genetic Algorithm Optimization of an N-sided Regular Polygon Split Ring Resonator”, Elsevier Procedia Technology, Vol. 6, 2012, Pages 763-770, ISSN 2212-0173. DOI:10.1016/j.protcy.2012.10.092, ICCCS 2012.
Raja, M. and P. Muthuchidambaranathan	“Joint Optimization of Precoder and Decoder in Multiuser MIMO Systems with Imperfect Channel State Information (CSI)”. Proc. of International Conference on Computing Communication and Networking Technologies (ICCCNT-2012), Coimbatore, 1-5.
Raja, M. and P. Muthuchidambaranathan	“Joint Precoding and Decoding in MU-MIMO Downlink Systems with Perfect Channel State Information (CSI)”. International Conference on Communication, Computing & Security (ICCCS-2012), Odisha, Procedia Technology, Elsevier, 6, 708–715.
A. Kalaiselvan, M. Raja and P. Muthuchidambaranathan	“Performance Analysis of Multiuser MIMO Systems using Non-Iterative Technique”, Proc. of International Conference of Signal processing, image processing and Pattern Recognition (ICSIPR'13), Coimbatore, pp. 342-345, Feb.2013.
Manuel, L., Midhun, C. K., & Kavitha, R. K.	“High speed dynamic asynchronous pipeline: Self-Controlled approach”. (INDICON), 2012 Annual IEEE (pp. 592-596).
Sumanta Bose, Prabu K, D. Sriram Kumar	“Real-Time Breath Rate Monitor based Health Security System using Non-invasive Biosensor”, July 26-28, 2012, Coimbatore.
M. Levy, D. Sriram Kumar, Anh Van Dinh, Sumanta Bose	“A Novelistic Approach for Rapid Beam Forming in Smart Antennas for Wireless Applications using Smart-Fractal concepts and New Algorithm”, August, 2012.
Prabu K, Sumanta Bose, Dr. D. Sriram Kumar	“Analysis of optical modulators for Radio over Free Space Optical communication Systems and Radio over Fiber Systems”, Dec 7 – 9, 2012, Cochin.
S. Issac Niwas, A. Kårnsnäs, V. Uhlmann, P. Palanisamy, C. Kampf, M. Simonsson, C. Wählby and R. Strand	“Automated classification of immunostaining patterns in breast tissue from the Human Protein Atlas”, paper presented in 15 <sup>th</sup> International conference on Medical Image computing and computer assisted intervention (MICCAI-2012), held at Nice, France during Oct 1 <sup>st</sup> – 5 <sup>th</sup> , 2012.
S. Issac Niwas	“Signal processing techniques in Breast cancer diagnosis using microscopy images”, presented in the Breast Cancer Online Symposium, Target Meeting Team in Houston, TX, USA on July 16 <sup>th</sup> , 2012.
S. Issac Niwas	“Classification of immunostaining patterns in breast tissue from the Human Protein Atlas (HPA) using the wavelet transform”, presented at Centre for

	Image Analysis, Uppsala University, Sweden on May 14 <sup>th</sup> , 2012.
Varun P. Gopi, P. Palanisamy, S. Issac Niwas	“Capsule Endoscopic Colour Image Denoising Using Complex Wavelet Transform”, presented in the 6 <sup>th</sup> International Conference on Information processing (ICIP) held at Bangalore, Aug. 10 <sup>th</sup> - 12 <sup>th</sup> , 2012.
Varun P. Gopi, P. Palanisamy	“CT Image Reconstruction Based on Combination of Iterative Reconstruction Technique and Total Variation”, presented in the IEEE International Conference of Signal Processing, Image Processing and Pattern Recognition (ICSIPR13) held at Coimbatore, Feb. 7 <sup>th</sup> -8 <sup>th</sup> , 2013.
Deepa N Sarma, G. Lakshminarayanan	A Novel Encoding scheme for Low Power in Network on Chip links, VLSI-12.
C. Vennila , Kumar Palaniappan CT, Kodati Vamsi Krishna, G.Lakshminarayanan, Seok-Bum Ko	Dynamic partial reconfigurable FFT/IFFT pruning for OFDM based Cognitive radio, IEEE-ISPAS 2012.

### 2.3. Attended by the Faculty / Students

Faculty / Students	Details
Dr. S. Raghavan	Session Chair in PIERS 2013, TAIPEI from 25 <sup>th</sup> to 28 <sup>th</sup> March 2013.
N.Gunavathi	IEEE India Annual Conference INDICON-2012, Kerala, India, Dec’7-9, 2012.
S. Pradeep Narayanan	COMSOL Conference INDIA 2012 on November 3 <sup>rd</sup> 2012 organised by COMSOL at The Lalit Ashok, Bangalore, Karnataka, India.
Prabu K	International Conference on Optical Engineering (ICOE 2012), July 26-29, 2012, VTU, Belgum.
Levy M	IEEE International Conference on Electronics, Computing and Communication Technologies (IEEE CONECCT), 2013, 17-19 Jan 2013, Bangalore.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Dr. B. Venkataramani Dr. S.R. Balasundaram	National Mission for Education through Information and Communication Technology (NME-ICT)	11th and 12th Feb 2012.
E.S.Gopi	Pattern Analysis and Biologically inspired Algorithms (PABIA)	1 day on 11-5-2012

#### 3.2. Attended

Faculty	Details
Dr. S. Raghavan	Panel discussion moderator in IEEE international workshop WIEM 2013

	during 1st- 2nd March 2013.
R.Thilagavathy	Participated in the two day Faculty Orientation Programme on “ Class Room Management & Communication” held on 5 & 6 October 2012, at Hotel Sangam, Tanjore.
N.Gunavathi	Participated in the two day Faculty Orientation Programme on “ Class Room Management & Communication” held on 5 & 6 October 2012, at Hotel Sangam, Tanjore.
R.Pandeeswari	Participated in the two day Faculty Orientation Programme on “ Class Room Management & Communication” held on 5 & 6 October 2012, at Hotel Sangam, Tanjore.
V.Sudha	Nuances of Support Vector Machine, 4 <sup>th</sup> -6 <sup>th</sup> Oct, 2012.
S.Deiva Lakshmi	Nuances of Support Vector Machine, 4 <sup>th</sup> -6 <sup>th</sup> Oct, 2012.
K.R.Arun Kumar	National Workshop on Modern Embedded Computing, INTEL, Bangalore.
S. Pradeep Narayanan	One Day workshop on COMSOL Multiphysics Engineering Simulation Software Modelling on 7 <sup>th</sup> December 2012 organised by COMSOL at Hotel Park View, Chennai, Tamil Nadu, India – 600034.
S. Pradeep Narayanan	Two days workshop on Micro Electro Mechanical Systems (MEMS) on November 1 <sup>st</sup> & 2 <sup>nd</sup> 2012 organised by MEMS Design Centre (Supported by NPMASS), Department of Electronics & Communication Engineering, Thiagarajar College of Engineering, Madurai, Tamil Nadu.
Prabu K	National Workshop on "Navigation Systems & Technologies", July 14 – 15, 2012.
Prabu K, Anand S, Levy M, Mayur Darak	Workshop on Recent Trends in Optics, Oct 15, 2012.
Prabu K, Anand S, Mayur Darak	Workshop on RF MEMS, Nov 1-2, 2012.
Prabu K	FDP on Smart Materials & Systems, June 11-15, 2012.

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr.B.Venkataramani	Introduction to Electronic packaging	Materials & Processes for Scientists,	DRDL, Hyderabad Oct 12 <sup>th</sup> , 2012.
Dr.P.Muthu Chidambara Nathan	Wireless Communication	ECE Association Inauguration	Dhanalakshmi Srinivasan College of Engineering, Perambalur,09.09.2012.
D. Sriram Kumar	Recent advancements in Microwave Engineering	National workshop	Prathyusha Institute of Technology & Management, 17&18.12.12.
D. Sriram Kumar	Electromagnetic Fields	Faculty Development Programme	Maharaja Engineering College for Women, Perundurai, Erode, 12.12.12.
D. Sriram Kumar	Issues on Mobile Communications	Guest lecture	Paavai Engineering College, Namakkal, 25.1.2013.
P.Palanisamy	Linear Algebra and Discrete-	Certificate Courses on Advanced Control	DRDL, Hyderabad during 01.02.2013 & 02.02.2013

	Time Systems	Engineering & Optimization Techniques	
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### 5. Sponsored Projects undertaken.

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
G.Lakshminarayanan	Low complexity Energy efficient Transceivers for Cognitive Radio System funded by UKIERI - Department of S&T, New Delhi.	UKIERI	28.00
G.Lakshminarayanan	One of the Directors for the Project on Technology Incubation & Development of Entrepreneurs (TIDE) in the areas of Electronics and ICT	Ministry of Communications and Information Technology, Department of Information Technology New Delhi	155.00
G.Lakshminarayanan	Partner for the project on Rural and Remote Ubiquitous Broadband Wireless Access	UKIERI	28.00

### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1.	S-band trainer kits for microwave lab- 2 Nos.	4.81094
2.	HFSS software towards M. Tech and research projects (Perpetual )- 5 Users Licence.	4.95000
3.	Wireless Digital Communication Training System.	4.725
4.	OptSIM upgradation 5.2 version and additional three user network license.	6.09000

### 7. Research Papers Published in National / International Journals

#### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	“Fast computation of PCA bases of image subspace using its inner-product subspace”	E.S.Gopi P.Palanisamy	Elsevier Journal on Applied Mathematics and Computation	Year: 2013, Volume: 219(12) Pages: 6729-6732
2.	“Formulating Particle	E.S.Gopi	Elsevier journal on	Year:2012

	Swarm Optimization based Generalized Kernel Function for Kernel-Linear Discriminant Analysis”	P.Palanisamy	Procedia technology	Volume:6 Pages:517-526
3.	“Formulating Particle swarm optimization based membership linear discriminant analysis”	E.S.Gopi P.Palanisamy	Elsevier journal on Swarm intelligence and evolutionary computation	March Year:2012 (Selected for publication on March 7 <sup>th</sup> 2013)

## 7.2. Students

S.No	Title	Author(s)	Journal	Year Vol. (No) Page
1.	System-on-programmable-chip implementation of diminishing learning based pattern recognition system.	J. Manikandan and B. Venkataramani	Springer International Journal of Machine Learning and Cybernetics	DOI 10.1007/s13042-012-0102-z
2.	Printed Planar UWB Antenna with Rejection of WLAN and WiMAX Bands.	Akkala. Subbarao and S. Raghavan	Microwave Optical Technology Letters, Wiley Publications, Impact factor: 0.618	Vol. 55, No.4, pp. 740-744, April 2013
3.	Compact Coplanar Waveguide-fed Planar Antenna for Ultra Wideband and WLAN Applications.	Akkala. Subbarao and S. Raghavan	International Journal of Wireless and Personal Communications, Impact factor: 0.458	Accepted
4.	A Compact UWB Slot Antenna with Signal Rejection in 5-6 GHz band.	Akkala. Subbarao and S. Raghavan	Microwave Optical Technology Letters, Wiley Publications, Impact factor: 0.618	Vol. 54, No. 5, pp. 1292-1296, May 2012
5.	Coplanar Waveguide-fed Ultra-wideband Planar Antenna with WLAN-band Rejection.	A. Subbarao, S. Raghavan	Journal of Microwaves, Optoelectronics and Electromagnetic applications, (JMoe), Scopus indexed	Accepted

6.	Design and Implementation of Online Clock Skew Scheme based Asynchronous Wave-Pipelined Distributed Arithmetic Filters on FPGA	M.Sanathi, G.Lakshminarayanan., and B.Venkataramani	IETE Journal of Research	
7.	Performance analysis of pseudo 4-phase dual-rail asynchronous protocol	M. Santhi, Siddharth Sarangan, K. Murali & G. Lakshminarayan	Taylor & Francis, Taylor & Francis	
8.	Dynamic partial reconfigurable adaptive transceiver for OFDM based cognitive radio	C.Vennila, Suresh.k, Rohit Rathor, G.lakshminarayanan, seok-Bum-Ko.	CCECE'13	
9.	Transceiver Design for MIMO Systems with Improper Modulations	Raja, M., P. Muthuchidambaranathan and Ha H. Nguyen	Springer-Wireless Personal Communications	2013 68, 265-280
10.	Joint Optimization of Precoder and Decoder in Multiuser MIMO Systems	Raja, M., Ha H. Nguyen and P. Muthuchidambaranathan	REV Journal on Electronics and Communications (IEEE Communications Society, Vietnam Chapter)	2012 2, 42-49.
11.	Low-Power Dual Dynamic Node Pulsed Hybrid Flip-Flop Featuring Efficient Embedded Logic	Absel, K.; Manuel, L.; Kavitha, R. K	IEEETransaction son Very Large Scale Integration (VLSI)Systems,	vol.PP,no.99,p p.1,0
12.	A Novelistic fractal antenna for Ultra Wide Band (UWB) Applications	M. Levy, S. Bose, A. V. Dinh, and D. Sriram Kumar	Progress In Electromagnetic Research B	2012 (45) 369-393
13.	Rapid Beam Forming in Smart Antennas using Smart-Fractal Concepts employing Combinational Approach Algorithms; Microstrip Antennas: Future Trends and New Applications	M. Levy, Sumanta Bose, D. Sriram Kumar	International Journal of Antennas and Propagation (IJAP)	2012 (2012)
14.	Fractal Electrodynamics in Smart Antennas : A Mathematical approach towards Rapid Beam Forming Algorithms	M. Levy, Sumanta Bose, D. Sriram Kumar	ACEEEE International Journal of Communication	(Accepted)

15.	An expert support system for breast cancer diagnosis using color wavelet features.	S. Issac Niwas, P. Palanisamy, R. Chibbar & W.J. Zhang	Springer: Journal of Medical Systems	Oct. 2012, vol.36, pp.3091-3102.
16.	Color deconvolution method for breast tissue core biopsy images cell nuclei detection and analysis using multiresolution technique	S. Issac Niwas, P. Palanisamy, and E. Bengtsson	International Journal of Imaging and Robotics	Jan. 2013, vol.9, pp.61-72
17.	Analysis of nuclei textures of fine needle aspirated cytology images for breast cancer diagnosis using complex Daubechies wavelets	Issac Niwas, S., P. Palanisamy, K. Sujathan & E. Bengtsson	Elsevier: Signal Processing	June 2012, <i>Article in press.</i>
18.	Automated classification of immunostaining patterns in breast tissue from the Human Protein Atlas	S. Issac Niwas, A. Kårnäs, V. Uhlmann, P. Palanisamy, C. Kampf, M. Simonsson, C. Wählby & R. Strand	Journal of Pathology informatics	Jan. 2013, <i>Article in press.</i>
19.	Capsule Endoscopic image denoising based on double density dual tree complex wavelet transform	Varun P. Gopi, P. Palanisamy	International Journal of Imaging and Robotics	Jan. 2013, vol. 9, pp. 48-60
20.	Mitigating Performance Degradation in LTE Advanced using Relaying Node	R. Seetharaman R. Vijayaragavan M. Pradeep	International Journal of Computer Applications, ISBN 973-93- 80869-38-9	Volume 49/ Number 9
21.	Femtocells: Smart Approach Analysis to Macrocells	R. Seetharaman R. Vijayaragavan	International Journal of Computer Applications, ISBN: 973-93- 80869-42-4	Volume 49/ Number 13
22.	Removal of Random Valued Impulse Noise by Directional Mean Filter using Statistical Noise based Detection	R. Seetharaman R. Vijayaragavan	International Journal of Computer Applications, ISBN: 973-93- 80868-48-9	Volume 46/ Number 10

**9. Details of Book any authored by faculty.**

E.S.Gopi, “Digital Signal Processing for Medical Imaging Using Matlab”, Springer, New York Heidelberg Dordrecht London, ISBN: 978-1-4614-3139-8 E-book: ISBN 978-1-4614-3140-4, 2013.

D.SriramKumar, “Problems and Solutions in Probability, Random Variables and Random Signal Principles”, Peyton Z. Peebles, McGraw-Hill Education publications, ISBN:978-1-25-900635-7.



# HUMANITIES

# HUMANITIES

## 1. Notable Achievements

### 1.1 Faculty Members

S.No	Name	Details of Prizes/Awards	Organization
01.	Dr. Sathyaraj Venkatesan	Consulting Reader and Editor	The Explicator (SCI Journal, published by Taylor and Francis Group, USA)

## 2. Conference /Seminars/ Symposium /Special Lectures

### 2.2. Papers presented by the Students

Student	Topic	Programme	Place & Date
Ms. M. P. Shabitha	Cognitive, Linguistic and Social Strategies in Second Language Writing	Ninth International Congress on English Grammar (ICEG 2013)	3 <sup>rd</sup> -5 <sup>th</sup> Jan 2013 Vellore Institute of Technology,
Ms. M. Ponmani	The Impact of Rote Learning at Tertiary Level	Ninth International Congress on English Grammar (ICEG 2013)	3 <sup>rd</sup> -5 <sup>th</sup> Jan 2013 Vellore Institute of Technology,

## 3. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Prof. R. Gururaj	“A session on Listening for Self Starter Programme” Organized by NIT, Tiruchy	Resource Person	25 <sup>th</sup> – 26 <sup>th</sup> Sep 2012 BHEL, Trichy
Dr. V. Vinod Balakrishnan	i. ”Decolonize the Mind, Culture”	Guest lecture/ Resource Person	i. 20 <sup>th</sup> Feb 2013 DOMS, NITT, Trichy.
	ii. “An Experience in Indian Aesthetics”	Resource Person	ii. 06 <sup>th</sup> Feb 2013 Auxilium College, Vellore.
	iii. “ The Romance of Scientific Inquiry”	Resource Person	iii. 24 <sup>th</sup> Jan 2013 CECRI Karaikudi.
Dr. R. Joseph Ponniah	“Language & Personality”	Resource Person	06 <sup>th</sup> March 2013 M.A.R College,

			Tiruchy
Dr. S. Mekala	Research Methodology: Role of Language	A Three Day national Workshop in Functional English for Engineering Teachers	24 <sup>th</sup> August, 2012. Department of English, Periyar Maniammai University,
Dr. Sathyaraj Venkatesan	i) "African American Literary Theories"  ii) "Literature, Media & Culture"  iii) "Technology Enabled Language Teaching"  iv) "Employment in Today's Job Market"	Resource Person  Symposium Speaker  Session Chair  Resource Person	i) 18 <sup>th</sup> Sep 2012 Academic Staff College, Bharathidasan University  ii) 21-23 Sep 2012 Thassim beevi Abdul Kader College for Women, Ramanathapuram in collaboration with ELTAI  iii) 21-23 Sep 2012 Thassim beevi Abdul Kader College for Women, Ramanathapuram  iv) 06 <sup>th</sup> March 2013 M.A.R College, Trichy

## 7. Research Papers Published In National / International Journals

### 7.1 Faculty

S. No	Title	Author(s)	Journal	Year Vol (No) Page
1.	"How to Name It?"	Dr. Sathyaraj Venkatesan and Gokulnath. A	The Hindu Magazine	24 <sup>th</sup> Nov 2012 pg. no. 4
2.	Toni Morrison's Home	Dr. Sathyaraj Venkatesan	Journal of the Australasian Universities	Volume 118/Nov.

			Language and Literature Association (AUMLA)	2012. 108 – 110.
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### 7.2 Student

S. No	Title	Author(s)	Journal	Year Vol. (No) Page
1.	The Influence of Socio-Cultural Aspects in ESL Classroom	M. P. Shabitha & Dr. S. Mekala	Proceedings of the 7th International conference & 43rd Annual ELTAI Conference on 'The English Classroom- Experiments and Experiences'	July 2012 pg.no.527-529
2.	The Influence of Sociolinguistic factors in Second Language Learning	M. P. Shabitha & Dr. S. Mekala	FORTELL (Forum for Teachers of English Language and Literature)	January 2013, Issue No.26. pg.no.5-8
3.	The Impact of Psycholinguistic Factors on Second Language Acquisition	M. P. Shabitha & Dr. S. Mekala	The IUP Journal of English Studies	March 2013, Vol. No.8, Issue No.1 pg.no.7-14
4.	The Role of Language in Human Cognition	M. P. Shabitha & Dr. S. Mekala	Proceedings of the National conference on 'A Paradigm Shift in English Language Teaching and Testing: A Literary/ Linguistic Approach'	March 2013 pg.no.82-85
5.	The Inductive Approach to teach Grammar in ESL Context	M. Ponmani & Dr. S. Mekala	Proceedings of the National conference on 'A Paradigm Shift in English Language Teaching and Testing: A Literary/ Linguistic Approach'	March 2013 pg.no.59-63

### 8.Ph.D Awarded

S.No	Name of the Research Scholar	Guide / Supervisor	University / Institute
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1.	Mrs. C. Indira	Dr. C. Meenakshisundram	NIT
2.	Mr. S. Shanmuga Sundaram	Dr. C. Meenakshisundram	NIT
3.	Mr. A. Gokulnath	Dr. Sathyaraj Venkatesan	NIT



# INSTRUMENTATION AND CONTROL ENGINEERING

## Instrumentation and Control Engineering

### 1. Notable Achievements

#### 1.1 Faculty Members

S.No.	Name	Details of Prizes/Awards	Organization
1.	Dr. A. Ramakalyan	Was elevated to the grade of “Senior member ”	IEEE, USA

#### 1.2 Student Members

Faculty	S.No.	Name	Details of Prizes/Awards	Organization
Dr.K.Dhanalakshmi	1.	Josephine Ruth, Sunjay Nakshatharan,	First Prize for the poster paper titled “Angular Trajectory Tracking using Antagonistic Shape Memory Alloy Actuators ”	International conference on Sensing Technology (ICST 2012), Kolkata, India, Dec’ 18-21, 2012.
	2.	Arpita Gosh	Got 99.79 percentile in CAT [Highest from our college]	
	3.	Swetha Kannan	Got 98.56 in CAT	
	4.	Praveen Madhusoodhanan	Got AIR 115 in GATE	

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised:

S.No	Coordinator	Programme	Period
1.	Dr. Ramakalyan. A.	Guest lecture on “ Secure Schemes for Secret Sharing and Key Distribution,” by Dr. N. Chandramowliswaran, Professor, Dept of Mathematics, VIT Vellore	January 28, 2013

#### 2.2. Papers presented by the Faculty / Students

##### 2.2.1 Papers presented by the Faculty

Faculty	Author(s)	Details
G. Uma,	U. Varun Kumar, B.V.M.P Santhosh Kumar, K. Suresh, G. Uma	IEEE Sensors Applications Symposium (SAS 2013), Galveston, Texas, USA, Feb 19-21 ,2013

B.Vasuki	B.Vasuki, S.Sathiya, K.Suresh	IEEE Sensors Applications Symposium (SAS 2013), Galveston, Texas, USA, Feb 19-21, 201
R. Ayyagari,	AA Pashilkar, Shaik Ismail, R. Ayyagari, & N. Sundarrajan	IEEE Symposium on Computational Intelligence for Security and Defense Applications (2013 CISDA), Nanyung Technological Univ., April 16 – 19, 2013
	AA Pashilkar, Shaik Ismail, R. Ayyagari, & N. Sundarrajan	IEEE Symposium on Computational Intelligence for Security and Defense Applications (2013 CISDA), Nanyung Technological Univ., April 16 – 19, 2013”

### 2.2.2 Papers presented by the Students

Faculty	Student	Author(s)	Details
M. Umapathy, G.Uma	P.Pandiyam	P.Pandiyam, G.Uma, M.Umapathy	“Design Of Logic Gates Using Laterally-Actuated Double-Gate NEMS ” in the proceedings of 9 <sup>th</sup> International Workshop on Nanomechanical Sensing 2012 (NMC-2012), IIT Bombay, Mumbai, India, June 6-8, 2012.
M. Umapathy	Y.Sujan,	M. Umapathy Y.Sujan, K. Suresh	“Thickness sensor for Ferromagnetic sheets” in proceedings of the 6 <sup>th</sup> International conference of IEEE Sensors Applications Symposium (SAS 2013), Galveston, Texas, USA, Feb 19-21, 2013.
B.Vasuki, G. Uma	Y.Sujan	Y.Sujan, B.Vasuki, G. Uma	“T-Shaped Resonating Beam Pressure Sensor” in proceedings of the 10 <sup>th</sup> International Conference on Semiconductor Electronics 2012 (IEEE-ICSE2012) Kaulalumpur, Malaysia, Sep 17-21, 2012.
K.Dhanalakshmi	S.Krishna Chaitanya	S.Krishna Chaitanya, K.Dhanalakshmi	“Design, Development and Investigation of Novel smart Grippers driven by NiTi fibers” in

			proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12), IIT Delhi, Delhi, India, Dec 5-8, 2012.
	Sunjay Nakshatharan, Josephine Ruth	Sunjay Nakshatharan, Josephine Ruth, K. Dhanalakshmi	“A new ball and beam system using shape memory alloy actuators” in proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12), IIT Delhi, Delhi, India, Dec 5-8, 2012.
	Josephine Ruth, Sunjay Nakshatharan	Josephine Ruth , Sunjay Nakshatharan, K. Dhanalakshmi	“Force Measurement using Self-Sensing Shape Memory Alloy” in proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12), IIT Delhi, Delhi, India, Dec 5-8, 2012.
N.Sivakumaran	E.Sathish	E.Sathish, S.Srinivasan, N.Sivakumaran	“Classification of normal epileptic EEG signals using adaptive neuro fuzzy inference system” in proceedings of 2 <sup>nd</sup> International Conference on Biomedical & Engineering Assistive Technologies, (BEATS 2012) Dec 6-7, 2012, NIT Jalandhar.
	A.Gupta, E.Sathish	A.Gupta,N.Sivakumaran, E.Sathish	“Effect of modelling hemo dynamic response function on statistical value in SPM for EEG correlated FMRI data of epileptic patient” in proceedings of 2 <sup>nd</sup> International conference on Biomedical & Engineering Assistive Technologies, (BEATS 2012) Dec 6-7, 2012, NIT Jalandhar.

Dr.K.Srinivasan,	A.Jenesh , K.Anbarasan	Dr.K.Srinivasan, A.Jenesh, K.Anbarasan	“Development of Fault Detection and Identification Algorithm for FOPDT and SOPDT Processes using Fast Fourier Transform Technique” Recent Trends in Instrumentation and Control (RTIC- 2013), National Conference, MIT, Chennai, March 22-23,2013.
Dr.K.Srinivasan, Ms.V.Sridevi	R.Dinesh Kumar,	R.Dinesh Kumar, Dr.K.Srinivasan, Ms.V.Sridevi	“A Multisensor Data Fusion using Different State Estimators” Recent Trends in Instrumentation and Control (RTIC- 2013) , National Conference, MIT, Chennai, March 22-23, 2013.
B.Vasuki, G. Uma, D Ezhilarasi,	Y.Sujan,	Y.Sujan, B. Vasuki, G. Uma, D Ezhilarasi, K Suresh	“Thickness sensor for Ferromagnetic sheets” in proceedings of the 6 <sup>th</sup> International conference on Sensing Technology (ICST 2012), Kolkata, India, Dec’18-21, 2012.
Ezhilarasi D	Sujan Y.	Akshay C, Nitin Karnwal, Abhfeeth K A, Rohan Khandelwal, Tapas Govindraju, Ezhilarasi D, Sujan Y.	“Wireless sensing and control for precision Green house management” in proceedings of the 6 <sup>th</sup> International conference on Sensing Technology (ICST 2012), Kolkata, India, Dec’18-21, 2012.
Ezhilarasi D	Abhfeeth K A,	Abhfeeth K A, Ezhilarasi D	“Monitoring and control of agriculture parameters in a green house through internet” in proceedings of the International multi conference of on Automation, Computing, Control, Communication and Compressed Sensing (iMac4s-2013), Kerala, India, March 22-23, 2013.
	Neelkant kashyap H.N		“Novel algorithm for image processing based hand Regonition” presented in ICAC3 conference jan 21, 2013.

	Divya konda Keerthana, Saravana kumar		“ Review of global path planning algorithms for autonomous underwater vehicles” presented at ICCVR international conference on computer vision and Robotics on oct-6, 2012.
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### 2.3. Attended by the Faculty / Students

Faculty / Students	Students	Details
B.Vasuki, G. Uma, M. Umapathy		IEEE Sensors Applications Symposium (SAS 2013), Galveston, Texas, USA, Feb 19- 21 ,2013
Dr. Ramakalyan. A		Industry-Academia Interaction in Control & Automation IEEE Bangalore section, IISc Bangalore Nov 2, 2012
Dr. Ramakalyan. A		Cyber-physical Systems IEEE Bangalore section, IISc Bangalore Nov 3, 2012
G.Uma	J Sivaraman	International Conference on Biomedical Engineering and Assistive Technologies, NIT Jalandhar, Jalandhar Punjab, India, Dec 6-7, 2012.
K. Dhanalakshmi	Sunjay Nakshatharan, Krishna Chaitanya S, Josephine Ruth	3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS12), IIT Delhi, Delhi, India, Dec 5-8, 2012
	Y Sujan, Sunjay Nakshatharan, Krishna Chaitanya S	6 <sup>th</sup> International conference of on Sensing Technology (ICST 2012), Kolkata, India, Dec' 18- 21, 2012
	Y Sujan	10 <sup>th</sup> International Conference on Semiconductor Electronics 2012 (IEEE-ICSE2012) Kaulalumpur, Malaysia, Sep 17- 21, 2012
	Y Sujan, S.Hariharakrishnan	CoventorWare user meet 2013,Ista hotel, Bangalore, India, Feb 4, 2013.
N.Sivakumaran	E.Sathish	International Conference on Biomedical Engineering and Assistive Technologies, NIT Jalandhar, Jalandhar Punjab, India, Dec 6-7, 2012.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
K. Dhanalakshmi and D. Ezhilarasi	Faculty development program on “Smart Materials and Systems” in the department of ICE, NIT Trichy.	June 11-15,2012

#### 3.2. Attended

Faculty	Students	Details
G.R Bennet		“P.V Installer certification by Underwriters laboratories”, Bangalore, India, Dec 19-21, 2013
Ramakalyan. A.		“Workshop on Probability & Stochastic Processes in Engineering” EE Dept., IIT Bombay, March 11-15, 2013
Ramakalyan A		“3-day Short Course on Finite Element Methods” Civil Engg. Dept., NIT Trichy, Mar 21-23, 2013.
K. Dhanalakshmi		QIP Short term course on “Variable structure and sliding mode control concept, theory and applications” at IIT Bombay, Mumbai, India , Jan 21-25, 2013
D. Ezhilarasi		QIP Short term course on “Variable structure and sliding mode control concept, theory and applications” at IIT Bombay, Mumbai, India , Jan 21-25, 2013
M.Umapathy	P. Pandiyan	“15th INUP Hands-on Training Workshop on Nanofabrication Technologies” at IIT Bombay, Mumbai, India , Jan 28-Feb 1, 2013
	P. Pandiyan	“7th INUP Familiarization Workshop on Nanofabrication Technologies” at IIT Bombay, Mumbai, India , June 4-5, 2012
B.Vasuki	S.Sathiya	“3-day Short Course on Finite Element Methods” Civil Engg. Dept., NIT Trichy, Mar 21-23, 2013.
K. Dhanalakshmi	Josephine Selvarani D.Ruth	“3-day Short Course on Finite Element Methods” Civil Engg. Dept., NIT Trichy, Mar 21-23, 2013.
D.Ezhilarasi	Minu A Pillai	“3-day Short Course on Finite Element Methods” Civil Engg. Dept., NIT Trichy, Mar 21-23, 2013.

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
A.Ramakalyan	Stochastic Problem in Networked Control Systems	Workshop on Probability & Stochastic Processes In Engineering	EE Dept., IIT Bombay, March 11-15, 2013
K. Dhanalakshmi	Applications of DC motors and drives		12 <sup>th</sup> October 2012, VIT Chennai,
K. Dhanalakshmi	Shape Memory Alloys for civil engineering applications		20 <sup>th</sup> September 2012, MAM College of Engineering, Trichy
K. Dhanalakshmi	Smart materials for intelligent systems	5 <sup>th</sup> National conference on Innovations in Power Electronics Controls and Systems(IPECS-2013)	15 <sup>th</sup> March 2013, MAM College of Engineering, Trichy

#### 7. Research Papers Published in National / International Journals

##### 7.1. Faculty

S.No	Faculty	Author(s)	Title	Journal	Year Vol. (No) Page
1	G.Uma, M. Umapathy	J.Sivaraman, G.Uma, M. Umapathy	Analysis of human atrial repolarisation phase of electrocardiogram in normal subject	Journal of Clinical and Experimental Cardiology	2012, Vol.(3) Issue 2, pp.90.
2	M. Umapathy	P.Senthilkumar, G. N.Dayanand, M.Umapathy V. Shankar	Experimental Estimation of SMA wire actuator with a modulated adaptive controller for position control	Journal of Smart materials and Structures.	2012, Vol.(21)
3	M.Umapathy	P.Senthilkumar, M. Umapathy	Use of load generated by SMA for its position control with neural network estimator	Journal of vibration and control	Accepted for publication (2013)

4	R. Ayyagari	S. Seshadhri, R. Ayyagari	Advanced driver assistance system for AHS over communication links with random packet dropouts	J. Mech. Systems and Signal Processing, Elsevier	2012
5	R. Ayyagari	Shair Ismail, Abhay Pashilkar, R.Ayyagari, N.Sundarrajan	Control Design Based Unified Aircraft Dynamic Model Formulation	IEEE Tr. Control Systems Technology	To appear in 2013
6.	N.Sivakumaran, S.Narayanan	T.Vinopraba.N. Sivakumaran, S.Narayanan,T. K.Radhakrishnan	Design of internal model control based fractional order PID controller	Journal of control theory applications, Springer	10, 3, 297-302, 2012
7.	N.Sivakumaran	C.Ahilan, Somasundaram Kumanan, N.Sivakumaran, J.Edwin Raja Dhasd	Modeling and prediction of machining quality in CNC turning process using intelligent hybrid decision making tools	Journal on Applied Soft computing, Elsevier	13, 1543–1551, 2013.
8.	K.Srinivasan,	K.Srinivasan, K.Anbarasan	Fuzzy scheduled RTDA controller design	ISA Transactions, Elsevier Publication (Impact factor: 1.14)	2013, Vol (52) 252–267

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1	S. Dharmalingam	M. Umaphathy	NIT Trichy
2	K. Suresh	M. Umaphathy	NIT Trichy

### 11. Other Important Points.

<ul style="list-style-type: none"> <li>Dr.A.Ramakalyan, Dr.N.Sivakumaran, Dr.S.Narayanan, Dr.K.Srinivasan conducted the course “Advanced Control Engineering” for scientists B, C, and D at DRDL Hyderabad during January - March 2013</li> </ul>
<p><b>SPORTS ACTIVITIES:</b></p> <ul style="list-style-type: none"> <li>1<sup>st</sup> place in cricket.</li> <li>Athletics overall first -48 points.</li> <li>2<sup>nd</sup> place in basket ball</li> </ul>

- 2<sup>nd</sup> place in chess.
- 1<sup>st</sup> place in carom
- 3<sup>rd</sup> place in water polo.
- Finished second overall with 114 points.

NITT FEST:

- 97.5 points-highest points ever scored by ICE department.
- 1<sup>st</sup> position in design & media.



# MANAGEMENT STUDIES

## MANAGEMENT STUDIES

**Department : MANAGEMENT STUDIES**

### 1. Notable Achievements

#### 1.1. Faculty Members

S.No.	Name	Prizes/Awards	Organization
1.	Department of Management Studies, NIT, Trichy	Innovation Leadership Award, Feb 2013	DNA and STARS group
2.	Department of Management Studies, NIT, Trichy	Outstanding B school (South), Feb 2013	DNA and STARS group
3.	Department of Management Studies, NIT, Trichy	B-School Leadership Award, Nov 2012	HUL,BSA and Dewang Mehta Business School Award
4.	Department of Management Studies, NIT, Trichy	Business school with best academic input(syllabus) in operations and manufacturing, Nov 2012	HUL,BSA and Dewang Mehta Business School Award
5.	Department of Management Studies, NIT, Trichy	Business school that encourages leadership as a part of the Curriculum, Nov 2012	HUL,BSA and Dewang Mehta Business School Award
6.	Department of Management Studies, NIT, Trichy	Outstanding B school (South), Nov 2012	Amar Ujala Awards

#### 1.2. Students

S.No.	Name	Prizes/Awards	Organization
1.	Department of Management Studies, NIT, Trichy	Best College Trophy -Progyan' 13	SASTRA Business School,Thanjavur
2.	Nitin Simha Vihari II <sup>nd</sup> yr	I Prize-Essay Writing	Lal Bahadur Shastri Institute of Management,Delhi
3.	Nitin Simha Vihari II <sup>nd</sup> yr	III Prize-National level writing contest	Let me know.com
4.	Nitin Simha Vihari II <sup>nd</sup> year	IV Prize-Essay and Elocution	LIBA,Chennai
5.	Himsagar I <sup>st</sup> year	I Prize-Paper Presentation	Anna University, Trichy
6.	Goutham Sai & Trilochan Sai I <sup>st</sup> year	3rd Prize- Brand wreck	IIM, Trichy
7.	Goutham sai & Gowthami - I <sup>st</sup> year	1 <sup>st</sup> Prize- Biz Quiz 2 <sup>nd</sup> Prize-Paper	SASTRA University,Thanjavur

		Presentation	
8.	Amod Garg, Nitesh Mittal, Harshit, Amitesh- 1 <sup>st</sup> yr	Best Management Team in Progyan'13	SASTRA Business School, Thanjavur
9.	Amod Garg & Anbarasan- 1 <sup>st</sup> year	2 <sup>nd</sup> Prize- Ultimate Manager	PRAGYAN'13, NIT Trichy
10.	Mahima Karve & team. Chandan Ratnabham & team- 1 <sup>st</sup> year	1 <sup>st</sup> Prize - "Brand it"	M'Pulse'13, DoMS NIT Trichy
11.	Gautham G - 1 <sup>st</sup> year	2 <sup>nd</sup> Prize - let me know.in	National Writing contest- 'Special Mention' MUN APPULSE'13
12.	Saravana Bharathi- 1 <sup>st</sup> yr	1 <sup>st</sup> Prize- International Photography contest	www.pagalguy.com
13.	Pradheep & Eshna Das- 1 <sup>st</sup> yr	1 <sup>st</sup> Prize - Tri-Knight-right Marketing Event	Amrita school of Business, Coimbatore

## 2. Conference / Seminars / Symposium / Special Lectures

### 2.1. Organised

S.No	Coordinator	Programme	Date
1.	Mrs. P.Sridevi	General Management Conclave Vyoog'2012	Dec 2012
2.	Mrs.V.Lavanya	HR Conclave AVANCE'2012	Dec 2012
3.	Dr. G.Muruganatham	National Marketing Conference MARCON'2013	Feb 2013
4.	Dr.N.Thamaraiselvan	Marketing Conclave MPULSE'13	Feb 2013

### 2.2. Papers presented by the Faculty / Students

Author(s)	Title	Place & Date
Dr. B.Koteeswara Rao Naik	Factors Influencing the Success of the SME Entrepreneurs – A Field Study of Auxiliary Units of Bharat Heavy Electrical Ltd.	6th International Conference on Contemporary Business – 2012 during 18 <sup>th</sup> to 20 <sup>th</sup> October, 2012 held at IIT Delhi.
Dr. B. Koteeswara Rao Naik	Factors Influencing the Selection of Research Theme by Science & Technology Faculty in India: Survey Findings	6th International Conference on Contemporary Business – 2012 during 18 <sup>th</sup> to 20 <sup>th</sup> October, 2012 held at IIT Delhi.

Dr.G.Muruganantham & Ravi Shankar Bhakat	Presented a paper titled “Study of Impulse Buying in Apparel Stores”	International Conference on –Marketing Paradigms in Emerging Economies, organized by Department of Management Studies, Banaras Hindu University, Varanasi on 4-5 December 2012.
Dr.G.Muruganantham &Ravi Shankar Bhakat	“Study of Impulse Buying in Apparel Stores”	National Level Conference on Recent Trends in Marketing organized by Department of Management Studies, National Institute of Technology, Trichy on 20 February 2013.
Dr.G.Muruganantham &Ravi Shankar Bhakat	Presented a paper titled “A Relationship Study of Fashion Involvement and Impulse buying”	National Level Conference on Recent Trends in Marketing organized by Department of Management Studies, National Institute of Technology, Trichy on 20 February 2013.

### 2.3. Attended by the Faculty / Students

Faculty / Students	Title / Programme	Place & Date
Himsagar Ist year	Model Development for Brand Loyalty-A case on Men’s Jeans Wear	10 <sup>th</sup> & 11 <sup>th</sup> of September, 2012, Anna University.

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co-ordinator	Title	Period
Dr.M.Punniyamoorthy & Mrs. P.Sridevi	Workshop on Nuances of Support Vector Machines	Three day-Oct 2012
Dr. G. Kannabiran	Emerging Practices in Business Analysis and IT Consulting	One Day-Sep 2012

#### 3.2. Attended

Faculty / Students	Title	Period
Dr. V.J.Sivakumar	Participated in in-country program on Accreditation and Certification of TVET institutions and participated in the international seminar on Enhancing quality of Technical Education through Accreditation conducted by Colombo plan staff college for Technician education in collaboration with	January 9 <sup>th</sup> and 13 <sup>th</sup> , 2012.

	National Institute of Technical Teachers' Training and Research, MHRD, Government of India	
Dr. V.J.Sivakumar	Participated in in-country program on Accreditation and Certification of TVET institutions and participated in the international seminar on Enhancing quality of Technical Education through Accreditation conducted by Colombo plan staff college for Technician education in collaboration with National Institute of Technical Teachers' Training and Research, MHRD, Government of India	January 9 <sup>th</sup> and 13 <sup>th</sup> , 2012.
Vinoth Balu IInd year	'Econometrics Workshop'-London School of Economics and Political Science, London	(4 weeks) July 2012

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr. M. Punniyamoorthy	Support Vector Machine	One day workshop on Support Vector Machines, Department of EEE,NITT	National Institute of Technology, Jun 8 <sup>th</sup> 2012

#### 7. Research Papers Published in National / International Journals

##### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Decision Support System for Real Time Vehicle Routing in Indian Dairy Industry - A Case Study	Dr. M. Punniyamoorthy	International Journal of Information System and Supply Chain management	Vol. 6, No. 3 (Accepted for publication--2013).
2.	Genetic Algorithm for Inventory Levels and Routing Structure Optimization in Two Stage Supply Chain	Dr. M. Punniyamoorthy	International Journal of Information System and Supply Chain management	(Accepted for publication)
3.	Enablers and inhibitors of advanced Information Technologies adoption by SMEs: An empirical study of auto ancillaries in India	Dr. G. Kannabiran	Journal of Enterprise Information Management	2012, 25 (2)

4	Study of Workplace-Stress among Information Technology Professionals	Dr. B. Koteeswara Rao Naik	IFRSA Business Review	2012, Vol.2, No.1, pp.48-52.
5	Factors Influencing Job Satisfaction: A Study of Employees of Small and Medium Scale Enterprise (SMEs)	Dr. B. Koteeswara Rao Naik	Journal of Asian Business Management	2012, Vol.4, No.2, pp.265-275.

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide(s) / Supervisor(s)	University / Institute
1.	Mrs.C.Padmavathy	Dr. V.J.Sivakumar	National Institute of Technology
2.	Mr.Jose Thoppan	Dr. M. Punniyamoorthy	National Institute of Technology

## ANNEXURE



**DoMS NITT awarded Outstanding B school (South) by DNA and STARS group (Feb 2013)**



**DoMS NITT organised a National Marketing Conference MARCON'2013 on 20<sup>th</sup> Feb 2013**



**DoMS NITT won the overall trophy at Progyan '2013, Management fest of Sastra School of Management**



**Winners with the judges of "The Ultimate Manager'13"**



# MATHEMATICS

## MATHEMATICS

### 1. Notable Achievements like prizes, awards won by the students & staff

S. No.	Name	Details of Prizes/Awards	Organization
1	Dr. R. Ponalagusamy	Regional Editor, Trends in Bioinformatics -	International Journal (SCOPUS).

### 2. Details of Conference/Seminars/Symposium/Special Lectures conducted.

S.No	Coordinator	Programme	Period
1	Dr. R. Ponalagusamy	<b>Chairman:</b> Organized National Conference on FRONTIERS in APPLIED SCIENCES AND COMPUTER TECHNOLOGY (FACT'12), Department of Mathematics and Department of Computer Applications, National Institute of Technology, Tiruchirappalli-620 015,	06-07, December, 2012.

### 3. Details of papers presented/attended by the Faculties/Students in Conferences/Seminars/Symposium Summer School /Winter School.

Author(s)Faculty/Students	Details
R. Ponalagusamy, P.J.A.Alphonse and M.Chandru	“New Algorithm of Fifth-Order Heronian Mean Runge-Kutta Method”, Proc. of the 2 <sup>nd</sup> <b>European-SIAM</b> Conference for the Applied Mathematics and Informatics held in Montreux, <b>Switzerland</b> , 2012, pp. 67-72.(ISBN: 978-1-61804-059-6).
Mr. V. Balakumar, K. Murugesan	Numerical Approximation of Jumarie’s Fractional Integral at International Conference on 11-13 July 2012 at MMASC-2012, Coimbatore Institute of Technology, Coimbatore.
Ms.G. Revathi, Saikrishnan P	Unsteady water boundary layer flow with non-uniform mass transfer, at International conference on Mathematical , Computational and Statistical Sciences and Engineering , Lucerne, Switzerland, Oct 15-16,2012.
Dr. R. Ponalagusamy	Attended 2 <sup>nd</sup> European-SIAM Conference for the Applied Mathematics and Informatics held in Montreux, Switzerland, 2012
Ms. A. Senthil Thilak, Research Scholar & Temporary Faculty	Attended International conference on Mathematical Sciences and Computing Engineering at Kuala Lumpur, Malaysia on 29 & 30-11-2012
Dr. V. Shanthi	Attended in the International Conference on History and Development of Mathematical Sciences & Symposium on Nonlinear Analysis,

	Maharishi Dayanand University, Rohtak(Haryana), India on 21-24, November 2012
Dr. V. Shanthi	Attended National Conference on Frontiers in Applied Sciences Computer Technology on 6,7- 12-2012 at Dept. of Mathematics &Computer Applications, NIT, Tiruchy-15
Dr. V. Shanthi	Attended National Conference on Frontiers in Analysis and Differential Equations on 19, 20 <sup>th</sup> December 2012 at Bharathidasan University, Trichirappalli -24
Ms. S. Lakshimiprabha Research Scholar	Attended Conference in EMG at Yadava College, Madurai on 13-12-2012
Mr. P. Dhanasekaran, Research Scholar	Attended one day seminar on pure and applied mathematics, at Alagappa University, Karikudi on 20-12-2012

#### 4. Details of invited/Guest Lectures delivered by the Faculty.

Faculty	Topic	Programme	Place & Date
Dr. R. Ponalagusamy	“Development of Numerical Algorithm for Solving Ordinary Differential Equation	Emerging Research in Applied Mathematics (ERAM)	National Engineering College, Kovilpatti, India, 2012
Dr. D. Deivamoney Selvam	“ Introduction to Probability Concepts, Random variables and Distribution”	Faculty Development Training Programme “Probability and Queuing Theory”	University College of Engineering, Villupuram on 30-11-2012
Dr. K. Murugesan	“Differential Equations”	Refresher Course in Mathematics for the University & College Teachers	Bharathiar University, Coimbatore on 17-09-2012
Dr. T. N. Janakiraman	“Distance and domination and their applications”	National Conference	Sastra University on 21-08-2012
Dr. T. N. Janakiraman	“Riemann’s Hypothesis”	Ramanujam’s day	Pudukottai Arts College on 22-12-2012
Dr. T. N. Janakiraman	“Grape Algorithms and dominations and distance in Graphics”		Seethalakshmi Ramasamy College Trichy on 28-01- 2013

Dr. P. Saikrishnan	“Short Term Training Programme on Numerical Methods for Fluid Dynamics”	Organized by Department of Mathematics, Indian Institute of Space Science and Technology(IIST), Department of Space, Government of India,	Valiamala, Thiruvananthapuram
Dr. V. L. Gomathi Nayagam	pure and Applied Mathematics	One day Seminar	Alagappa University Karaikudi on 20-12-2012
Dr. V. L. Gomathi Nayagam	Fuzzy Information System	Seminar	Annamalai University 22-02-2013

### 5. Details of Sponsored Projects undertaken

Co-ordinator	Name of the Project	Sponsor	Amount In Rs.
<b>Dr. R. Ponalagusamy</b>	Sponsored project on Decision Making from Incomplete Information for Young Women Scientist Scheme-A (Awadee: Dr.Geetha Sivaraman) for three years (3 <sup>rd</sup> August, 2011- 2 <sup>nd</sup> August, 2014)	Department of Science and Technology, New Delhi, India	17,64,000/-

### 6. Details of Equipment purchased if the value is more than Rs.5.00 lakh.

S. No	Equipment	Amount (Rs. in Lakhs)
1	Personal Computers and HP Laser jet Printers (For the Faculty members and office, February, 2013)	10,05135.00

### 7. Details of Research Papers published by the faculty and students in refereed journals.

S.No	Title	Author(s)	Journal	Year Vol. (No) Page
1	Lattice Forward-Secure identity Based Encryption Scheme	Kunwar Singh, C. Pandurangan and A. K. Banerjee	Journal of the Internet Services and Information Security	2012,2,118-128
2	Lattice Forward-Secure identity Based Encryption Scheme with Shorter Ciphertext	Kunwarsingh, C. Pandurangan and A. K. Banerjee	Journal of the Internet Services and Information Security	2013 3, 5-19
3	Mathematical Analysis on Effect of Non-Newtonian Behaviour of Blood on Optimal Geometry of Microvascular	Dr. R. Ponalagusamy	Journal of The Franklin Institute	349(2012), pp.2861-2874

	Bifurcation System			
4	Mathematical Model of Pulsatile Flow of Non-Newtonian Fluid in Tubes of Varying Cross-Sections and Its Implications to Blood Flow	R.Ponalagusamy, R.Tamil Selvi and A.K.Banerjee	Journal of The Franklin Institute,	349(2012), pp.1681-1698
5	Development of new Fifth-Order Fifth-Stage Runge Kutta Method based on Heronian Mean	R.Ponalagusamy, P.J.A.Alphonse and M.Chandru	International Journal of Engineering Science, Advanced Computing and Bio-Technology	2(No.4) (2012) pp.162-197
6	Local Truncation Error for the Parallel Runge- Kutta Fifth Order Methods	R.Ponalagusamy and K.Ponnammal	Information Technology Journal	11(9)(2012), pp.1141-1153
7	Formation of Machine Cells in Cellular Manufacturing System Using Linear Array with a Reconfigurable Pipelined Bus System	R.Ponalagusamy, E.Kannan and Michael Arock	International Journal of Mathematics and Engineering with Computers	3(2012), pp. 17-27
8	Intuitionist Fuzzy Interval Information System	Geetha Sivaraman, V. Lakshmana Gomathi Nayagam and R. Ponalagusamy	International Journal of Computer Theory and Engineering	4(3)(2012), pp. 459-461
9	Boundary layer flow over a yawed cylinder with variable viscosity: Role of non-uniform double slot suction (injection)	<b>Dr.P. Saikrishnan</b>	International Journal of Numerical Methods for Heat & Fluid Flow	Vol. 22 issue 3, pp. 342 - 356, 2012

### 8. Details of Research Scholars who have completed Ph.D.

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1	P. Selvi(2012)	Dr. A. K. Banerjee	NIT, Tiruchy -620 015
2	Dr. K. Ponnammal (April-12)	Dr. R. Ponalagusamy	NIT, Tiruchy -620 015
3	Dr. A. Raghunathan (April - 2012)	Dr. K. Murugesan	NIT, Tiruchy -620 015
4	Dr. R. Tamil Selvi (Feb.2013)	Dr. R. Ponalagusamy Dr. A. K. Banerjee (Co-Guide)	NIT, Trichy-620 015

**9. Any other important achievement, which is worthy of inclusion in the Institute Day report.**

International Member of Program and Organizing committee for Conferences: **Dr. R. Ponalagusamy**

- (1) Chairman, 2<sup>nd</sup> European-SIAM Conference for the Applied Mathematics and Informatics held in Montreux, Switzerland, 2012.
- (2) Annual International Conference on Computational Mathematics, Computational Geometry and Statistics (CMCGS 2012), 2012, Singapore.
- (3) International Conference on Information Technology (ICIT 2013), Dubai, UAE, 6<sup>th</sup> and 7<sup>th</sup>, February, 2013.
- (4) Annual International Conference on Computational Mathematics, Computational Geometry and Statistics (CMCGS 2013), 2013, Hotel Fort Canning, Singapore.
- (5) The 2012 International Conference on Bioinformatics and Computational Biology (BIOCOMP'12), U.S.A.
- (6) The 2012 International Conference on Foundations of Computer Science (FCS'12), U.S.A.
- (7) The 2012 International Conference on Grid Computing and Applications (GCA'12), U.S.A.
- (8) The 2012 International Conference on Artificial Intelligence (ICAI'12), U.S.A.
- (9) The 2012 International Conference on Image Processing, Computer Vision and Pattern recognition (IPCV'12), U.S.A.
- (10) The 2012 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'12), U.S.A.
- (11) The 2012 International Conference on Embedded Systems and Applications (ESA'12), U.S.A.
- (12) The 2012 International Conference on Modeling, Simulation and Visualization Methods (MSV'12), U.S.A.

**Subject Expert in Faculty Selection Committee:**

***Dr. R. Ponalagusamy***

Member of Selection Committee (Subject Expert) for faculty recruitment in the Department of Mathematics, National Institute of Technology, Warangal -506 021, 3<sup>rd</sup> and 4<sup>th</sup> March, 2012.

Member of Selection Committee(Subject Expert) for faculty recruitment in the Department of Mathematics, Visvesvaraya National Institute of Technology, Nagpur – 440 010, 22<sup>nd</sup> and 23<sup>rd</sup> March, 2012.

Member of Selection Committee(Subject Expert) for faculty recruitment in the Department of Mathematics, Anna University, Regional Centre, Tiruchirappalli–620 015, 20<sup>th</sup> November, 2012.

Member of Selection Committee (Subject Expert) for faculty recruitment in the Department of Mathematics, Thiagarajar College of Engineering, Madurai.



# MECHANICAL ENGINEERING

## MECHANICAL ENGINEERING

### 1. Notable Achievements

#### 1.1. Faculty Members

Sl.No	Name	Details of Prizes/Awards	Organization
1.	Dr.V.Arul Mozhi Selvan	Green Environment Award	NIT, Trichy

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised

Sl.No	Coordinator	Programme	Period
1.	S.Shanmugam	Fluid movers	30 January 2013
2.	S. Shanmugam	Thermal power plant electronics	18 march 2013
3.	S.Suresh	Two weeks ISTE MHRD/ IIT Bombay sponsored Computational Fluid Dynamics Workshop	12 <sup>th</sup> to 22 <sup>nd</sup> June 2012 at NITT

#### 2.2. Papers presented by the Faculty / Students

Sl.No	Author(s)	Details
1.	K. R. Balasubramanian R. Anand S. P. Sivapirakasam Badapu Venkatesh G. R. Kannan	Study on performance and emission characteristics of DI diesel engine fueled deccan hemp methyl ester, ASME International Mechanical Engineering Congress & Exposition, Houston, Texas USA, November 9-15, 2012.
2.	S. P. Sivapirakasam K. R. Balasubramanian R. Anand G. R. Kannan	Optimization of biodiesel production using RSM and study of combustion charecteristics on DI diesel engine, ASME International Mechanical Engineering Congress & Exposition, Houston, Texas USA, November 9-15, 2012.
3.	T. Suthakar K. R. Balasubramanian K. Sankaranarayananamy	Multi objective optimization of laser welding process parameters by desirability approach of design of experiments, ASME International Mechanical Engineering Congress & Exposition, Houston, Texas USA, November 9-15, 2012.
4.	R.Anand, G.R.Kannan, Karthikeyan Palaniswamy,	A Study of the Performance Emission and Combustion Characteristics of a DI Diesel Engine Using Waste Cooking Oil Methyl Ester-Ethanol Blends, ASME 2012 International Mechanical Engineering Congress & Exposition, Houston,

		USA, Nov.9-15,2012.
5.	R.Anand, G.R.Kannan, Karthikeyan Palaniswamy,	Performance Emission and Combustion Characteristics of Diesel Engine Using Biodiesel-Diesel -Diethyl Ether Blends, ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, USA, Nov.9-15,2012.
6.	R.Anand, Karthikeyan Palaniswamy	Experimental Investigation of the Water Impact on Performance of Proton Exchange Membrane Fuel Cells (PEMFC) With Porous and Non-Porous Flow Channel, ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, USA, Nov.9-15,2012.
7.	S.P.Sivapirakasam, G.R.Kannan, R.Anand	Optimization of Biodiesel Production Using RSM and Study of Combustion Characteristics on DI Diesel Engine, ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, USA, Nov.9-15,2012.
8.	K.R.Balasubramanian,G.R .Kannan, R.Anand,	Study on Performance and Emission Characteristics of DI Diesel Engine Fuelled With Deccan Hemp Methyl Ester, ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, USA, Nov.9-15,2012.
9.	Naresh Kumar Gurusala and Arul Mozhi Selvan V	“Experimental investigation on the solubility of e-diesel as a fuel for automobiles”, International Conference on Advances in Mechanical Engineering, College of Engineering, Pune.
10.	Naresh Kumar Gurusala and Arul Mozhi Selvan V	“Biodiesel production from waste chicken fat”, <i>Advances in Mechanical Sciences AIMS-2013-CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore
11.	Krishna Chaitanya S and Arul Mozhi Selvan V	“Experimental investigation on heat transfer enhancement using nanofluids in automobile radiator”, <i>Advances in Mechanical Sciences AIMS-2013- CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore.
12.	Yuyulsu Krishnan. K and Arul Mozhi Selvan V	“Experimental Investigation on the Vibration Exposure of Mini Truck Drivers”, <i>Advances in Mechanical Sciences AIMS-2013- CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore
13.	T. Ramesh, R. Bharanidaran,	Design of Monolithic Microgripping device with integrated force sensing jaw, <i>Recent Advances in Mechanical Engg. and Automatic Control</i> , WSEAS, Paris ISBN: 978 – 1 – 61804 – 142 – 5, Page No. 168 – 173
14.	Sujith Kumar C.S, Qiaqin Yang, S. Suresh	An Experimental Investigation on Heat Transfer Enhancement using modified Surfaces. <i>Proceedings of the 24th CANSAM</i> , Saskatoon, Saskatchewan, Canada, June 2-6, 2013( Accepted)
15.	Sujith Kumar C. S, S. Suresh, Rajiv K,	Heat Transfer Enhancement by Nano Structured Carbon Nanotube Coating, <i>International</i>

		Conference on Emerging Trends during 23rd March 2012 to 25th March 2012, at NIT Durgapur, India
16.	P.Selvakumar, S. Suresh, G. Udayakumar	Enhancing Performance of a Radiator of Electronic Cooling System using Carbon Nanotube based Nanofluids, Proceedings of International Conference on Emerging Electronics during December 15-17, 2012 at Indian Institute of Technology Bombay.
17.	S. Venkatachalapathy, S. Suresh, P.Selvakumar, G. Vijay,	Laminar Convective Heat Transfer of Al <sub>2</sub> O <sub>3</sub> /Thermic Oil Nanofluid in a Plain Tube, Proceedings of International Conference Techconnect world 2012, during June 18-21, 2012, Santa Clara, USA.
18.	V. Mariappan, M. Udayakumar, S. Suresh, R. B. Anand, K.P. Shafeeq	Experimental Investigations on Thermo Physical Properties of Al <sub>2</sub> O <sub>3</sub> /DMAC Nanofluid, Proceedings of International Conference Techconnect world 2012, during June 18-21, 2012, Santa Clara, USA.
19.	P.Selvakumar, S. Suresh	Effect of CuO/water nanofluid in the enhancement of convective heat transfer for electronic cooling, Proceedings of International Conference Techconnect world 2012, during June 18-21, 2012, Santa Clara, USA.
20.	S. Suresh, P.Selvakumar, R. Bharath	Experimental Investigation of Thermo Physical Properties of Synthetic Oil based Nanofluids, Proceedings of International Conference Techconnect world 2012, during June 18-21, 2012, Santa Clara, USA

### 2.3. Attended by the Faculty / Students

Sl.No	Faculty / Students	Details
1	K.R. Balasubramanian	Programme on decision making for effective leadership, Administrative Staff College of India, Hyderabad, March 4-8, 2013
2	K.R. Balasubramanian	Multi objective optimization of laser welding process parameters by desirability approach of design of experiments, ASME 2012 International Mechanical Engineering Congress & Exposition (IMECE2012), Houston, Texas, USA, November 9-15, 2012
3	K.R. Balasubramanian	A three-dimensional numerical model for the analysis of laser keyhole welding, International Symposium on Joining of Materials, SOJOM, BHEL, Tiruchirappalli, January 19-22, 2012
4	K.R. Balasubramanian	Experimental study on welding fume formation rate in GTAW process, International Symposium on Joining of Materials, SOJOM, BHEL, Tiruchirappalli, January 19-22, 2012

5	R.Anand	ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, USA, Nov.9-15, 2012.
6	V Mariappan	International conference TechConnect World 2012, Santa Clara, California, USA, 18.06.2012 to 21.06.2012
7	T.Ramesh	A Short Term Course on Micro and Nano Fabrication, IIT, Kanpur, 27.02.12 – 02.03.12
8	T.Ramesh, R.Bharanidaran	Recent Advances in Mechanical Engineering. and Automatic Control, WSEAS, Paris, 2 – 4 December 2012

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Sl.No	Co-ordinator	Title	Period
1.	V Mariappan	2-Week ISTE workshop on Engineering Thermodynamics, ISTE-IITB through ICT at NIT, Trichy/MHRD	11.12.2012 to 21.12.2012
2.	Dr.K.Sankaranarayanan Dr.S.P.Sivapirakasam Dr.K.R.Balasubramanian	Safety Training Program at IGCAR, Kalpakkam	19.06.2012 to 22.06.2012
3.	Dr.K.Sankaranarayanan Dr.S.P.Sivapirakasam Dr.K.R.Balasubramanian	Safety Training Program at IGCAR, Kalpakkam	11.09.2012 to 14.09.2012
4.	Dr.K.Sankaranarayanan Dr.S.P.Sivapirakasam Dr.K.R.Balasubramanian	Safety Training Program at IGCAR, Kalpakkam	04.12.2012 to 05.12.2012
5.	T.Ramesh	A Short Term Course on Micro and Nano Fabrication, IIT, Kanpur,	27.02.12 to 02.03.12
6.	S.Suresh	Two weeks ISTE MHRD/ IIT Bombay sponsored Computational Fluid Dynamics Workshop	12 <sup>th</sup> to 22 <sup>nd</sup> June 2012

#### 3.2. Attended

Sl.No	Faculty / Students	Details
1.	K.R. Balasubramanian	Workshop on fire safety, IIT Gandhinagar, Ahmedabad, March 2-3, 2013
2.	K.R. Balasubramanian	Workshop on Supercritical technology for power sector, Engineering Staff College of India, Hyderabad, February 3-4, 2012
3.	Dr.R.Anand	Automotive Fuels and Emissions at ARAI, Pune during March 4-8, 2013
4.	Dr.R.Anand	Automotive combustion control systems at IIT Madras during Jan.28-30, 2013
5.	Dr.R.Anand	International workshop on Renewable Energy,

		Climate Change & Energy Management at Anna University, Chennai during Jan 24-25,2013
6.	Dr.R.Anand	Automotive engine combustion at IIT Madras, during Sep.24-28, 2013.
7.	Dr. R. B. Anand	2-weeks ISTE workshop on Engineering Thermodynamics (December 11 – 21, 2012)
8.	Dr.V.Arul Mozhi Selvan	Proficiency Improvement Program on “Automotive Fuels and Emission” organized by The Automotive Research Association of India (ARAI), Pune, 04.03.2013 to 08.03.2013
9.	Dr.V.Arul Mozhi Selvan	ISTE Workshop on Aakash for Education, Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 10.11.2012 to 11.11.2012
10.	Dr.V.Arul Mozhi Selvan	MHRD Sponsored ISTE Workshop on “Thermodynamics in Mechanical Engineering” Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 11.12.2012 to 21.12.2012.
11.	Dr.V.Arul Mozhi Selvan	Outbound Experiential Learning for Team building & Effective Group Dynamics, Adventure Zone, Madhurandhagam, 11.02.2013 to 12.02.2013
12.	V Mariappan	2- day ISTE WORKSHOP on Aakash for educating, MHRD/ISTE-IITB through ICT at NITT , 10.11.2012to 11.11.2012
13.	V Mariappan	One week Coordinators' workshop on 'Engineering Thermodynamics,MHRD/ISTE-IITB, 20.11.2012 to 24.11.2012
14.	K.Sankaranarayananamy T. Ramesh N. Siva Shanmugam	Three day Special Lecture on FEM by J.N. Reddy. Professor of Texas A&M, USA
15.	S. Venkatachalapathy	One week Coordinators' workshop on 'Engineering Thermodynamics,MHRD/ISTE-IITB, 20.11.2012 to 24.11.2012
16.	AR. Veerappan	One week Coordinators' workshop on 'Engineering Thermodynamics,MHRD/ISTE-IITB, 20.11.2012 to 24.11.2012
17.	M. Shahul Hameed	One week Coordinators' workshop on 'Engineering Thermodynamics,MHRD/ISTE-IITB, 20.11.2012 to 24.11.2012

#### 4. Invited / Guest Lectures Delivered by the Faculty

Sl.No	Faculty	Topic	Programme	Place & Date
1.	K.R. Balasubramanian	Industrial safety	Delivered guest lecture on safety training programme.	Indira Gandhi Centre for Atomic Research, Kalpakkam. September 11-14, 2012
2.	K.R. Balasubramanian	Finite Element Analysis	Delivered guest lecture on FEA	St.Joseph College of Engineering and Technology, Thanjavur, August 18, 2012
3.	K.R. Balasubramanian	Industrial safety	Delivered guest lecture on safety training programme.	Indira Gandhi Centre for Atomic Research, Kalpakkam, June 19-22, 2012
4.	K.R. Balasubramanian	CFD in automotive applications	Delivered guest lecture on CFD in automotive applications	Vinayaka Mission's Kirupananda Variyar Engineering College, Salem, March 15-16, 2012
5.	Dr.V.Arul Mozhi Selvan	Biodiesel – Modern Era in CI Engines	CSIR Sponsored National Seminar on “Alternate Fuels – Sustainable Sources and Utilization Techniques”	Kongu Engineering College, Erode, 31.08.2012
6.	Dr.V.Arul Mozhi Selvan	Alternate Fuels Present and Future	National Level Technical Symposium “Energise 2012”	Shivani Engineering College, Tiruchirappalli, Sept, 2012
7.	Dr.S.P.Sivapirakasam	Accident Investigation	Industrial Safety, Health and Environment	Dr. Navalar Nedunchezhiyan College of Engineering, Tholudur, 15.03.2013 to 16.03.2013
8.	Dr.S.P.Sivapirakasam	Design of Experiments	Fascinating Advancement in Research Methodology and D.O.E. Hands on Training	Mar Ephraem College of Engineering and Technology, Marthandam 08.03.2013 to 09.03.2013
9.	Dr.S.P.Sivapirakasam	Environment, health and safety	Need for Environment, health and safety	Knowledge Insitute of Technology, Salem. 14.03.2013

### 5. Sponsored Projects undertaken.

Sl.No	Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
1.	K. R. Balasubramanian	Modeling of A-TIG welding of austenitic stainless steels and prediction of residual stresses	UGC-DAE-CSR	Rs.7,72,800/-
2.	Dr.R.Anand	A study on the feasibility of using processed waste engine oil as an alternate fuel for a DI diesel engine	from Institute of Engineers, India during the year of 2012-2013	1.00
3.	K.Sankaranarayanan T. Ramesh N. Siva Shanmugam	Failure analysis of High Pressure Feed water Heaters of TPS I Expansion	NLC Neyveli	5.34
		Design and Analysis of Leak Proof Joints for Supercritical Boiler Tubes Test Facility	BHEL Trichy	9.04
		Comparative study and analysis of FBHE coil support	BHEL Trichy	20.35
4.	Dr.S.P.Sivapirakasam	Design of Experimental Matrix for Heat Transfer Studies at Supercritical Test Facility	BHEL, Trichy	6.88
5.	Dr.S.P.Sivapirakasam	Checking of welding Procedure for the repair work of Kaplan turbine	Saravana Industries Limited, Trichy	1.10

### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1.	Absorption study kit: Generator Absorber Heat EXchange (GAX) Vapor Absorption refrigeration System. (under progress in TEQIP office),2012-2013	9,75,000
2.	Simultaneous DSC/TGA for Thermal Analysis	26.21
3.	Phast Risk Micro Software	7.62
4.	Micro hardness tester	6,96,000
5.	Automated TIG welding machine	8,91,000
6.	Micro plasma module	7,65,000

7.	Plasma arc welding with CNC unit	6,50,000
8.	Resistance spot welding machine	4,97,000
9.	Erichsen cupping tester (TEQIP)	6,95,000

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

Sl.No.	TITLE	Author(s)	Journal	Year Vol. (No) Page
1.	Experimental Studies on the microstructure and hardness of laser transformation hardening of low alloy steel	P. Dinesh Babu G. Buvanashakaran K. R. Balasubramanian	Transactions of the Canadian Society for Mechanical Engineering	2012, 36(3), 241-257
2.	Effects of Al <sub>2</sub> O <sub>3</sub> Coating on Diesel Engine Performance, Combustion, and Emission Characteristics Fueled by Pongamia Methyl Ester and Its Blends with Diesel	M. Mohamedmusthafa S.P. Sivapirakasam M. Udayakumar K.R. Balasubramanian	AICHE - Environmental Progress & Sustainable Energy Journal	2012, 31(1), 147-156
3.	Studies on weld shape formation and Marangoni convection in Nd:YAG laser welding	T. Suthakar K. R. Balasubramanian K. Sankaranarayananasamy G. Buvanashakaran	International Journal of Mechatronics and Manufacturing Systems	2012, 5(3/4), 226-246
4.	Finite element analysis of heat distribution in laser beam welding of AISI 304 stainless steel sheet	K.R. Balasubramanian, T. Suthakar, K. Sankaranarayananasamy G. Buvanashakaran	International Journal of Manufacturing Research	2012, 7 (1), 42-58
5.	Parametric Optimization of TIG Welding on 316L Austenitic Stainless Steel by Grey-Based Taguchi Method	Nanda Naik Korra, K.R. Balasubramanian	Advanced Materials Research	2012, 383- 390, 4667- 4671
6.	Investigations on the fume formation rate in shielded metal arc welding process using different electrodes	M. Shahul Hameed S. P. Sivapirakasam K.R. Balasubramanian R. Nagalakshmi	Advanced Materials Research	2012, 383- 390, 4672- 4677
7.	Laser Welding Simulations of Stainless Steel Joints using Finite Element Analysis	K.R. Balasubramanian T. Suthakar K. Sankaranarayananasamy G. Buvanashakaran	Advanced Materials Research	2012, 383- 390, 6225- 6230
8.	Effect of Peclet Number on the Thermo Capillary Convection and Molten Pool Shape Formation during Laser Welding Using CFD	T. Suthakar, K. Sankaranarayananasamy, K. R. Balasubramanian, G. Buvanashakaran K. Krishna murthy	Advanced Materials Research	2012, 383- 390, 6231- 6235

9.	Experimental investigation of laser transformation hardening of low alloy steel using response surface methodology	P. Dinesh Babu G. Buvanashakaran K. R. Balasubramanian	International Journal of Advanced Manufacturing Technology	DOI 10.1007/s00170-012-4616-z. (Online)
10.	Dry sliding wear resistance of laser hardened low alloy steel at room and elevated temperatures	P. Dinesh Babu G. Buvanashakaran K. R. Balasubramanian	Proceedings of the Institution of Mechanical Engineers, Part J, Journal of Engineering Tribology	Accepted for Publication
11.	Numerical analysis and experimental validation of hardness and microstructural changes during laser transformation hardening of low alloy steel plates	P. Dinesh Babu G. Buvanashakaran K. R. Balasubramanian	Proceedings of the Institution of Mechanical Engineers, Part L, Journal of Materials: Design and Applications	Accepted for Publication
12.	Comparison of Plastic Limit and Collapse Loads in Pipe Bends with Shape Imperfections under In-Plane Bending and an Internal Pressure.	T. Christo Michael, AR. Veerappan, S. Shanmugam,	International Journal of Pressure Vessels and Piping.	2012, Vol. 99-100, pp. 23 – 33. (ISSN: 0308-0161) (Elsevier).
13.	Effect of ovality and variable wall thickness on collapse loads in pipe bends subjected to in-plane bending closing moment.	T. Christo Michael, AR. Veerappan, S. Shanmugam.	Engineering Fracture Mechanics.	79(1), pp. 138–148. (ISSN: 0013-7944) (Elsevier) 2012,
14.	Artificial neural network approach to study the effect of injection pressure and timing on diesel engine performance fuelled with biodiesel.	G.R. Kannan, K. R. Balasubramanian and R.Anand	International Journal of Automotive Technology,	Accepted in 2012
15.	Effect of injection pressure and injection timing on DI diesel engine fuelled with biodiesel from waste cooking oil	G.R. Kannan, and R.Anand	Biomass and Bioenergy,	2012, 46, 343-352
16.	Production and application of biodiesel – A case study	Prabu, A. Anand, R.B.	International Journal of Engineering Research and Development	2012 / 2 / 28 - 41
17.	Mathematical modeling of aerosol emission rate from die sinking electrical	S.P.Sivapirakasam, Jose Mathew, M. Surianarayanan	Applied Mathematical Modeling	Vol No.36, Pages

	discharge machining process			1493-1503
18.	Effects of Al <sub>2</sub> O <sub>3</sub> coating on diesel engine performance, combustion, and emission characteristics Fuelled by pongamia methyl ester and its blends with diesel	M.Mohamed Musthafa, S.P.Sivapirakasam, M.Udayakumar, K.R.Balasubramanian,	Environmental Progress & Sustainable Energy Journal	Vol 31, Pages 147-156
19.	Experimental Investigation on Manufacturing and Environmental Aspects of Electrical Discharge Machining Process Using Graphite Electrode	S. Thiyagarajan, S.P.Sivapirakasam, Jose Mathew and M. Surianarayanan	Advance Materials Research	Vols. 433-440, pages 655-659
20.	Experimental investigation on the impact sensitivity of a match head composition influenced by the surface roughness of in-process contact materials	Nalla Mohamed.M, Sivapirakasam.S.P, Surianarayanan	Process Safety and Environmental Protection	-
21.	Investigation on the Friction Sensitivity of a Matchhead Composition Influenced by the Surface Roughness of Contact Materials.	Nalla Mohamed M., Sivapirakasam S. P. and Surianarayanan M	Propellants, Explosives, Pyrotechnics	-
22.	Evaluation of thermal hazards and thermo-kinetic parameters of a matchhead composition by DSC and ARC	Sivapirakasam. S.P, Nalla Mohamed. M, Surianarayanan	Thermochimica Acta	Vol 557, Pages 13-19
23.	A Numerical Approach to Design a Compliant based Microgripper with integrated force sensing jaw	R. Bharanidaran, T. Ramesh	International Journal of Mechanics ISSN: 1998-4448	Accepted for its publication
24.	Design and analysis of monolithic microgripper	R. Bharanidaran, T. Ramesh	International journal of Scientific & Engineering Research ISSN: 2229-5518	Volume 3, Issue 6, June 2012
25.	Thermal Performance of Ethylene Glycol based Nanofluids in an Electronic Heat Sink	P. Selvakumar, and S. Suresh	Journal of Nanoscience and Nanotechnology, special issue "Nanospace Science and Technology"	(Accepted for publication).
26.	Use of Al <sub>2</sub> O <sub>3</sub> -Cu/Water	P. Selvakumar and S.	IEEE Transactions	10.1109/T

	Hybrid Nanofluid in an Electronic Heat Sink,	Suresh,	on Components, Packaging and Manufacturing Technology, Issue: 99, 2012, Digital Object Identifier:	CPMT.20 12.221101 8
27.	Turbulent heat transfer and pressure drop characteristics of dilute water based Al <sub>2</sub> O <sub>3</sub> -Cu hybrid nanofluids,	S. Suresh, K. P. Venkitaraj, M. Shahul Hameed, J. Sarangan	Journal of Nanoscience and Nanotechnology, special issue "Nanospace Science and Technology	
28.	Comparison of Heat Transfer and Pressure Drop in Horizontal and Vertical Helically Coiled Heat Exchanger with CuO/ Water Based Nano Fluids,	N. Kannadasan, K. Ramanathan, S. Suresh, M. Chandrasekar	Experimental Thermal and Fluid Science	2012,42, 64–70.
29.	Mechanisms proposed through experimental investigations on thermophysical properties and forced convective heat transfer characteristics of various nanofluids – A review,	S. Suresh, T. Senthilkumar,	Renewable and Sustainable Energy Reviews,	August 2012, Volume 16, Issue 6, Pages 3917– 3938
30.	Convective performance of CuO/water nanofluid in an electronic heat sink,	P. Selvakumar, S. Suresh,.	Experimental Thermal and Fluid Science	, 40 (2012) 57–63
31.	Experimental studies on heat transfer and friction factor characteristics of Al <sub>2</sub> O <sub>3</sub> /water nanofluid under turbulent flow with spiraled rod inserts,	S.Suresh, P.Selvakumar, M.Chandrasekar, V. Srinivasa Raman,	Chemical Engineering and Processing	53 (2012) 24– 30

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	T. Christo Michael	S. Shanmugam	NIT Tiruchirappalli
2.	G.R.Kannan	Dr.R.Anand	NIT Tiruchirappalli
3.	S.Vijayaraj (MEZ0303)	J.Sarangan	NIT Tiruchirappalli

4.	P.Selvaraj ( MEZ0402)	J.Sarangan	NIT Tiruchirappalli
5.	M. Marimuthu	Dr. R. B. Anand & Dr. M. Udayakumar	NIT Tiruchirappalli
6.	M.S. Alphin	K. Sankaranarayananasamy	NIT Tiruchirappalli
7.	N. Siva Shanmugam	K. Sankaranarayananasamy	NIT Tiruchirappalli
8.	K. Muthukumar	K. Sankaranarayananasamy	NIT Tiruchirappalli
9.	P.Velmurugan	K.s.Kumaraswami Dhas & K. Sankaranarayananasamy	NIT Tiruchirappalli

#### 9. Details of Book any authored by faculty.

**K. R. Balasubramanian, K. Sankaranarayananasamy, G. Buvanashakaran, Authored a chapter “Modeling and Simulation of Laser Welding” in the book ‘Lasers in manufacturing’ published by ISTE-Wiley, U.K ISBN: 9781848213692. 203-246.**

#### 11. Other Important Points

1.	Professor S. Shanmugam has been appointed Member of Board of Governors of NIT puducherry from 20th March 2013.
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# METALLURGICAL & MATERIALS ENGINEERING

## METALLURGICAL AND MATERIALS ENGINEERING

### 1. Notable Achievements

#### 1.2. Students

S.No.	Name	Details of Prizes/Awards	Organization / Location
1	Ms. Vidhya	DAAD Summer Fellowship (2012); and served as Brand Ambassador	Germany
2	Mr Uppiliappan	MITACS Summer Fellowship (2012)	Canada
3	Mr. Joshua	Selected for MITACS Summer Fellowship (2013)	Canada
4	Ms. Soundarya Srinivasan and Mr. Sandeep Awasthi	Selected for Prof. TRAnantharaman Summer Internship (2013)	India
5	(Few students)	Selected for Summer Fellowships awarded by IITs / National Academies (2012, 2013)	India
6	Mr Sandeep Awasthi	Ranked within the top ten student entries, from part of Asia and Africa, in an international online competition on steel plant operations, conducted by World Steel (2012)	World Steel
7	Students such as Ms Bala (PhD) and Mr Mohon (MTech) won prizes for best paper presentations in conferences (2012, 2013)	Papers presented, based on research guided by faculty, such as Prof K S Pandey and Prof S Raman Sankaranarayanan	India

### 2. Conferences / Seminars / Symposium / Special Lectures

#### 2.1. Organised

S.No	Coordinator	Programme	Period
1	Dr.N.Ramesh Babu	Short Term Course On ENGINEERING MATERIALS AND MANUFACTURING METHODS (EM3-2012)	June 25-30, 2012
2	Dr.N.Ramesh Babu	Special Lecture on Non Contact Profilometers and the latest developments.	26th of Feb. 2013

## 2.2. Papers presented by the Faculty / Students

Author(s)	Details
Dr. S. Muthukumuran	Poster presented in "NRC-M Symposium on Mechanical Behaviour of Materials" held at Indian Institute of Science, Bangalore during 30 – 31 Jan 2012.
Dr. N RameshBabu	Presented a paper in International Conference in Future Bioengineering (ICFB 2012) November 24-25, 2012, Bangkok, Thailand, organized by Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES)

## 2.3. Attended by the Faculty / Students

Faculty / Students	Details
Dr. N RameshBabu	International Conference on Design of Biomaterials at Indian Institute of Science Bangalore during 9-11 Dec 2012.

## 3.0. Summer School / Winter School / Workshops

### 3.1. Organised

Co-ordinator	Title	Period
B.Ravisankar/S.Kumaran	Advanced Materials and Manufacturing Methods (A3M)	December 3-8, 2012
S Raman Sankaranarayanan and S P Kumaresh Babu	Special self – supporting two day training programme for steel industry, on continuous casting, conducted in NIT Trichy (attended by steel plant personnel, from different states)	Dec. 2012

### 3.2. Attended

Faculty / Students	Details
B.Ravisankar	Attended Seminar on Missile Materials and Technologies, DRDL, Hyderabad on 03 May 2012.
Faculty such as S Raman Sankaranarayanan, S Jerome, S Kumaran	Attended Training programmes, 2012 – 2013, (different programmes) conducted by organizations such as ASCI, ESCI
S Raman Sankaranarayanan and PhD scholars (Moorthy Ram, Naik and Murali)	User group meeting and training programme on ThermoCalc and DICTRA, specialized technical software in thermodynamic modelling, March 2013, at Hyderabad
S Raman Sankaranarayanan	Attended Group Meeting (2012) at a Defence Estt. on the use of thermodynamic modeling for the development of

	advanced materials, for strategic applications
Faculty such as S Jerome and S Raman Sankaranarayanan	Seminar on Advanced Manufacturing, organized by DRDO, along with faculty of other departments, January 2013, at Hyderabad

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
B.Ravisankar	Plastic Deformation		November 01-02, 2012 at Defence Research and Development Organisation (DRDL), Hyderabad.
Dr.N.RameshBabu	Delivered a lecture on "Ceramic Materials"	in Materials Awareness Program at DRDL Hyderabad	29th Dec 2012
Many faculty of this dept (Inclgd. those cited above)	Lectures on a wide array of topics in Metallurgy and Materials	M A P at DRDL Hyderabad (initiated by Director NIT Trichy and coordinated by Dean R&C)	Multiple dates and multiple modes of delivery, including video conference
Many faculty of this dept.	Lectures on different aspects of Metals and Materials	Short term training programmes / workshops conducted in NIT Trichy	2012 - 2013
S Raman Sankaranarayanan	Alumina pick up by mould slag during continuous casting of steels	Special lecture for steel plant personnel	JSW (steel company), Toranagallu; and Vijayanagar chapter of Ind. Instt. Of Metals; July 2012
S Raman Sankaranarayanan	Continuous Casting of Stainless Steels	Special half day training programme for steel plant personnel	Salem Steel Plant (SAIL), 2013
S Raman Sankaranarayanan	Developments in Indian steel industry	Student Chapter of Ind. Instt. Of Metals	JJ CET, Trichy, August 2012
S Raman Sankaranarayanan	Performance of mould slag in continuous casting of steel	Student Chapter of Ind. Instt. Of Metals	C A R E, Trichy, July 2012

## 5. Sponsored Projects undertaken

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
B.Ravisankar/S.Kumaran	Consolidation of mechanically alloyed 5083 aluminium nano composites by equal channel angular pressing (ECAP)	DST	Rs 35 lakhs
Dr.N.RameshBabu (PI) Dr.M.Ashok(Co-I)	Surface Modification of Biodegradable Magnesium Alloys by Plasma Electrolytic Processing for Orthopaedic Implant Applications	DST	39.03
Principal Investigator: Dr. S. Muthukumaran	Title of the project: Friction welding of steel plate/ tube to titanium tube using an external tool	DAE-UGC-CSR Consortium	: 2.50 Lakhs/ year and extendable to three years
Prof S P Kumaresh Babu and Prof S Natarajan	CMPDI project for coal industry, jointly with NLC Neyveli	Ministry of Coal, GoI	250 Lakhs

## 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh) (2012)

S.No	Equipment	Amount (Rs. in Lakhs)
1	SYSWELD- technical software for modelling of welding (S Muthukumaran and S Raman Sankaranarayanan)	Sixteen Lakhs

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Microstructural and Mechanical Properties of Al 7075 alloy processed by Equal Channel Angular Pressing	Ramesh Kumar S, Kondaiah Gudimetla, Venketachalam P, Ravisankar B, Jayasankar K,	Materials Science and Engineering A	Vol.A 533 (2012) pp. 50– 54

2.	Consolidation of Al-2024 Powder by Conventional P/M Route and ECAP – A Comparative Study	Nishtha Gupta , S.Ramesh Kumar , B.Ravisankar and S.Kumaran	World Academy of Science, Engineering and Technology	Vol. 61 (2012) PP 1067-1070.
3.	Densification of Al-2024 and Al-2024/Al <sub>2</sub> O <sub>3</sub> Powders by Conventional P/M Route and ECAP – A comparative study	Nishtha Gupta, B.Ravisankar, S.Kumaran and T.Srinivasa Rao	Trans. IIM	Volume 65, Issue 4 (2012), Page 381-386.
4.	Diffusion Bonding of Ti-6Al-4V alloy with Inconel 718	J.Krishnamoorthi , V.Balusamy, P C Angelo , R.Vinothkumar, and B.Ravisankar	European Journal of Scientific Research	Vol.83 No.2 (2012), pp.221-229.
5.	High temperature oxidation and corrosion behaviour of Ni/Ni-Co-Al composite coatings	Meenu Srivastava, J.N. Balaraju, B. Ravisankar, C. Anandan, and V.K. William Grips	Applied Surface Science	Vol 263 (2012) pp 597-607.
6.	Comparison in the Oxidation and Corrosion Behavior of Aluminum and Alumina-Reinforced Ni/Ni-Co Alloy Coatings	Meenu Srivastava, J.N. Balaraju, B. Ravisankar, and V.K. William Grips	METALLURGICAL AND MATERIALS TRANSACTIONS A	VOLUME 44A, FEBRUARY 2013,pp 696- 707
7.	Surface morphology, corrosion resistance and in-vitro bioactivity of P containing ZrO <sub>2</sub> films formed on Zr by plasma electrolytic oxidation	M. Sandhyarani, N. Rameshbabu, K. Venkateswarlu, D. Sreekanth, Ch. Subrahmanyam	Journal of Alloys and Compounds	2013, 553, 324-332
8.	X-Ray Peak Profile Analysis of Nanostructured Hydroxyapatite and Fluorapatite	K. Venkateswarlu, D. Sreekanth, M. Sandhyarani, V. Muthupandi, A. C. Bose, and N. Rameshbabu	International Journal of Bioscience, Biochemistry and Bioinformatics	2013, 2(6), 417-421
9.	Effect of Micro Arc Oxidation Treatment Time on In-Vitro Corrosion Characteristics of Titania Films on Cp Ti.	K. Venkateswarlu, J. Hari, D. Sreekanth, M. Sandhyarani, A. C. Bose, and N. Rameshbabu	International Journal of Bioscience, Biochemistry and Bioinformatics	2012, 2(6), 422-426

10.	Adsorptive removal of lead from aqueous solution using nano-sized hydroxyapatite	S. T. Ramesh, N. Rameshbabu, R. Gandhimathi, P.V. Nidheesh, M. Srikanth Kumar	Applied Water Science	2012, 3, 105–113
11.	Fabrication and characterization of micro arc oxidized fluoride containing titania films on Cp Ti	K. Venkateswarlu, N. Rameshbabu, D. Sreekanth, A.C. Bose, V. Muthupandi, S. Subramanian	Ceramics International	2013, 39, 801-812
12.	Kinetics and Equilibrium Studies for the Removal of Heavy Metals in Both Single and Binary Systems Using Hydroxyapatite	S. T. Ramesh, N. Rameshbabu, R. Gandhimathi, P.V. Nidheesh, M. Srikanth Kumar	Applied Water Science	2013, 2 (3), 187-197
13.	Gold supported calcium deficient hydroxyapatite for room temperature CO oxidation	E. Lingareddy, A.Prabhakarn, J. Karuppiah, N. Rameshbabu, Ch.Subrahmanyam	International Journal of Nanoscience	2012, 11 (3)
14.	Role of electrolyte additives on in-vitro electrochemical behaviour of micro arc oxidized titania films on Cp Ti	K. Venkateswarlu, N. Rameshbabu, D. Sreekanth, A.C.Bose, V. Muthupandi, N.K. Babu, S. Subramanian	Applied Surface Science	2012, 258, 6853– 6863
15.	Effect of various additives on morphology and corrosion behavior of ceramic coatings developed on AZ31 magnesium alloy by plasma electrolytic oxidation	D. Sreekanth, N. Rameshbabu, K. Venkateswarlu	Ceramics International	2012, 38,4607-4615
16.	Synthesis and characterization of CdS nanoparticles using C-phycoerythrin 67 from the marine cyanobacteria	D. MubarakAli, V. Gopinath, N. Rameshbabu, N. Thajuddin	Materials Letters	2012, 74, 8-11.
17.	Comparison of Microstructure and Mechanical	S.Venukumar, Swaroop Yalagi and S.Muthukumaran	Transactions of Nonferrous Metals Society of China,	2013. (Accepted

	Properties of Conventional and Refilled Friction Stir Spot Welds in AA 6061-T6 using Filler Plate”,)			
18.	Microstructure and Mechanical properties of Refilled Friction Stir Spot Welding of commercial pure aluminum"	S.Venukumar, Swaroop Yalagi and S.Muthukumaran	Materials Science Forum, 2013. (Accepted)	
19.	Interfacial microstructure and strength of friction welding of steel tube to aluminium tube plate using an external tool.	C. Vijaya Kumar, S. Muthukumaran, S. Senthil Kumaran, A.Pradeep	Advanced Materials Research, Vol. 383-390, pp. 877-881 (2012)	
20.	Optimization of friction welding of tube to tube plate using an external tool with filler plate	G.K.Balaji, S. Muthukumaran, S. Senthil Kumaran, A.Pradeep	Journal of Materials Engineering and Performance, Vol. 21, pp.1199–1204 (2012).	

## 7.2. Students

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1	Student Dilip Krishna, on advanced magnetic materials	along with researchers from IIT BHU and DMRL	Presented in NMD, Nov. 2012	Proceedings / abstract

## 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1	P.Venkatachalam	B.Ravisankar	NIT Trichy
2	S.Ramesh Kumar		
3	S.Jerome		

## 11. Other Important Points

- a. An endowment award, for the **best outgoing student of BTech MME NITT**, has been set up by the family of Mrs Saraswathi, a retired staff of this Institute. Her daughter had been a student of this dept. This award would be given for the first time, in April 2013.
- b. Dept. MME has established “**Student of the Month Award**” to honour outstanding students. As of Feb. 2013, three students (S/s Vidhya, Uppiliappan and Sandeep) had been the winners.
- c. Students of this dept. had contributed immensely to the success of NIT Trichy, in sports and cultural competitions; and in events like Festember and Pragyan.
- d. (Despite the limited interest shown by students of NIT Trichy, in “GATE” examination) Three students of BTech MME IV year have qualified within the top one hundred ranks in metallurgy, in Feb. 2013.
- e. (On top of the frequent career break throughs and professional accomplishments of our students) one alumnus of this department recently graduated from the prestigious **Carnegie Mellon University** and then joined the **Mittal group** (the largest steel company in the world)
- f. Ms Srilakshmi has rendered wonderful service to this Instt by acting as the student liaison between the Press and NITT
- g. In tune with the enormous growth taking place in Indian steel industry, more than one fourth of the graduating class of BTech MME 2013 has **opted for career in the steel industry**, as of March 2013.
- h. A special national (metallurgical) annual conference “**Behind the Teacher’s Desk**” was organized by CSIR - NML, Tata Steel, NIT JSR and Ind Instt of Metals (April 2013). The event had participants from one third of the metallurgy departments in the country. Prof S Raman Sankaranarayanan chaired one technical session (on advanced materials) and also served as the Chief Guest for the Valedictory Function. Student Mohon won the best paper award in the technical session on modelling.
- i. Five students of the graduating class BTech MME 2013 continued as **Steel scholars**, with an attractive scholarship from the Ministry of Steel, GoI.
- j. This dept **organized special lectures by eminent personalities** from the academia and research, on wide array of topics.
- k. This dept has actively pursued the MoU (signed in 2012) with CSIR - CECRI; and has projects at the MTech and PhD levels, with collaboration between NITT and CECRI.
- l. This dept. has admitted, under new admission regulations for PhD (external), one PhD scholar (engineer with Ashok Leyland) who would be working on a project of strategic interest to the automobile industry, with guidance from MME NITT.
- m. Considering the recent steps taken by this dept. towards industrial interaction, a few steel plants, one national lab and one welding company have expressed interest in signing MoUs with NITT.
- n. Faculty of this dept. such as Profs. V Sivan, S Natarajan, S P Kumaresh Babu and S Raman Sankaranarayanan, have participated in a keen manner, in the newly established CECASE (an inter – disciplinary centre of NIT Trichy). Faculty of this dept. are also launching shortly a centre for ferrous process metallurgy, to work closely with the steel industry.

## ANNEXURE





# PHYSICS

## PHYSICS

### 1. Notable Achievements

#### 1.1. Faculty Members

S.No.	Name	Details of Prizes/Awards	Organization
1	R. Justin Joseyphus	Chartered Physicist	Institute of Physics, London, UK

#### 1.2. Students

Faculty	S.No.	Name	Details of Prizes/Awards	Organization
A Chandra Bose	1	A. Chithambararaj	Best Paper Award	National conference on advances in naval materials (ADAM-2013), NIOT, IIT, Chennai, Feb. 22-23 2013.
	2.	A. Chithambararaj	Best Poster Award – First prize	International conference on advances in materials and processing, challenges and opportunities (AMPCO 2012), IIT, Roorkee, Nov. 2-4 2012.
	3.	T. Selvalakshmi	Best paper award	National seminar on new materials Research and Nanotechnology, (NSNMRN 2012) Department of Physics, Government Arts College, Ooty, September, 12-14, 2012
R. Justin Joseyphus	1	T. Arun	Best Poster Presentation	National workshop, NIT Goa
N. Manivanan	1	L.R. Shobin	The Best Paper Award	Bishop Heber College, Tiruchirappalli

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised:

S.No	Coordinator	Programme	Period
1.	A. Chandra Bose and R. Justin Joseyphus	Short term course on Materials Characterization	(One week) 03-07 December 2012
2	R. Sankaranarayanan	INPHYNIT-T'13, National Level Physics Symposium	March 11, 2013
3	R. .Nagalakshmi	Workshop-Convergence-2012 Recent Trends in Materials Research	21-22 Dec. 2012

		Sponsored by BRNS, CSIR,DRDO, DST and NITT	
4	S. Manivannan & N.V. Giridharan	National Level Technical Symposium Quality'13	19-20 March 2013

## 2.2. Papers presented by the Faculty / Students

Faculty	Author(s)	Details
T. Balasubramanian	G. Jayalakshmi, K. Saravanan, T. Balasubramanian	Surface functionalization of ZnO films by THIOL. SPIE OPTICS+PHOTONICS-2012, San-Diego, CA, USA, August 12–16.
	G. Jayalakshmi, K. Saravanan, T. Balasubramanian	Room temperature ferromagnetism in swift heavy ion irradiated V doped ZnO thin films. SPIE OPTICS+PHOTONICS-2012, San-Diego, CA, USA, August 12–16.
	Shivanandan S Indimath , Krishnan Balasubramaniam , T Balasubramanian	In-service Inspection of Corrosion under Rail Clamps using Higher Order Modes Clusters Guided Waves (HOMC-GW), Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
D. Sastikumar	Remakanthan S, Cherian Thomas , D.Sastikumar	A study on accelerator based neutron sources and characterization of moderator materials for neutron radiography, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
	Y.V.V.M.Mohana Rao, Pradeep.A ,S. Muthukumar and D.Sastikumar	Ultrasonic Inspection Of Aluminum Welds Produced Byfriction Stir Welding, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
A. Chandra Bose	A. Chithambararaj, N. Rameshbabu and A. Chandra Bose	Synthesis of h-MoO <sub>3</sub> by chemical precipitation method, International conference on nanoscience and nanotechnology (ICONSAT-2012), Hyderabad, Andra Pradesh, January 19-23, 2012.
	A. Chithambararaj and A. Chandra Bose	Microwave assisted ultra fast synthesis of 1-D molybdenum oxide nanocrystals: structural and electrical studies, International conference on key engineering materials (ICKEM-2012), Singapore, Feb. 27-29, 2012.

K. Veerathangam, A. Chithambararaj and A. Chandra Bose	Preparation, characterization and study of structural and optical properties of h-MoO <sub>3</sub> , National seminar on technologically important crystalline and amorphous solids (TICAS-2012), Kalasalingam University, Virudhunagar, Tamilnadu, March 02-03, 2012.
K. Veerathangam, A. Chithambararaj and A. Chandra Bose	Synthesis of hexagonal molybdenum oxide nanocrystals: study of solvent effects on structural and optical properties, National conference nano fiesta 2K12, Mepco Schlenk Engineering College, Tamilnadu, March 07-08, 2012.
A. Chithambararaj, and A. Chandra Bose	Crystallite size and shape controlled synthesis of h-MoO <sub>3</sub> nanocrystals via microwave-assisted method, International conference and workshop on nanoceramics and nanomaterials (ICWCN-2012), Delhi university, Delhi, March 13-16, 2012.
T. Selvalakshmi and A, Chandra Bose	Sol-Gel Synthesis of Gadolinium Oxide Host Matrix For Luminescent Application, National Seminar on New Materials Research and Nanotechnology, Government Arts College, Ooty, September 12 – 14, 2012.
A. Chithambararaj, and A. Chandra Bose	Effect of mineralizer (KNO <sub>3</sub> ) on the structural and optical properties of h-MoO <sub>3</sub> nanocrystals, International conference on advances in materials and processing, challenges and opportunities (AMPCO 2012), IIT, Roorkee, Nov 2-4 2012.
A. Chithambararaj, N. Rameshbabu and A. Chandra Bose	Study of microwave assisted growth of meta-stable h-MoO <sub>3</sub> nanocrystals, International Conference on Emerging Advanced Nanomaterials (ICEAN), Brisbane, Australia, Oct. 22 – 25, 2012.
T. Selvalakshmi and A. Chandra Bose	Optical study on gadolinium oxide nanoparticles synthesized by hydrothermal method, International conference on advances in materials and processing, challenges and opportunities (AMPCO 2012), IIT, Roorkee, November 2-4 2012.
P. Dinesh , S. Thirunavukkarasu , B.P.C. Rao , T. Jayakumar and A. Chandra Bose	GMR based Eddy Current Testing of Stainless Steel Plates and Welds, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
T. Selvalakshmi and A. Chandra Bose	Effect of dopant concentration on photoluminescence properties of Gd <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> , 57 <sup>th</sup> DAE Solid State Physics Symposium, Indian Institute of Technology,

		Bombay, December 3-7, 2013.
	T. Selvalakshmi and A. Chandra Bose	Structural And Luminescent Study On $Gd_2O_3:Eu^{3+}$ Codoped With $Tb^{3+}$ Synthesized By Sol-Gel Method National Conference on Luminescent and its Applications, January 8-10 2013.
	G. Dhananjeyan, A. Chithambararaj and A. Chandra Bose	Synthesis of pure and Ni doped h-MoO <sub>3</sub> nanocrystals, Second International Workshop on Advanced Functional Nanomaterials - (SIWAN 2013), Anna University, Chennai-25, Tamilnadu, Jan. 28-30 2013.
	A. Chithambararaj and A. Chandra Bose	Hydrothermal synthesis of 1D h-MoO <sub>3</sub> : Structural and thermal properties, International Conference on Recent Trends in Applied Physics & Material Science (RAM-2013), College of Engineering and Technology, Bikaner-04, Rajasthan, Feb. 01-02, 2013.
	R. Thilakavathi, A. Chithambararaj, A. Chandra Bose and S. Boomadevi	Study on Structural and Optical Properties of $Dy^{3+}$ doped h-MoO <sub>3</sub> , National seminar on Technologically Important Crystalline and Amorphous Solids (TICAS-2013), Kalasalingam University, Virudhunagar, Tamilnadu, March 01-02, 2013.
	A. Chithambararaj and A. Chandra Bose	Synthesis of 1D h-MoO <sub>3</sub> by solution based precipitation methods and investigations on gas sensor applications, National conference on advances in naval materials (ADAM-2013), National Institute of Ocean Technology (NIOT), Chennai, Feb. 22-23, 2013.
	A. Chithambararaj and A. Chandra Bose	Synthesis of Pure and Ag Loaded Flower Like Hierarchical h-MoO <sub>3</sub> : Studies on Structural, Thermal, Optical and Electrical Properties, International Conference on Materials for Advanced Technologies (ICMAT-2013), Suntec Singapore, June 30 – 5 July, 2013.
N. Baskaran	S. Sathya Sheela and N. Baskaran	Magnetic Ground State and Electronic Structure Calculations of PbMnO <sub>3</sub> using DFT International conference on solid state science and Technology, Dec. 18-20, 2012, University of Malaysia
	Rambabu Polisetti , K. Arunmuthu , T. Saravanan , John Philip , N. Baskaran , B. P.	Comparison of Post-Processing Methods for Correction of Ring Artifact in Flat Panel X-ray Computed Tomography,

	C. Rao and T. Jaykumar	Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
N. Gopalakrishnan	Nidheesh kumar B , Rahul Kumar , N Gopalakrishnan ,	Characterization of Thermal Barrier Coating Specimen using Thermography Technique, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
	Nidheesh kumar B , Rahul Kumar , N Gopalakrishnan	Coating Integrity Studies using Thermography Technique, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
J. Hemalatha	T. Prabhakaran and J. Hemalatha	Synthesis and Characterization of Flexible Polymer Nanocomposite Films of PVDF/ZnFe <sub>2</sub> O <sub>4</sub> for Magnetolectric Device Applications, ICEAN 2012, The university of Queensland, Australia, October 22-25, 2012
	A.C. Bineesh , G.K. Sharma , A. Joseph , B.P.C. Rao , T. Jayakumar ,J. Hemalatha and A. Chandrabose	Defect Characterisation in Austenitic Stainless SteelWelds by Phased Array Ultrasonic Testing, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
	M. Nabeel Rashin and J. Hemalatha	Synthesis and Acoustical Studies on Cobalt Ferrite Nanofluid, ICMF-13, NPL, New Delhi, January, 2013
M.Ashok	Pradeep Reddy, Yesu Raja, M.Ashok	Structural, Thermal, Magnetic And Uv-Vis Analysis Of Co <sub>2</sub> FeO <sub>4</sub> Spinel Oxide Synthesized By Co-Precipitation Process. National Seminar On New Materials Research And Nanotechnology, Government Arts College, Ooty, September 12 – 14, 2012.
	R.Ram Mohan and M.Ashok	Defect Detection In Friction Stir Welded Steel Plates By NDT Methods, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
	Sreerag .T , Dr. Krishnan Balasubramaniam , Dr.M.Ashok	Full Matrix Capture & Total Focusing Method By Phased Array Ultrasonic Using Matlab Software, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.

M. C. Santhosh kumar	R. Swapna, R. Amiruddin, M. C. Santhosh kumar	DUAL ACCEPTOR DOPING AND AGING EFFECT OF P-ZnO:(Na, N) NANOROD THIN FILMS BY SPRAY PYROLYSIS, 2 <sup>nd</sup> International conference on Optoelectronic Materials and Thin Films for Advanced Technology (OMTAT-2013) January 3-5, 2013
	Sachin Sajeev , Krishnan Balasubramaniam , Bruce Maxfield , M. C. Santhosh Kumar	Low Frequency Eddy Current Inspection on Reformer Tube, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012.
	R. Swapna, M. C. Santhosh Kumar	Ag-N Dual Acceptor Doping and Fabrication of n-ZnO:Eu/p-ZnO:(Ag, N) Homojunction by Spray Pyrolysis The International Conference on Emerging Advanced Nanomaterials (ICEAN - 2012) University of Queensland, Brisbane, Australia, 22-25 October 2012
	R. Swapna, R. Amiruddin, M. C. Santhosh kumar	Aging and Annealing effect on dual acceptor Ag-N doped ZnO films. 57 <sup>th</sup> DAE-Solid State Physics Symposium, 3-7, December 2012
	R. Swapna, M. C. Santhosh Kumar, K. Venkateswarlu	Fabrication of p-ZnO: (Ag, N)/n-ZnO:Mo homojunction, 4 <sup>th</sup> International Conference on Advanced Nano Materials, IIT Madras, India 17-19, October 2012
B. Karthikeyan	Chinta Gopi, B. Karthikeyan	Improved signal quality in ultrasonic flaw detection of Aluminum alloy 64430, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	Rahul Kumar , Nidheesh Kumar B , B. Karthikeyan	Characterization of defects of Friction Stir Welds in Aluminium using Ultrasonic Phased Array Technique, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
N.V. Giridharan	Jegatheesan Periyannan, Muneeswaran Muniyandi and Giridharan Nambi Venkatesan.	Effect of thickness and annealing temperature on the properties of PZT films at Morphotropic Phase Boundary composition prepared by sol-gel spin-on technique . 4th International Conference on Solid State Science & Technology, Holiday Inn, Malacca, Malaysia, December 18-20, 2012 .

	P. Jegatheesan, N.V. Giridharan	Fabrication of microcantilevers based on the sol-gel deposited PZT film Fifth ISSS National Conference on MEMS, Smart Materials, Structures and Systems, Karpagam University, Coimbatore, Sep. 21-22, 2012.
	M.Muneeswaran and N.V.Giridharan,	Synthesis of nanosized $\text{Bi}_{1-x}\text{Fe}_x\text{O}_3$ Ceramics, 4th International Conference on Advanced Nano Materials, IITM, October 17-19, 2012
	M.Muneeswaran and N.V.Giridharan	Synthesis and Characterization of Nano sized $\text{BiFeO}_3$ Ceramics By Soft chemical approach, National Seminar on New Materials and Nano Technology, Ooty, Sep 12-14, 2012
	M. Muneeswaran, C. Mascovani, and N. V. Giridharan,	Structural and multiferroic properties of $\text{YMnO}_3$ ceramics synthesized by co-precipitation method, DAE-SSP, IITB, 3-7, December 2012
	Sheethal S , N.V. Giridharan and S Palit Sagar	Optimization Of Electromagnetic Stirring (Ems) Parameters Using Ultrasonic C Scan Imaging, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
R. Joseyphus	Justin Arun Kumar Sharma , Arpita Ghosh , R. Justin Joseyphus and S Palit Sagar	To Establish The Feasibility Of IR Thermography For Sorting Of High Alumina Rich Iron Ores, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	Devang S. Patel, R. Justin Joseyphus , Amitava Mitra , Rajat K. Roy	Evolution of Tempered Martensite in Medium Carbon Steel and its Characterization by Magnetic Barkhausen and Hysteresis Loop Techniques, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	K. Prakash, T Arun, R. Justin Joseyphus and B. Jeyadevan	“Size distribution effects on the optical properties of gold nanoparticles synthesized by polyol process” Fourth International Optical Society of America (OSA) Network of Students Conference (IONS-NA 4) 10-12 October 2012, New York, USA
	K. Prakash, S. Nallamuthu, and R. Justin Joseyphus	“Synthesis and Properties of Gold Coated Magnetic Nanoparticles” Frontiers in Optics, 14-18 October 2012, Rochester, New York, USA.

	K. Prakash, T. Arun and R. Justin Joseyphus	“Synthesis and Properties of CoNi Alloy Nanoparticles Prepared by Polyol Process for Soft Magnetic Applications” 13th International Conference on Magnetic Fluids (ICMF-13), Jan7-11, 2013 National Physical Laboratory, New Delhi.
	T. Arun, K. Prakash and R. Justin Joseyphus	“ <i>Synthesis and Magnetic Properties of Prussian blue modified cubic Fe nanoparticles</i> ”, NANO INDIA-2013, February 19-20, 2013, CSIR-National Institute for Interdisciplinary Science and Technology (NIIST),Pappanamcode, Thiruvananthapuram, Kerala – 695019.
	T. Arun, R. Kuppusamy, K. Prakash and R. Justin Joseyphus	“Prussian Blue modified Fe <sub>3</sub> O <sub>4</sub> nanocubes”, Optical Flare-2013, A National Workshop on Optics and Photonics for Engineering Applications, March 16-17, 2013, NIT Goa
R.Nagalakshmi	N.Sudharsana, V.Krishnakumar R.Nagalakshmi	Growth, Spectral, thermal and first-order hyperpolarizability studies of nonlinear optical crystal: Anilinium Hydrogen Sulphate-Poster DAE-BRNS National Laser Symposium (NLS-20) held in Crystal Growth Centre, Anna University, Chennai during January 9-12, 2012.
	N.Sudharsana,G.Jasmine Priya, V.Krishnakumar R.Nagalakshmi	Linear and Nonlinear Optical properties of 2,5-DCAP crystal-A combined experimental and theoretical study -Poster Photonics 2012,The international conference on fiber optics and photonics held in Indian Institute of Technology, Madras during December 09-12,2012.(Optics infobase proceedings)
	Ajil P James, R. Nagalakshmi, A.Mitra*, A.K.Panda	Structural Health Monitoring (SHM) of Pipes through Guided Waves Technique Using Rapidly Quenched Nanostructured, Magnetostrictive Ribbons, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	N.K.S. Praveen Telidevara , B. Sasi , C.K. Mukhopadhyay , R. Nagalakshmi , B. P. C. Rao and T. Jaykumar	Wavelet based Signature Identification of Acoustic Emission Signals generated during Tensile Deformation of AISI type 316 Stainless Steel, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012

	N.Sudharsana, V.Krishnakumar R.Nagalakshmi	Experimental and theoretical studies of 2,5-DCAP crystal for nonlinear optical applications-Oral XVII National seminar on crystal growth held in Anna University, Chennai during January 09-11, 2013.
S. Manivannan	L.R.Shobin, K.C. Park, S. Manivannan	National Conference on Frontier Topics in Advanced Materials, Bishop Heber College, Trichy, March 11, 2013
	S. Praveen , Anish Kumar , K. V. Rajkumar , S. Manivannan , B. P. C. Rao and T.Jayakumar	Imaging of Inclined Defects using Immersion Time of Flight Diffraction Technique (I-TOFD), Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	K. Nikhil , Lino George , Krishnan Balasubramaniam , S. Manivannan	Inspection of Weld in Hexcan using Phased Array Guided Wave Ultrasonic Testing, Non-Destructive Evaluation Technical Proceeding of National Seminar and Exhibition, ISNT Delhi chapter, December 10-12, 2012
	L.R.Shobin, B. Renganathan, D. Sastikumar, K.C. Park, S. Manivannan	Optoelectronic Materials and Thin Films for Advanced Technologies, Cochin University of Science & Technology, Cochin, January 2-5, 2013

### 2.3. Attended by the Students/Faculty

	Faculty / Students	Details
D.Sastikumar	D.Sastikumar	International conference on Fiber optics and Photonics Dec .9-12, IIT , Chennai.
A.Chandra Bose	A. Chandra Bose	International Conference on Emerging Advanced Nanomaterials (ICEAN), Brisbane, Australia, Oct. 22 – 25, 2012
N. Baskaran	N. Baskaran	International conference on solid state science and Technology, Dec. 18-20, 2012, University of Malaysia.
J. Hemalatha	J. Hemalatha	Training programme on communication skill development, 21, 22 Feb 2013, organised by the women cell, NITT
R. Justin Joseyphus	K. Prakash	The XXXIII Annual Meeting of the Electron Microscopy Society of India(EMSI 2012), July 2 <sup>nd</sup> - 4 <sup>th</sup> 2012, IISc. Banglore.
	T.Arun	Advanced School for Transmission Electron Microscopy (ASTEM-2013), March, 4-8, 2013, Institute of Physics (IOP), Bhubaneswar and Indian Institute of Technology Bhubaneswar (IITBBSR),Bhubaneswar.

	T.Arun	Satellite workshop 1 <sup>st</sup> July and 5-6 <sup>th</sup> July, 2012 Jointly Organised by Indian Institute of Science, Bangalore with EMSI.
	T.Arun	The XXXIII Annual Meeting of the Electron Microscopy Society of India 2-4 July 2012, Organised by Indian Institute of Science, Bangalore with EMSI.
S. Manivannan	L.R.Shobin	National Conference on Frontier Topics in Advanced Materials, Bishop Heber College, Trichy, March 11, 2013
	L.R.Shobin	Optoelectronic Materials and Thin Films for Advanced Technologies, Cochin University of Science & Technology, Cochin, January 2-5, 2013

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Faculty	Co-ordinator	Title	Period
N.Gopalakrishnan	N.Gopalakrishnan N.V.Giridharan	Workshop on Advances in Nanomaterials and Thinfilms	08-09 March, 2013

#### 3.2. Attended:

Faculty	Faculty / Students	Details	Period
D.Sastikumar	D.Sastikumar	Winter College on Optics: Trends in Laser Development and Multidisciplinary Applications to Science and industry	4 -15 Feb. 2013 at Trieste, Italy.
N.Gopalakrishnan	S.Gowrishankar R.N.Lokesh	Structure & Thermodynamics of Emerging Materials (STEM-2012)	5-6 November, 2012
N.V. Giridharan	P. Jegatheesan M. Muneeswaran	Convergence - 2012, Recent Trends in Materials Research, NIT-Trichy.	Dec. 21-22, 2012
R. Justin Joseyphus	K. Prakash	“Workshop on Advanced Functional Materials-WAFM-2012”	March 19-24, 2012 at Dept. of Physics, Banaras

			Hindu University, Varanasi.
	K. Prakash	“National Workshop on Optics and Photonics for Engineering Applications - Optical Flare”	16 <sup>th</sup> -17 <sup>th</sup> March 2013, NIT Goa.

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
A.Chandra Bose	Oxide material preparation and characterization	Engineering Materials and Manufacturing Methods	NIT- Trichy June, 28, 2012
	Nanomaterials	UGC – Refresher Course	Bhaathidasan University, Trichy. November- 23, 2012.
	Synthesis, characterization of oxide nanomaterials for engineering applications.	Advanced Materials Processing, Characterization and Applications	PSN college of Engineering and Technology, January 23-25, 2013.
N. Baskaran	Computational materials science	UGC lecture series	Pondicherry University, 02.02.2013
J. Hemalatha	Functional Polymer Nanocomposite structures	Invited Lecture	Sri Venkateshwara University, Tirupathy, Andra Pradesh, India 18.02.2013
J. Hemalatha	Magnetic Material & Magnetoelectric Multiferroic Nanocomposite structures	Resource Person for the Refresher course on Recent Trends in Condensed Matter Physics (RTCMP-2012)	School of Physics, Madurai Kamaraj University, Madurai during Nov.19, 2012
M.C. Santhosh Kumar	An Introduction to MEMS	One day work shop on condensed mater physics	Govt. Brennen College, Thalassery , Kerala, 25.03. 2013
M.C. Santhosh Kumar	Transparent conducting oxides: advances & applications	Work shop on advances in condensed mater physics	Devamatha College, Pala Kottayam, Kerala 25.03.2013

Dr. R. Justin Joseyphus	Electron microscopy of nanomaterials	Hydrogen energy and advanced materials meeting	University of Kerala, Trivandrum, 13-14 Dec, 2012
	Mossbauer spectroscopy	UGC Refresher Course	Bharathidasan University, Tiruchirappalli, 24 Nov, 2012
R.Nagalakshmi	Strongly Correlated Electron System	XVII National Seminar on Crystal Growth	Anna University, 9-11 January 2013
S. Manivannan	Incredible Carbon	National Science Day	A.A.Govt. Arts College, Musiri, 28.02.2013
S. Manivannan	Carbon Nanomaterials	UGC Sponsored One Day Seminar on Laser Material Processing and Nanomaterials	Jamal Mohamed College, Trichy & 09.03.2013
S. Manivannan	Carbon Nanomaterials in Photonics	Photonics Lecture Series	Bharathidasan University, Trichy & 11.03.2013
N.V. Giridharan	Ferroelectrics-basics, materials, properties and applications	Workshop on Advances in Nanomaterials and Thinfilms (WANT-2013)	8 <sup>th</sup> and 9 <sup>th</sup> March 2013, N.I.T. Trichy

### 5. Sponsored Projects undertaken.

Co-ordinator	Name of the Project	Sponsor	Amount (Rs. in Lakhs)
B Karthikeyan	Synthesis, exciton and phonon properties of NiO nanotube composite polymers	CSIR	9.00

### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

	Equipment	Amount (Rs. in Lakhs)
B. Karthikeyan	Vibration Isolation Table	7
M. Ashok	FTIR	9

### 7. Research Papers Published in National / International Journals

#### 7.1. Faculty

Faculty	S.No	Title	Author(s)	Journal	Year Vol. (No) Page
T.Balasubramanian	1	Activation of room temperature ferromagnetism in ZnO films by surface functionalization with thiol and amine	G. Jayalakshmi, N. Gopalakrishnan, T. Balasubramanian	Journal of Alloys and Compounds	2013 551 667–671
	2	Activation and Deactivation of room temperature ferromagnetism in ZnO films.	G.Jayalakshmi S.Sriman Narayanan, T. Balasubramanian	Functional Materials Letters	2012 05, 1250044: 1–5.
	3	Swift Heavy Ion induced modifications in Structural, Optical & Magnetic properties of pure and V Doped ZnO films.	G. Jayalakshmi, K. Saravanan, S. Balakumar T. Balasubramanian	Vacuum	10.1016/j.vacuum.2013.02.014
	4	Impact of thiol and amine functionalization on photoluminescence properties of ZnO films.	G. Jayalakshmi, K. Saravanan, T. Balasubramanian	Journal of Luminescence	<a href="http://dx.doi.org/10.1016/j.jlumin.2013.02.057">http://dx.doi.org/10.1016/j.jlumin.2013.02.057</a>
	5	Enhancing mechanism for room temperature ferromagnetism in ZnO films on amine functionalization.	G. Jayalakshmi, T. Balasubramanian	Journal of Materials Science: Materials in Electronics	DOI 10.1007/s10854-013-1193-3
D. Sastikumar	6	Growth of nanolaminate structure of tetragonal zirconia by pulsed laser deposition	Govindasamy Balakrishnan, Parasuraman Kuppusami, Dillibabu Sastikumar and Jung Il Song	Nanoscale Research Letters	2013, Vol .8 page 82
	7	Effect of magnetism on the ethanol sensitivity of undoped and Mn-doped CuO nanoflakes	R.N. Mariammal K. Ramachandran G. Kalaiselvan, S. Arumugam, B. Renganathan, D. Sastikumar	Applied Surface Science	2013 Vol. 270, Pages 545–552

	8	On the enhancement of ethanol sensing by CuO modified SnO <sub>2</sub> nanoparticles using fiber-optic sensor	R.N. Mariammal, K. Ramachandran, B. Renganathan, D. Sastikumar	Sensors and Actuators B	2012 Vol. 169 Pages 199– 207
	9	<u>Role of Heterojunction and Oxygen Vacancies on Ethanol Detection by ZnO:SnO<sub>2</sub> Nanocomposites</u>	Mariammal, R. N. Stella, C Renganathan, B Sastikumar, D Ramachandran, K	Advanced Science Letters	2012, Volume 17, pp. 56-63
A. Chandra Bose	10	Flower-like hierarchical h-MoO <sub>3</sub> : A new findings of efficient visible light driven nano photocatalyst for methylene blue degradation	A. Chithambararaj, N. S. Sanjini, A. Chandra Bose, and S. Velmathi	Catalysis Science Technology	2013, DOI: 10.1039/c3cy20764a.
	11	Effect of dopant concentration on photoluminescence properties of Gd <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> ,	T. Selvalakshmi and A. Chandra Bose	AIP Conference Proceedings	1512 (2013) 340 - 341
	12	Dopant Induced Bandgap Narrowing in Y-Doped Zinc Oxide Nanostructures	Rajeswari Yogamalar, Pedinti S. Venkateshwaran, Mercy R. Benziger, Katsuhiko Ariga, Ajayan Vinu, and A. Chandra Bose	Journal of Nanoscience and Nanotechnology	12(2012) 75-83
	13	ZnO-based pn homo- junction fabricated by spin coating method	N. Rajeswari Yogamalar, and A. Chandra Bose	Science Advanced Materials	4 (2012) 1-10
	14	Synthesis, Dopant Study and Device Fabrication of Zinc Oxide Nanostructures: Mini Review	N. Rajeswari Yogamalar, and A. Chandra Bose,	Progresses in Nanotechnology and Nanomaterials (PNN)	2012
	15	Dielectric and conductivity study of microwave sintered SrBi <sub>2</sub> Ta <sub>2</sub> O <sub>9</sub> ceramics	Senthil Venkatesan, Tanmaya Badapanda, A. Chandra Bose and Simanchalo Panigrahi	ISRN Ceramics	2012

16	Microwave assisted ultra fast synthesis of 1-D molybdenum oxide nanocrystals: structural and electrical studies	A. Chithambararaj, and A. Chandra Bose	Advanced Materials Research	488-489 (2012) 940-944
17	Dielectric relaxation behavior and electrical conduction mechanism in polymer-ceramic composites based on Sr modified barium zirconium titanate ceramic	V. Senthil, T. Badapanda, A. Chithambararaj, A. Chandra Bose, A. K. Mohapatra, S. Panigrahi	Journal of Polymer Research	19 (2012) 9898
18	Effect of mineralizer (KNO <sub>3</sub> ) on the structural and optical properties of h-MoO <sub>3</sub> nanocrystals	A. Chithambararaj and A. Chandra Bose	Advanced Materials Research	585 (2012) 110-114
19	Hydrothermal synthesis of 1D h-MoO <sub>3</sub> : Structural and thermal properties	A. Chithambararaj and A. Chandra Bose	AIP Conference Proceedings.	(2012), Accepted.
20	Hydrothermal synthesis of molybdenum oxide microbelts	A. Chithambararaj, and A. Chandra Bose	AIP Conference Proceedings	1447 (2012) 311-312
21	Morphological and luminescence study on Eu <sup>3+</sup> doped ZnO nanoparticles prepared by hydrothermal method	M. Suganthi and A Chandra Bose	Advanced Materials Research,	2012 (Accepted )
22	Optical study on gadolinium oxide nanoparticles synthesized by hydrothermal method	T. Selvalakshmi and A. Chandra Bose	Advanced Materials Research	585 (2012) 105-109
23	Synthesis and characterization of Er <sup>3+</sup> doped Y <sub>2</sub> O <sub>3</sub> nanoparticles	T.Selvalakshmi, S. Philomina, R. Srinivasan and A. Chandra Bose	Journal of Luminescence and its application	12 (2012) 82-84

N. Baskaran	24	Emergence of biaxial polarization in lone pair doped orthorhombic $\text{HoMnO}_3$ : A theoretical study	S. Sathya Sheela and N. Baskaran	Journal of Physcal Condensed Matter	In press
N.Gopalakrishnan	25	Fabrication of n- $\text{Zn}_{1-x}\text{Ga}_x\text{O}$ /p- $(\text{ZnO})_{1-x}(\text{GaP})_x$ th in films and homojunction	S. Gowrishankar L. Balakrishnan T.Balasubramanin N.Gopalakrishnan	Materials Science and Engineering: B	2013 (178) 31–38
	26	p-Type Formation Mechanism of Codoped and Tridoped ZnO Thin Films	L. Balakrishnan S. R. Barman N. Gopalakrishnan	Science of Advanced Materials	2013 (5) 1-7
	27	Influence of oxygen partial pressure on ferromagnetic switching characteristics of ZnO:Cr heteroepitaxial films	N. Gopalakrishnana L. Balakrishnan M. Suganya S. Gowrishankar	Composite Interfaces	2013 (20) 221-228
	28	Activation of room temperature ferromagnetism in ZnO films by surface functionalization with thiol and amine	G. Jayalakshmi, N. Gopalakrishnan, T. Balasubramanian	Journal of Alloys and Compounds	2013 (551), 667-671.
	29	Fabrication of tridoped p-ZnO thin film and homojunction by RF magnetron sputtering	L. Balakrishnan, S. Gowrishankar, N.Gopalakrishnan	Ceramics International	2012 (38) 6221–6227
	30	Fabrication of $\text{Al}^{3+}$ and large radii mismatch $\text{As}^{5+}$ codoped p-ZnO thin film and homojunction	L. Balakrishnan N.Gopalakrishnan	Thin Solid Films	2012 (520) 5702–5705.
	32	$\text{NH}_3$ sensing by p-ZnO thin films	L. Balakrishnan, S. Gowrishankar, N. Gopalakrishnan	Sensors	2012 7258
J. Hemalatha	33	Viscosity Studies on Novel Copper	M. Nabeel Rashin and J. Hemalatha	Experimental Thermal and	2013 In Press

		Oxide–Coconut Oil Nanofluid		Fluid Science	
	34	Ferroelectric and magnetic studies on unpoled Poly (vinylidene Fluoride)/Fe <sub>3</sub> O <sub>4</sub> magnetoelectric nanocomposite structures	T. Prabhakaran and J. Hemalatha	Materials Chemistry and Physics	(2013) 137, 781-787
	35	Acoustical studies on the interaction of copper oxide - Ethylene glycol nanofluid	M. Nabeel Rashin and J. Hemalatha	Advanced Nanomaterials and Nanotechnology (Springer Proceedings in Physics)	(2013) 143, 223-227 Book ISBN: 978-3-642-34215-8
	36	Magnetic and ultrasonic investigations on magnetite nanofluids	M. Nabeel Rashin and J. Hemalatha	Ultrasonics	(2012), 52, 1024–1029
	37	Negative giant magnetoresistance effect in single layered superparamagnetic polymer nanocomposite structures of Poly(vinyl alcohol)– polyaniline/bismuth ferrite	T. Prabhakaran and J. Hemalatha	Smart Materials Structures	(2012) 21, 085012
R. Sankaranarayanan	38	Classical rules and quantum strategies in penny flip game	S. Balakrishnan, R. Sankaranarayanan,	Quantum Information Processing.	2013, 12 (2), 1261-1268
M.C. Santhosh Kumar	39	Deposition of the low resistive Ag–N dual acceptor doped p-type ZnO thin films	R. Swapna, M.C. Santhosh Kumar	Ceramics International	2013, 39, 1799–1806
	40	Resistivity Stability of Ga Doped ZnO Thin Films with Heat Treatment in Air and Oxygen Atmospheres	T. Prasada Rao, M. C. Santhosh Kumar	Journal of Crystallization Process and Technology,	2012, 2, 72-79

	41	The role of substrate temperature on the properties of nanocrystalline Mo doped ZnO thin films by spray pyrolysis	R. Swapna, M.C. Santhosh Kumar	Ceramics International	2012, 38, 3875–3883
	42	Growth and characterization of molybdenum doped ZnO thin films by spray pyrolysis	R. Swapna, M.C. Santhosh Kumar	Journal of Physics and Chemistry of Solids	2013, 74, 418–425
	43	Effects of thickness and atmospheric annealing on structural, electrical and optical properties of GZO thin films by spray pyrolysis	T. Prasada Rao, M.C. Santhosh Kumar, N. Sooraj Hussain	Journal of Alloys and Compounds	2012, 541, 495–504
B. Karthikeyan	44	Vibrational, giant dielectric and AC conductivity properties of agglomerated CuO nanostructures	K. R. Deepthi, T. Pandiyarajan, B. Karthikeyan	Journal of Material Science: Materials in Electronics	(DOI 10.1007/s10854-012-0875-6)
	45	Synthesis and antifungal studies on CuO nanostructures	M. Hussain Beevi, S. Vignesh, T. Pandiyarajan, P. Jegatheesan, R. Arthur James, N. V. Giridharan and B. Karthikeyan	Advanced Materials Research	488-489 (2012) 666-670
	46	Role of Fe doping on structural and vibrational properties of ZnO nanostructures	T. Pandiyarajan, R. Udayabhaskar, B. Karthikeyan	Applied Physics A	(DOI 10.1007/s00339-011-6755-8)
	47	Microstructure and enhanced exciton–phonon coupling in Fe doped ZnO nanoparticles	T. Pandiyarajan, R. Udayabhaskar, B. Karthikeyan	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	103 (2013) 173–178
	48	Optical properties of annealing induced post growth ZnO:ZnFe <sub>2</sub> O <sub>4</sub> nanocomposites	T. Pandiyarajan, B. Karthikeyan	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	106 (2013) 247–252

N.V. Giridharan	49	Enhanced Electrical Properties of PZT thick films prepared by sol- gel technique through step-by-step crystallization process	P. Jegatheesan, N.V. Giridharan	Journal of Material Science: Materials in Electronics	23 (2012) pp.1103-1107
	50	Synthesis and antifungal studies on CuO nanostructures	M. Hussain Beevi, S. Vignesh, T. Pandiyarajan, P. Jegatheesan, R. Arthur James, N. V. Giridharan and B. Karthikeyan	Advanced Materials Research	488-489 (2012) pp. 666-670
	51	Low temperature synthesis of Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> ceramic powders by gelatin agent assisted sol-gel process	P. Jegatheesan M. Muneewaran S. Gokul Raj and N.V. Giridharan	Advanced Materials Research	488-489 (2012) pp. 310-314
	52	Structural and magneto-electric properties of Bi <sub>0.4</sub> La <sub>0.6</sub> Fe <sub>0.8</sub> Mn <sub>0.2</sub> O <sub>3</sub> ceramics,	S. P. Keerthana, M. Muneeswaran, P. Jegatheesan, N. V. Giridharan,	AIP Conference Proceedings	1447 (2012) pp. 1333-1334
	53	Synthesis of Nanosized BiFeO <sub>3</sub> Powders by Co-precipitation Method	M. Muneeswaran, P. Jegatheesan and N.V. Giridharan	Journal of Experimental Nanoscience	8 (2013) pp.341-346
	54	Structural and multiferroic properties of YMnO <sub>3</sub> ceramics synthesized by co-precipitation method	M. Muneeswaran, C. Mascovani, and N. V. Giridharan,	AIP Conference Proceedings	1512 (2013) pp. 1270-1271
	R. Justin Joseyphus	55	Crystallization kinetics of Nd-substituted yttrium iron garnet prepared through sol-gel auto-combustion method	T. Arun, M. Vairavel, S. Gokul Raj, R. Justin Joseyphus	Ceramics International
56		Residual Stress Analysis in Surface Mechanical Attrition Treated (SMAT) Iron and	Nishanth. S. Prabhu, J. Joseyphus, T.S.N. Sankaranarayanan, B. R. Kumar, Amitava Mitra, A.	IEEE Trans. Magn.	2012, 48(12), 4713.

		Steel Component Materials by Magnetic Barkhausen Emission Technique	K. Panda.		
R.Nagalakshmi,	57	Growth and characterization of hydroxyethylammonium picrate single crystals for third-order nonlinear optical applications	N.Sudharsana, B.Keerthana, R.Nagalakshmi, V.Krishnakumar, L.Guru Prasad	Materials Chemistry and Physics	2012(134) 736
	58	Growth and nonlinear optical studies of N-acetyl-L-Cysteine crystal	L.Guru Prasad, V.Krishnakumar, R.Nagalakshmi	European Physical Journal Applied Physics	57(2012) 10201
	59	Vibrational and Third-Order Nonlinear Optical Study on Hydroxyethylammonium Picrate (HEAP) Single Crystals	N.Sudharsana, R.Nagalakshmi, V.Krishnakumar, A.Sharma, R.Fausto, T.N.Guru Row, Rumpa Pal	AIP Conference Proceedings	2012(1447), 1263
	60	Growth and characterization of anilinium hydrogen sulfate (AHS) single crystals: An organic nonlinear optical material	N.Sudharsana, G.Subramanian, V.Krishnakumar, R.Nagalakshmi	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	2012(97) 798
	61	Oxygen and gold ion irradiation effects on hydroxyethylammonium (L) tartrate monohydrate single crystals	N.Sudharsana, K.Asokan, V.Krishnakumar, R.Nagalakshmi	Radiation Measurements	2013(49) 88
S. Manivannan	62	Single-walled carbon nanotubes wrapped poly-methyl methacrylate fiber optic sensor for ammonia, ethanol and methanol vapors at room temperature	S. Manivannan, A.M. Saranya, B. Renganathan, D. Sastikumar, G. Gobi, Kyu Chang Park	Sensors and Actuators B: Chemical	171– 172 (2012) 634– 638

**8. Ph.D Awarded:**

<b>S.No.</b>	<b>Name of the Research Scholar</b>	<b>Guide / Supervisor</b>	<b>University / Institute</b>
1.	L.Balakrishnan	N.Gopalakrishnan	NITT

**11. Other Important Points:**

R. Justin Joseyphus - MoU with The University of Shiga Prefecture, Japan for collaboration at the Institute level from March 2013.



# PRODUCTION ENGINEERING

## PRODUCTION ENGINEERING

### 1. Notable Achievements

#### 1.1. Faculty Members

S.No.	Name	Prizes/Awards	Organization
1	Dr.P.Sathiya	Best Cited paper Award 2012 for the Paper Titled "Optimization of laser butt welding parameters with multiple performance characteristics" in Journal of Optics and Laser Technology	Elsevier Publications
2	Dr.S.Vinodh	Received First and Second Best paper Award in the International Conference on Agile Manufacturing (ICAM 2012) during December 16-19,2012.	IIT-Banaras Hindu University (IIT-BHU), Varanasi.

#### 1.2. Students

S.No.	Name	Prizes/Awards	Organization
1.	Anirudh A.M.	Receipt of DAAD WISE 2013	DAAD WISE
2.	Koushini.N (114110041) and Janani.D (114110018)	Won Inter NIT volleyball tournament held at NIT Surat Won SHAURYA'12, IITKGP sports fest-volleyball held during	NIT Surat
3.	Anand Mohapatra (114109004)	Litfest'12 - CEG: (Oct-12) 2nd Place: Sports and Entertainment Quiz Saarang - IIT-M: (Jan-13) 2nd Place: Cluedo Vortex - NITT: (Feb-13) 2nd Place: General Quiz Probe - NITT: (Feb-13) 2nd Place: Technical Quiz Pragyan - NITT: (Mar-13) 1st Place: Pragyan Main Quiz	IIT-M,CEG,NIT Trichy
4.	J V JEOFFER (114109030)	First Place in Mcafee Quiz  First place in How Stuff Works Quiz (Pragyan 2013)	NIT Trichy

5.	SURYANSH MAHESH JALAN (114109093)	Represented NIT-Trichy football team at Shaurya, IIT-Kharagpur's sports tournament where the NIT sports contingent won best college overall. (September 2012)	IIT Kharagpur
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## 2. Conference / Seminars / Symposium / Special Lectures

### 2.1. Organised

S.No	Event Details	Programme	Date
1	Features of PRODIGY '13 <ul style="list-style-type: none"> <li>• Release of Department Alumni Database</li> <li>• Two Guest Lectures</li> <li>• Conduct of CNC, ANSYS and FLEXIM workshops</li> <li>• Paper presentation by 6 student teams</li> <li>• Rapid Prototyping Demonstration</li> </ul>	Prodigy 2013 Organised by Production Engineering Association	March 15-16,2013

### 2.2. Papers presented by the Faculty / Students

Author(s)	Title	Place & Date
Prasanna Venkatesan S and Kumanan S	Supply chain risk Prioritization using a hybrid MCDM approach	ICMIE, Singapore, 2012
S.P.Leo kumar, J.Jerald, S.Kumanan, Shashank Pansari	Experimental investigation of Micro drilling of C360 Brass	CMTI, Bangalore, 2013
S.P.Leo kumar, J.Jerald, S.Kumanan, Ankit Nargundkar	Experimental investigation of Micro end milling of cost grade Virgin PMMA	CMTI, Bangalore, 2013
S.P.Leo kumar, J.Jerald, S.Kumanan	Manufacturing application of micro machining for automobile components	IE-India, Coimbatore, 2012
Manikandan.N, S.Kumanan & C.Sathyanarayanan	Electrochemical deburring of automobile components-A study	IE-India, Coimbatore, 2012
Selvarajan L, Ramesh P, and Sathiyarayan C	Investigation of Mechanical and Machinability properties of Aluminium MMC by using EDM for Automobile Components	PSG Tech, Coimbatore, 2012
S.Prasanna venkatesan, K.R.Arun and Mano Kanthanathan	Bottleneck analysis in a field coil manufacturing system using Flexsim simulation	IITM Research park, IITM
S.Vinodh, V.Kamala, M.S.Shama	Sustainable concept selection using Grey Rough set Evaluation	INC@mtTRENDS'12

<b>Author(s)</b>	<b>Title</b>	<b>Place &amp; Date</b>
M.S.Shama,K.Jayakrishna and S.Vinodh	Re-manufacturability Index Evaluation for an Automotive Product	Nimhans Convention Center Bangalore, 2012
K.Jayakrishna, V.Kamala, S.Vinodh and M.P.Chowdiah	Executive support System for Performance measurement in a Responsive and Fuzzy Environment	International conference on Agile Manufacturing 2012,IIT-Banaras Hindu university, Varanasi
Uthirapathi A, Lenin Singaravelu D	Effect of rotating tool electrode on machining of Titanium alloy using Electric Discharge Machining	ICEM, 2012, Singapore
Manojkumar kuttubonia, Uthirapathi A, Lenin Singaravelu D	Effect of process parameters in electric discharge machining of Ti-6Al-4V alloy by three different tool electrode materials	ICMIE 2012, Singapore
Sai Balagi.S (114110063) and Aditya Patil (114110096)	Paper got published at the International Conference on Contemporary Business 2012	December 2012.

### 2.3. Attended by the Faculty / Students

<b>Faculty / Students</b>	<b>Title / Programme</b>	<b>Place &amp; Date</b>
Dr.Lenin Singaravelu D	ICEM 2012	Singapore, December 29, 2012 – January 1, 2013
Dr.V.Anandkrishnan	ICEM 2012	Singapore, December 29, 2012 – January 1, 2013
Dr.S.Vinodh	International conference on Agile Manufacturing 2012	Varanasi December 16-19, 2012

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

<b>Co-ordinator</b>	<b>Title</b>	<b>Period</b>
Dr.J.Jerald, Dr. S.Prasanna Venkatesan	Engineering optimization and approaches	August 24-25, 2012
Dr.P.Asokan,Dr.S.Vinodh	Innovative product design and Rapid Manufacturing Strategies	April 12-13 2012
Dr.S.Vinodh and Dr.P.Senthil	Rapid Prototyping and Tooling Techniques	March 8-9,2013
Dr.S.Kumanan	One Day Workshop on Curriculum Development in Production Engineering	March 22, 2013

#### 3.2. Attended

<b>Faculty / Students</b>	<b>Title</b>	<b>Period</b>
Dr.S.Prasanna	ISTE workshop on introduction to	25/5/2012

venkatesan	Research methodologies	to 4/7/2012
Dr.S.Vinodh	Optimization for Engineering Design	September 3-7, 2012
Dr.Lenin Singaravelu	ISTE Workshop on 'Engineering Thermodynamics'	Dec. 11-20, 2012

#### 4. Invited / Guest Lectures Delivered by the Faculty

Faculty	Topic	Programme	Place & Date
Dr.S.Kumanan	Introduction to Lean Manufacturing	One Day Executive development Programme on Lean Manufacturing to BHEL Executives	2012
Dr.P.Sathiya	Plenary Talk on Laser welding on super duplex stainless steel	Dr.M.G.R Deemed University,Chennai	19-4-2012
	Keynote address on Welding processes and its recent developments	Mechanical Engineering Student Association 204 Inauguration,Shivani Engineering College	27-9-2012
	Welding parameter optimization using Taguchi Techniques and RSM	AC TECH,Karikudi	10-12-2012
Dr.J.Jerald	Total Productive Maintenance	One Day Executive development Programme on Lean Manufacturing to BHEL Executives	21.9.2012
Dr.C.Sathiyarayanan	Production & Productivity	One Day Executive development Programme on Lean Manufacturing to BHEL Executives	21.9.2012
Dr.S.Prasanna Venkatesan	Evolutionary multi objective optimization	NIT-Trichy	28/8/2012
Dr.S.Vinodh	Leanness assessment and its implementation studies	One Day Executive development Programme on Lean Manufacturing to BHEL Executives	21.9.2012
	Modeling and Evaluation of agile systems	ICAM'12, IIT-Banaras Hindu University, Varanasi	December 16-19,2012

## 5. Research Projects undertaken and status

Co-ordinator	Name of the Project	Sponsor	Duration and Status	Amount (Rs. in Lakhs)
HOD/Production Engineering	DST-FIST	DST, New Delhi	2010-15 (Ongoing)	105
Dr.R.Narayanasamy	Formability studies of I.F. Steel sheets	M/s. Tata Steels Ltd, Jamshedpur.	(Ongoing)	8
	Formability of Low Nickel Stainless Steel sheets	Salem Steel Plant, Salem.	(Ongoing)	0.5
	Formability of HSLA sheets	Tube Products of India Ltd., Chennai	(Ongoing)	
Dr.P.Asokan and Dr.V.Senthilkumar	Improvement of surface characteristics of bio-degradable magnesium alloys through cryogenic machining (PI)	DST-SERC	3 years (2013-2016)	21.75
Dr.M.Durai selvam	Exploratory studies on Localized Repair of Aero Engine Blade by welding Technique	Gas Turbine Research Establishment (GTRE)	2012-2013	9.9
	Structural Integrity Evaluation studies on High Speed Transmisson shaft for Turbofan Engine Application	GTRE	2012-2014	49.59
Dr.P.Sathiya	Experimental investigation and metallurgical analysis of friction welded duplex stainless steel joints	CSIR, New Delhi	2013-2015	17.96
Dr.J.Jerald	Development of Indigenous Capability for Ultra-Precision Electrolytic In-Process Dressing (ELID) Grinding Facility for Micro/Nano Machining	Department of Science and Technology, New Delhi.	Ongoing	15.6 Lakhs
Dr.S.Vinodh	Development of a model for ensuring sustainable product design in automotive organizations	DST, New Delhi	2010-2013	11.9
	Decision support systems for measuring Agile characteristics	CSIR, New Delhi	2010-2013	7.5

## Consultancy Projects undertaken

Co-ordinator	Name of the Project	Sponsor	Duration and Status	Amount (Rs. in Lakhs)
Dr. V.Senthilkumar	Development of nanocoating to prevent seawater corrosion in boiler tubes-PI	BHEL,Trichy	6 months (FEB13-JULY 13)	14.51
	Validation and site demonstration of nanostructured coating for Boiler water wall and super heater tubes-PI	BHEL,Trichy	18 months	7

## 6. Major Equipment / Software Purchased (more than Rs. 1 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1	TreadMill (TEQIP)	3.66
2	Ergo cycle (TEQIP)	1.48
3	Method study equipment (TEQIP)	1.31
4	ECM Machine (TEQIP)	8.10
5	GaBi Package for Life Cycle Assessment	3.70
6	Pneumatic & Electro-Pc.SW	4.10
7	Hydraulic & Pneumatic -Pc.SW	4.10
8	Flexsim software - Simulation	4.01
9	Ergomaster software	4.51
10	Metallurgical microscope (EDM)	7.60
11	Interactive white board system	1.19

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S. No.	Author(s)	Title	Journal	Year Vol. (No) Page
1.	S.Kumanan, Jerald J, Leokumar S.P, Chandrakar H.V	Experimental investigation and optimization of process parameter in Micro-Electrical Discharge Machining	International journal of Manufacturing technology and Management	Accepted for publication
2.	Edwin Raja Dhas J, Somasundaram Kumanan, C P Jesuthanam	Prediction of Weld Quality using intelligent decision making tools	Artificial intelligence Research	2012 7 (2), 131-148
3.	Udhayakumar P and S Kumanan	Some metaheuristic approaches for optimizing tardiness of job and tool in a flexible manufacturing	International journal of advanced Operations	2012 4(3), 219-252

<b>S. No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Journal</b>	<b>Year Vol. (No) Page</b>
		system	management	
4.	Prasanna Venkatesan S and Kumanan S	Multi objective supply chain sourcing strategy Design under Risk using PSO and Simulation	International journal of Advanced Manufacturing and technology	2012 61(1-4) 325-337
5.	M.Ilangkumaran And S. Kumanan	Application of hybrid VIKOR model in selection of maintenance strategy	International journal of Information system and Supply chain Management	2012 5(2), 59-81
6.	Udhayakumar P and S Kumanan	Integrated scheduling of FMS using Evolutionary algorithms	International journal of Advanced Manufacturing and technology	2012 61 (5-8), 621-635
7.	Prasanna Venkatesan S and Kumanan S	Supply chain risk Prioritization using a hybrid AHP and PROMOTHEE approach	International journal of services and Operations management	2012 13(1),19-41
8.	Prasanna Venkatesan S and Kumanan S	Supply chain risk Prioritization using a hybrid MCDM approach	Advanced Materials Research	2012 488-499 406-410
9.	Prasanna Venkatesan S and Kumanan S	A multi objective discrete particle swarm optimization algorithm for supply chain network design	International Journal of Logistics Systems and Management	2012 11, 375-406
10.	K.Kumar and Kumanan S	Decision making in location selection : An integrated approach with clustering and Topsis IUP	Journal of Operations management	2012 11(1), 1-14
11.	Prasanna Venkatesan S and Kumanan S	A multi objective discrete particle swarm optimization algorithm for supply chain under risk	Proceedings of international Simulation Conference of India (ISCI)	IIT Mumbai ISCI 2012
12.	K.Mathiyazhagan, Kannan Govindan, A.Noorul Haq, Yong Geng	An ISM approach for barrier analysis in implementing green supply chain management	Journal of cleaner production	In press Corrected proof: 2013, 1-15
13.	K.Mathiyazhagan, Kannan Govindan, A.Noorul Haq	Barrier analysis to improve green in existing supply chain management	Taylor & Francis	CRC press. 2013,422
14	P.Ravindran, K.Manisekar,	Application of factorial techniques to study the	Materials & Design	2012 39, 42-54

S. No.	Author(s)	Title	Journal	Year Vol. (No) Page
	P.Narayanasamy, N.Selvakumar, R.Narayanasamy	study the wear of Al Hybrid composites with Graphite additions		
15	M.Sumathi, N.Selvakumar, R.Narayanasamy	Workability studies on sintered Cu-10 SiC preforms during cold axial upsetting	Materials and design	2012 39, 1-8
16	N.Selvakumar, A.P.Mohanraj, R.Narayanasamy	Experimental investigation on workability and strain hardening behaviour of Fe-V-0.5Mn sintered composites	Materials & Design	2012 41, 349-357
17	K.Velmanirajan, A.Syed Abu Rhaheer, R.Narayanasamy, C.Ahamed Basha	Numerical modelling of aluminium sheets formability using response surface methodology	Materials & Design	2012 41, 239-254
18	P.Ravindran, K.Manisekar, R.Narayanasamy, P.Narayanasamy	Tribological Behaviour of powder metallurgy-processed aluminium hybrid composites with the addition of Graphite solid lubricant	Ceramics international,	2013 39 (2), 1169-1182
19	M.Srinivasan, C.Loganathan, R.Narayansamy, V.Senthilkumar, Q.B.Nyuyen, M.Gupta	Study on hot deformation behaviour and microstructure evolution of cast-extruded AZ31B magnesium alloy and nanocomposite using processing map	Materials & Design	2013 47,449-455
20	R.Ravindran, K.Manonmani, R.Narayanasamy	An analysis of wrinkling limit diagrams of aluminium alloy 5005 annealed at different temperatures	International journal of material forming	In press
21	K.Velmanirajan, A.Syed abu thaheer, R.Narayansamy	Effect of annealing temperature in Al 1145 Alloy sheets on formability void Coalescence and texture analysis	Journal of Materilas engineering and Performance	In press
22	G.M.Balamurugan, Muthukannan Duraivelvam, V.Anandakrishnan	Comparison of high temperature wear behaviour of plasma sprayed WC-Co coated and hard chromium plated AISI 304 austenitic stainless steel	Materials and design	2012 35,640-646
23	N.L.Parthasarthi, Muthukannan Duraivelvam,	Effects of plasma spraying parameter on wear resistance of NiCrBSiCFe	Materials and design	2012 36,141-151

<b>S. No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Journal</b>	<b>Year Vol. (No) Page</b>
	Utpal Borah	plasma coatings on austenitic stainless steel at elevated temperatures at various loads		
24	M.Hashim , K.E.Sarath Ragavendra Babu, Muthukannan Duraiselvam, Harshad Natu,	Improvement of wear resistance of Hastelloy C-276 through laser surface melting	Materials and design	2013 46,546-551
25	S.Karthikeyan, P.Asokan, S.Nickolas & Tom	Solving flexible job-shop scheduling problem using hybrid particle swarm optimisation algorithm and data mining	International Journal of Manufacturing technology and Management	2012 26(1) 81-103.
26	S.Karthikeyan , P.Asokan and S.Nickolas	A hybrid firefly algorithm for multiobjective flexible job job scheduling problems	International journal of Production Technology and Management Research	2012 3(2),89-98,
27	S.Padmanabhan, M.Chandrasekaran, P.Asokan, and V.Srinivasa Raman	A performance study of real coded Genetic Algorithm on Gear Design Optimization	Advanced Materials Research	2013 622,64-68,
28	K.Pannerselvam, K.Pradeep, P.Asokan	Optimization of End Milling Parameters for Glass Fiber Reinforced Plastic (GFRP) using Grey Relational analysis	Procedia Engineering	2012 38,3962-3968
29	P.Sathiya,K.Panneerselvam, R.Soundararajan	Optimal design for Laser beam butt welding process parameter using artificial neural networks and genetic algorithm for super austenitic steel	International journal of Optics and Laser technology	2012 44, 1905-1914
30	P.Sathiya,Mahendra kumar Mishra, B.Shanmugarajan	Effect of shielding gasses on microstructure and mechanical properties of super austenitic SS by hybrid welding	International Journal of Materials and design	2012 33, 203-212
31	A.P.Abilash and P.Sathiya	Finite element simulation of laser welding of 904 L super austenitic stainless steel	International Journal of Minerals, Metals and Materials	DOI 10.1007/s12666-011-0093-6
32	P.Sathiya, Ajesh Sudhakaran,	Mechanical and metallurgical investigation	International journal of	2012 7, 490-498

<b>S. No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Journal</b>	<b>Year Vol. (No) Page</b>
	R.Soundararajan	on Gas Metal Arc welding of super Austentic stainless Steel	Mechanical and materials mEngineering	
33	P.Sathiya, K.Panneerselvam, M.Y.Abdul Jaleel	Optimization of laser welding process parameters for super austentic stainless steel using artificial neural networks and genetic algorithm	International journal of Materials and design	2012 36, 110-127
34	Paulraj Sathiya, M.Y.Abdul Jaleel and B.Shanmugarajan	Analysis of metallurgical and mechanical properties of laser welded super austentic stainless steel	International journal of Engineering, Design and technology	2012 10, 110-127
35	D.Katherasen, Madana Sashikant,S.Sandeep Bhat,P.Sathiya	Flux cored arc welding parameter optimization of AISI 316L (N) Austentic Stainless steel	International journal of industrial and manufacturing engineering	2012 6, 26-33
36	D.Katherasen, Jiju V Elias , P.Sathiya and A.Noorul Haq	Simulation and parameter optimization of flux cored arc welding using artificial neural network and particle swarm optimization algorithm	International Journal of Intelligent Manufacturing	DOI 10.1007/s10845-012-0675-0
37	D.Katherasen, P.Sathiya	Process parameter optimization of AISI 316L(N) weld joints produced using flux cored arc weelding process	International journal of minerals, metals and materials engineering	Accepted for publication
38	D.Katherasen, Jiju V Elias , P.Sathiya and A.Noorul Haq	Modeling and optimization of flux cord arc welding by genetic algorithm and simulated annealing algorithm	International journal of multidiscipline modelling in materials and structures	Accepted for publication
39	D.Katherasen, Jiju V Elias , P.Sathiya and A.Noorul Haq	Flux cored arc welding parameter optimization using particle swarm optimization algorithm	Procedia Engineering	2012 38, 3913-3926
40	D.Katherasen , P.Sathiya, A.Raja	Shielding gas effects on flux cored arc welding of AISI 316L (N) austentic stainless steel joints	Materials and Design	2013 45, 43-51
41	D.Katherasen, Madana Sashikant, S.Sandeep Bhat, P.Sathiya	Flux cord arc welding parameter optimization of AISI 316L (N) austentic	International journal of industrial and	2012 6,26-33

<b>S. No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Journal</b>	<b>Year Vol. (No) Page</b>
		stainless steel	manufacturing engineering	
42	Benjamin Joseph, D.Kathrasen, P.Sathiya, C.V.Srinivasa Murthy	Weld metal characterization of 316L (N) austenitic stainless steel by electron beam welding process	International journal of Engineering, Science and Technology	2012 4(2),169-176
43	P.Sathiya, P.M.Ajith, R.Soundararajan	Genetic algorithm based optimization of the process parameters for gas metal arc welding of AISI 904 L stainless steel	Journal of mechanical Science and technology	Accepted for publication
44	Venkatachalam, G.Narayanan S, Patel Nilay S, Nishant Prabhakar	Influence of hole shape and pattern on the prediction of limiting strain for perforated commercial pure aluminium sheets	Applied Mechanics and Materials	2012 232, 961-965
45	V.SenthilKumar, A.Balaji, D.Arulkirubakaran	Application of constitutive and neural network models for the prediction of high temperature flow behaviour of Al/Mg based nanocomposite	Journal of Transaction of Non-Ferrous alloys metal society	Accepted for publication
46	P.Senthil , T.Selvaraj, K.Sivaprasad	Influence of turning parameters on machinability of homogenized Al-Cu/TiB2 in-situ metal matrix composites	International journal of advanced manufacturing technology	DOI: 10.1007/s00170-012-4592-3
47	P.Senthil, T.Selvaraj, G.Kannan, R.Jeyapaul	Multi response optimization of turning operation on Al-Cu/TiB2 in-situ metal matrix composites using desirability function	International journal of manufacturing technology and management	2013 25, 1/2/3
48	P.Senthil, T.Selvaraj, S.Vinodh	Modeling of turning parameters of Al-Cu/TiB2 in-situ matrix composites using artificial neural network	International journal of Advanced Operations Management	2012 4(4)
49	S.Vinodh, S.Aravindraj	Axiomatic modelling of Lean manufacturing system	Design and technology	2012 10(2), 196-216
50	S.Vinodh, T.Selvaraj, T.Preveen	Development of agile product development cycle for rotary switches	Journal of engineering, design and technology	2012 10(3), 380-396
51	S.Vinodh, Uday kumar, Jeya Girubha R	Thirty-criteria –based agility assessment: a case study in an Indian pump	International journal of Advanced	2012, 63( 9-12), 915-929

S. No.	Author(s)	Title	Journal	Year Vol. (No) Page
		manufacturing organisation	manufacturing Technology	
52	Uthirapathi A, Lenin Singaravelu D	Effect of process parameters of Titanium alloy using electric discharge machining	Advanced Materials research	2013 651,448-452
53	Manoj Kumar Kuttubonia, Uthirapathi A, Lenin Singaravelu	Effect of process parameters in Electric Discharge Machining of Ti-6Al-4V alloy by three different tool electrode materials	Advanced materials research	2012 (488-489), 876-880
54	Lenin Singaravelu D, Chandra K, Misra P.S,	New processing technology for manufacture of Metallo-ceramic brakepads	Powder Metallurgy	2011 54(2), 118-126

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide(s) / Supervisor(s)	University / Institute	Month and Year
1	Mr.S Prasanna Venkatesan	Dr. S Kumanan	NITT	2012
2	Mr P UdhayaKumar	Dr. S Kumanan	Anna Univ	2012
3	Mr Hafeez Ahmed	Dr. V Senthilkumar	NITT	2012
4	Mr P Senthil	Dr. T Selvaraj	NITT	2012
5	Mr.G. M. Balamurugan	Dr. M. Duraiselvam	NITT	2012
6	Mr.K Kumar	Dr.S Kumanan	NITT	2012

### 9.M.S Awarded

S.No.	Name of the Research Scholar	Guide(s) / Supervisor(s)	University / Institute	Month and Year
1.	Mr K Pradeep	Dr.P.Asokan and Dr.K.Pannirselvam	NITT	2012

### 10. Other Important Points

1. Guest Lecture on "Material Modelling using Non-Linear Finite Element Method" by Dr.A.Arokiarajan, Associate Professor, Department of Applied Mechanics, IIT-M, Chennai organised by Production Engineering Association on 13.3.2013.
2. Guest Lecture on "Industrial Management practices in healthcare" by Mr.Ananthapadmanaban, Group Director, Kavery Hospitals, Trichy organised by Production Engineering Association on 17.3.2013.



## Centre of Excellence in Corrosion and Surface Engineering (CECASE)

### 1. Notable Achievements:

CECASE has launched M.S.( by research) in Corrosion and Surface Engineering for Executives working in public sector units under part time sponsored category. Presently two candidates are pursuing their M.S. programme sponsored from Southern Railway, Diesel Loco Shed, Ponmalai, Tiruchirappalli.

#### 1.1. Faculty Members

S.No.	Name	Details of Prizes/Awards	Organization
1.	Prof.S.Natarajan Chairman, CECASE.	Honoured with Editorial Membership in International Journal of Surface Engineering	Maney Publishing , U.K

### 2. Conference / Seminars / Symposium / Special Lectures

#### 2.1. Organised

S.No	Convenor/ Co- Convenors	Programme	Period
1.	Prof.S.Natarajan/ Dr.S.P.Kumaresh Babu Dr.S.Raman Sankaranarayanan Dr.R.Karvembu Dr.A.Sreekanth	Two day Short term course on Corrosion Control and Surface Engineering CECASE/ Event -1.	October 18-19, 2012
2.	Prof.S.Natarajan/ Dr.S.P.Kumaresh Babu Dr.M.Duraiselvam, Dr.P.Sathiya	Three - One Day Colloquium on Corrosion Control and Surface Engineering : Current R&D and Industrial Scenario CECASE/ Events - 2, 3 & 4.	December 10-12, 2012
3.	Prof.S.Natarajan/ Dr.S.P.Kumaresh Babu Dr.P.Sathiya	National Conference on Corrosion , Surface Engineering and Tribology (CST-2013) CECASE/Event - 5.	April 22-23, 2013

### 3. Research Papers Published in International Journals

#### 3.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Erosion Behaviour of WC-Co-Cr Thermal Spray Coated Grey Cast Iron under Mining Environment	J.Yogananth, S.Natarajan and S.P.Kumaresh Babu	Transactions of Indian Institute of Metals	DOI 10.1007/s12666-013-0262-x
2.	Erosive Wear Behavior Of Nickel Based High Alloy White Cast Iron Under Mining Conditions Using Orthogonal Array.	J.Yogananth, S.Natarajan and S.P.Kumaresh Babu	International Journal of Materials Engineering and Performance (ASM)	Under Print



# LIBRARY

## CENTRAL LIBRARY

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

S.No	Coordinator	Programme	Period
1.	Dr. G. Thamaraiselvi	NITT User Orientation Program on “IEEE XPLORE Digital Library” for all the Staff, Research Scholars and PG students of NITT	24.05.2012
2.	Dr. G. Thamaraiselvi	Library Orientation programme to the UG fresh students of NITT	23-25, July 2012
3.	Dr. G. Thamaraiselvi	“Digital Library User Orientation Program” for the Ph.D. & M.S. Research scholars of NITT	29.10.2012

#### 3.2. Attended

Faculty / Students	Details
1. Dr. G. Thamaraiselvi 2. Mr. G. Thamilavel	Training Programme on RFID Based Document Identification & Library Security System integrated with existing LIBSYS Software conducted by M/S. M/S. 2CQR INDIA, Library Security Solutions, CHENNAI – 600 116 on trial basis in the Central Library, NIT, Trichy-15 during 03.07.2012 to 03.08.2012
Dr. G. Thamaraiselvi and All the Library Science Graduate Trainees	One Day workshop on “Content Management system” conducted by CSG, NIT, Trichy-15 on 8 <sup>th</sup> Sep. 2012
Dr. G. Thamaraiselvi and All the Library Science Graduate Trainees	Two days’ Workshop on “Communication Skills and Development” 21-22 Feb 2013

### 6. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs. in Lakhs)
1.	RFID Equipments	Rs. 25,00,000/- (Approx.)
2.	Latest Model PCs (Dell 3010) to the Digital Knowledge Centre (30 Nos.)	Rs. 10,00,000/- (Approx.)
3.	CCTV Web Cameras (25 Nos.)	Rs. 10,00,000/- (Approx.)

## 7. Research Papers Published in National / International Journals

### 7.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	"Knowledge Management in Libraries for the Knowledge Society and its Perspectives	Dr. G. Thamaraiselvi	Library Hi Tech.,	2013

### 8. Ph.D Awarded

S.No.	Name of the Research Scholar	Guide / Supervisor	University / Institute
1.	Dr. P. Mounissamy	Dr. A. Kaliammal	Bharathidasan Univeristy

# TRAINING AND PLACEMENT

## STUDENTS PLACEMENT

During the year under report (2012-13), the students' placement record continues to be maintained at higher percentages despite global slowdown. The overall percentage of placements as on 27.03.2013 for under graduate programme is **92.3%** and Post Graduate Programme is **56.7%**. The placement process is still in progress. Details are given below:

### **Campus Placements: Under Graduates**

Sl. No.	UG Branch	Total Placed	As Percentage of Registered Students
01.	Civil	78	92.9
02.	C.S.E.	91	97.8
03.	E.E.E.	78	94.0
04.	E.C.E.	80	90.9
05.	Mech.	89	92.7
06.	MME	29	78.4
07.	Prod.	73	89.0
08.	I.C.E.	80	94.1
09.	Chem.	48	90.6
10.	Arch.	13	100.0
<b>Total</b>		<b>659</b>	<b>92.3</b>

### **Campus Placements: Post Graduates**

Sl. No.	PG Branch	Total Placed	As Percentage of Registered Students
01.	M.B.A.	47	67.1
02.	M.C.A.	69	80.2
03.	M.Tech. Comp. Science & Engineering	19	90.5
04.	M.Tech. Thermal Power Engineering	12	63.2
05.	M.Tech. Industrial Safety Engineering	10	43.5
06.	M.Tech. Manufacturing Technology	6	37.5
07.	M.Tech. Power Systems	8	47.1
08.	M.Tech. Power Electronics	8	47.1
09.	M.Tech. Material Science	6	31.6
10.	M.Tech. Transportation Engg. & Management	2	16.7
11.	M.Tech. Welding Engineering	16	76.2
12.	M.Tech. Communication Systems	9	42.9
13.	M.Tech. VLSI Systems	10	52.6
14.	M.Tech. Industrial Engineering	8	38.1
15.	M.Tech. Industrial Metallurgy	5	38.5
16.	M.Tech. Structural Engineering	6	37.5
17.	M.Tech. Environmental Engineering	3	23.1
18.	M.Tech. Plant Design (Chemical Engineering)	5	47.4
19.	M.Tech. Non-Destructive Testing.	20	95.2
20.	M.Tech. Energy Engineering	2	11.1
21.	M.Tech. Process Control & Instrumentation	9	44.4
<b>Total</b>		<b>285</b>	<b>56.7</b>

**Notable Achievement: (As on 02.04.2013)**

<b>No. of Companies Visited</b>	<b>No. of Students Attended</b>	<b>No. of Students Placed</b>	<b>Percentage</b>	<b>Double offer (UG &amp; PG)</b>
210	944	UG : 659 PG : 285	UG : 92.3 PG : 56.7	UG : 51 PG : 15

With the placement process still in progress, the Institute is expected to end the year with near 100% placements for UGs and over 70% Placements for PGs.

Overseas offers has witnessed an increase with US postings from Microsoft, Facebook, EPIC etc and also a few Middle east postings.

Highest Salary Offer : Rs.70 lakhs per annum (USA)

Enabled industry sponsored scholarship for students from leading global MNCs like Schneider, Michelin etc.

## Computer Support Group

### 1. Notable Achievements

Internet through Wi-Fi provided to Opal Hostel, Guest House, Faculty Quarters, Central Library premises, Administrative building and some of the boys hostels.

#### 1.1.Papers Presented by the Faculty / Students

Author(s)	Details
K. Pradeep, CAD/CAM Engineer	“Optimization of End Milling Parameters for Glass Fiber Reinforced Plastic (GFRP) using Grey Relational Analysis “ at International Conference on Modelling, Optimisation and Computing on April 10, 11 2012 organised by Department of Mechanical Engineering, Noorul Islam University, Kumaracoil, India. [International Publication details listed under sl.no.7]

### 3.0. Summer School / Winter School / Workshops

#### 3.1. Organised

Co- ordinator	Title	period
P. Arun K. Pradeep K. Srinivasan S.R. Balasundaram	Content Management System for the Research Scholars, Faculty, Staff and Executives	One day on September 8, 2012
Dr.S.R. Balasundaram	Four Day Aakash Android Application Programming Workshop	23/02/2013, 24/02/2013 02/03/2013 & 03/03/2013

#### 3.2 Attended

Faculty / Students	Details
Shri K. Muruganandam, Technical Officer Grade – II	Training programme on “Earthing Practices in Electrical Installations” at Hyderabad on 5,6 & 7 <sup>th</sup> March 2013 organised by Engineering Staff College of India, Hyderabad
Shri S. Thavamani	Training programme on “Network Security Administration” at Hyderabad on 19 - 21 March 2013 organised by Engineering Staff College of India, Hyderabad
Shri A. Lawrence	Training programme on “Network Security Analysis” at Hyderabad on 19-21 March 2013 organised by Engineering Staff College of India, Hyderabad

#### 4. Major Equipment / Software Purchased (more than Rs. 5.00 lakh.)

S.No	Equipment	Amount (Rs.in Lakhs)
01.	10 numbers of Ruckus Zone Flex 7762-S Single Wi-Fi Outdoor Access Point with Internal & External Antenna (200 Simultaneous users)	8.32
02.	3 numbers of Dell PowerEdge R510 Rack Mount Server Intel Xeon X5660 2.80GHz (6 Core) Processor x 2 No., 16GB DDR3 1333MHz ECCRam,600GB 15000 rpm 3.5inch 6 Gpbs SAS Hot Plug HDD, PERC H700 Integrated 512MB RAID Controller, Redundant Power Supply 750W, Red Hat Enterprise	10.74
03.	Dell PowerEdge R910 Rack Mount Server 4 x Intel Xeon 2.0GHz, 18M Cache (8 Core), 32GB Memory (16x2 GB), 1333MHz, 7 x 600GB SAS 2.5"HDD, PERC H700 Integrated RAID Controller, Redundant Power Supply, Red Hat Enterprise Linux 6.1 Pre-installed with Media with 3 years RHN Subscription	12.44

#### 5. Research Papers Published in National / International Journals :

##### 5.1. Faculty

S.No.	Title	Author(s)	Journal	Year Vol. (No) Page
1.	Optimization of End Milling Parameters for Glass Fiber Reinforced Plastic (GFRP) using Grey Relational Analysis	K. Pradeep, CAD/CAM Engineer	Elsevier, Procedia Engineering International Journal 38	( 2012 ) 3962 – 3968 and available online at <a href="http://www.sciencedirect.com">www.sciencedirect.com</a>

## **TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME PHASE II (TEQIP-II)**

### **Preamble**

The Indian system of engineering education has become vast and so far around 3000 engineering institutions have been established throughout the country. The exponential growth in Technical Education has however not translated into any significant growth in the number of quality graduates due to restricted availability of qualified faculty and better teaching-learning and training facilities. There is currently a huge gap between quality and quantity in Technical Education. The World Bank took keen interest in systemic transformation of country's technical education system to make it globally competitive and showed willingness to assist the Government of India to launch a Technical Education Improvement Programme (TEQIP) as a long term programme of 10-12 years and in three phases.

The Ministry of Human Resource Development, Government of India through NPIU have competitively selected 127 institutions including 18 Centrally funded institutions, 68 State funded institutions, 22 private unaided institutions and 19 Polytechnics spread across 13 States of India to participate in the first phase of TEQIP during 2003-09. After the completion of TEQIP Phase-I, a study was carried out for evaluating the impact of the Programme and learn lessons for TEQIP Phase-II.

### **TEQIP PHASE - II**

As per TEQIP design, each phase is required to be designed on the basis of lessons learnt from the implementation of an earlier phase. As mentioned above, TEQIP-I started a reform process in 127 Institutions. The reform process needs to be sustained and scaled-up for embedding gains in the system and taking the transformation to a higher level. To continue the development activities initiated through TEQIP-I, a sequel Project is planned as TEQIP-II.

#### **Objectives:**

1. Strengthening Institutions to produce high quality engineers for better employability,
2. Scaling-up PG education and demand-driven Research & Development and innovation,
3. Establishing Centers of Excellence for focused applicable research,
4. Training of faculty for effective Teaching, and
5. Enhancing Institutional and System Management effectiveness.

#### **Status of TEQIP – II at National Institute of Technology, Trichy (2012-2013)**

The following are office bearers involved in the TEQIP-II.

#### **TEQIP PHASE-II**

<b>Sl. No.</b>	<b>Name</b>	<b>Role</b>
1	Dr.S.Sundarrajan	Director
2	Dr.G.Swaminathan	TEQIP- II Coordinator
3	Dr.N.Sivakumar	Additional Coordinator
4	Dr.V.Senthilkumar	Nodal Officer - Procurement

5	Dr.Sishaj P.Simon	Nodal Officer - Academic
6	Dr.K.N.Sheeba	Nodal Officer - Equity Plan
7	Dr.K.R.Balasubramanian	Nodal Officer - Finance

**The following are the training programme attended by faculty and staff of our institute for the year (2012-2013).**

<b>SI. No.</b>	<b>Name of the Faculty/Staff members</b>	<b>Training Program/Place</b>	<b>Duration</b>
1	1.V.Mohan, Assistant, ICE Department 2.J.Gunasekaran, Assistant, Main Office/Estt., 3.C.Ilango, Assistant, Dean(Academic Office) 4.K.Maran, Jr. Asst., Training and Placement	Right Information Act & Citizen Charter” at Hotel Bharat Continental, Shankar Road, Rajender Nagar, New Delhi	16 <sup>th</sup> & 17 <sup>th</sup> March 2012
2	1.Dr.N.Sivakumaran, Additional coordinator, TEQIP-II, 2.Dr.V.Senthil Kumar, Nodal Officer(Procurement) 3.Dr.Sishaj P Simon, Nodal Officer(Academic) 4.Dr.K. N. Sheeba, Nodal Officer(Equity Plan)5.Dr.K.R.Balasubramanian, Nodal Officer(Finance)	attend the Training Programme on “Decision Making for Effective Leadership” Hyderabad at organized by Administrative Staff College of India, Hyderabad	04 <sup>th</sup> to 08 <sup>th</sup> March 2013
3	1. Mr. R. Sathik Batcha, Mechanic ‘C’ /ECE 2. Mr.C. Nallathambi, Mechanic ‘B’/ EMC, 3. Mr .P. Ravi, Mechanic ‘A’ Grade/EMC, 4. Mr.S.Saravanan, Mechanic ‘C’/EEE, 5. Mr.C.N. Roshan Babu, Technician-I Mechanical Engg., 6. Mr. A.Michael Raj, Mechanic ‘C’/Mech. Engg, 7. Mr.C.Palanisamy, Mechanic ‘C’/Mech. Engg., 8. Mr. A. Mohanraj, Helper/EMC 9. D. Nagendran, Helper/EMC	Harmonics in Power Systems and Variable Frequency Drive (VFD)” at Chennai organized by Abba Carrier guidance and Counseling, Nungambakkam, Chennai	08 <sup>th</sup> February 2013

	10.Mr. V. Mariesan, Helper/EMC 11.Mr. T. Gopinath, Helper/CCS		
4	1.Dr. P. Asokan Professor, Production 2.Dr. C. Nagamani Professor, EEE 3.Dr. G. Swaminathan Professor, Civil 4.Dr. A. K. Bakthavatsalam, Professor, T&P 5.Dr. P. Jayabalan, Professor Civil 6.Dr. T. K. Radhakrishnan Professor Chemical 7.Dr. C. Meenakshisundaram, Professor, Humanities 8.Dr. G. Venkatesa Prabhu Professor, Chemistry, 9.Dr. N. Thamarai Selvan Asso.Professor, MBA 10.Dr. S. Nickolas Associate Professor, CA 11.Dr. N. Kumaresan Professor EEE, 12.Dr. R. Karvembu Asso. Professor, Chemistry, 13.Dr. R. Gururaj Asso. Professor, Humanities 14.Dr. P. Kalaichelvi Asso. Professor Chemical 15.Dr. G. Uma, Associate Professor, ICE 16.Dr. K. Dhanalakshmi Asso. Professor ICE, 17.Dr. M. Arivazhagan Asso. Professor, Chl 18.Dr. R. Murugesan Asso. Professor Humanities, 19.Dr. K. Baskar Associate Professor Civil , 20.Dr. K. Panneerselvam Asst. Professor Pro. 21.Dr. Senthil Arasu Asso. Professor,MBA 22.Dr. K. Siva Prasad Assistant Professor MME, 23.Dr. V. Arulmozhi Selvan Asst. Professor, Mechanical,	Outbound Experimental Learning for Team Building & Effective Group Dynamics at Madhurantakam.	11 & 12 <sup>th</sup> February, 2013

	<p>24.Dr. M. Perumalsamy Assistant Professor Chemical,</p> <p>25.Dr. P. Jeyapaul Associate Professor, Professor</p> <p>26.Dr. Sishaj P. Simon Assistant Professor EEE,</p> <p>27.Dr. A. Arunagiri Assistant Professor Chemical,</p> <p>28.Dr. S. Moorthy Assistant Professor EEE,</p> <p>29.Dr. R. Nagalakahmi Assistant Professor Physics,</p> <p>30.Dr. R. K. Jeyachitra Assistant Professor ECE,</p> <p>31.Dr. M. Venkata Krithiga Asst. Professor EEE</p>		
5	Mr. Deendayal, Assistant Professor, Civil Engineering	Application of Plaxis Programs for Geotechnical Design at Plaxis AsiaPac & Ram Caddsys, Chennai.	20 <sup>th</sup> February 2013
6	<p>1. Dr. G. Swaminathan, HoD, CEESAT</p> <p>2. Dr.N.Sivakumaran, Associate Professor, ICE Dept.,</p> <p>3. Dr.K.R.Balasubramanian, Assistant Professor, Mech. Engg. Dept.</p>	Fire Safety at IIT Gandhinagar	2 <sup>nd</sup> & 3 <sup>rd</sup> March 2013
7	<p>1. Dr. R. Anand, Assistant Professor, Department of Mechanical Engineering</p> <p>2. Dr.V. Arul Mozhi Selvan, Assistant Professor, Department of Mechanical Engineering</p>	Automotive Fuels and Emissions organized by ARAI, Pune	4 <sup>th</sup> to 8 <sup>th</sup> March 2013
8	Dr. V. Lakshmana Gomathi Nayagam, Assistant Professor, Department of Mathematics	Validation of Fuzzy Mathematical Modeling in Decision Support	1 <sup>st</sup> to 7 <sup>th</sup> March 2013

		Systems” at Jadavpur University, Kolkata	
9	<p>1.Dr. P. Mounissamy,Library Assistant (SG),Library</p> <p>2.Shri R. Saravanan, Sanitary Inspector,EMD</p> <p>3.Shri K. Rajan, Sanitary Inspector,EMD</p> <p>4.Shri A. Pugalendi, Technical Officer-II, CHL</p> <p>5.Shri R. Manickavasakar, Assistant, Main Office</p> <p>6.Shri P.Govindaraju, Computer Operator, Main Office</p> <p>7.Shri S. Selvaraj, Jr. Assistant, Main Office</p> <p>8.Shri K. Rathinam, Jr. Assistant, Main Office</p> <p>9.Shri. G. Selvaraj, Mechanic ‘B’ , EMD</p> <p>10.Shri R. Sekar, Mechanic ‘C’, Production Engg.</p> <p>11.Shri. S. Balu, Mechanic ‘C’, Civil Engg.</p> <p>12.Shri G. Gunasekaran, Mechanic ‘C’, ECE</p> <p>13.Shri. A. Sahayam, Mechanic ‘C’, EMC</p> <p>14.Shri S. Saravanan, Mechanic ‘C’, EEE</p> <p>15.Shri A. Paramasivam, GCH, EMC</p> <p>16.Shri A. Santhiyagu, GCH, Physics</p> <p>17.Shri M. Anandan, Helper-II, Management Studies</p> <p>18.Shri S. Anbalagan, Helper-I, O/o. Dean (Academic)</p> <p>19.Shri P. Balaraman, Lab Attendant-cum-Helper-III Library</p> <p>20.Shri F. Baskar, Helper-II, EMD</p> <p>21.Shri G. Baskaran, Helper-III, Civil Engg.</p> <p>22.Shri S. Dharmalingam, Helper-II, Main</p>	Outbound Experimental Learning for Team Building & Effective Group Dynamics at Madhurantagam.	20 <sup>th</sup> & 21 <sup>st</sup> February 2013

	<p>Office</p> <p>23.Shri N. Dhanapal, Helper-II,Main Office</p> <p>24.Shri S. Jeeva,Helper-II,Management Studies</p> <p>25.Shri M. Loganathan, Helper-II, EMD</p> <p>26.Shri N. Murugesan,GCH, Main Office</p> <p>27.Shri M. Muthazhagu, Helper-I, Transport Section</p> <p>28.Shri C. Muthu, Helper-II, Main Office</p> <p>29.Shri M. Muthukrishnan, Helper-III,Transport</p> <p>30.Shri E. Rajendran,Helper-II,EMD</p> <p>31.Shri D. Ravi Kumar,Lab Att.-cum-Helper-III,EEE</p> <p>32.Shri A. Simon Raj,Helper-II,Physical Edu.</p> <p>33.Shri M. Subramani,Helper-II,Dean (FW) Office</p> <p>34.Shri M. Tamilarasan,Helper-II,Civil Engg.</p> <p>35.Shri A. Vincelas,Helper-II,Physical Education</p> <p>36.Shri S. RajangamHelper-II,O/o. Dean (Aca)</p> <p>37.Shri S. Thivyanathan,Mechanic 'A',Production</p> <p>38.Shri S. Shankar, Mechanic 'C',Production</p>		
10	<p>1.Sri.J.Gunashekaaran,Assistant,Main Office</p> <p>2.Sri.A.S.Ashokkumar,Helper-II, Main Office</p> <p>3.Sri.L.Vishnubahadur,Jr. Superintendent,Main Office</p> <p>4.Sri.R.Sathik Batcha, Mechanic 'C',ECE</p> <p>5.Sri.S.Magesh,Technician Gr.II,Mechanical</p> <p>6.Sri.B.Baskar,Helper,Mechanical</p> <p>7.Sri.P.Sahadevan,Mechanic 'A',Mechanical</p> <p>8.Sri.D.Deenadayalan,Technician</p>	<p>Outbound Experimental Learning for Team Building &amp; Effective Group Dynamics” at Madhurantagam.</p>	<p>27<sup>th</sup> &amp; 28<sup>th</sup> February 2013</p>

<p>(ECG),Hospital</p> <p>9.Sri.G.Nagarajan,Helper –III,Hostel Office</p> <p>10.Sri.K.Sundaravelu,Helper – III,EMD</p> <p>11.Sri.K.Maran,Jr. Asst.,T&amp;P</p> <p>12.Sri.A.Neelamegam,GCH,O/o DAP</p> <p>13.Sri.C.Ilango,Jr. Asst.,O/o DAP</p> <p>14.Sri.K.Shanmugam,Mech ‘C’,O/o DAP</p> <p>15.Sri. S.Periyamayan,Mechanic ‘A’,Production</p> <p>16.Sri.K.Suruli Babu,Helper – III,Production</p> <p>17.Sri.R.Suresh,Lab Attendant Cum Helper,Production</p> <p>18.Sri.V.Rajendran,Helper –III,Production</p> <p>19.Sri.K.Ramesh,Helper-III,Production</p> <p>20.Sri.P.Palanichamy,Mechanic ‘C’,Production</p> <p>21.Sri.C.N.Roshan Babu,Tech. Gr. I/Mechanical</p> <p>22.Sri.T.Chitramoorthy,Jr. Asst./Mechanical</p> <p>23.Sri.A.Micheal Raj,Mechanic ‘C’/Mechanical</p> <p>24.Sri.C.Palanisamy`,Mechanic ‘C’/Mechanical</p> <p>25.Sri.S.Rayar Kennedy,Helper – III/Mechanical</p> <p>26.Sri.V.Mohan,Assistant/ICE</p> <p>27.Sri.S.Chandrasekaran,Helper – II,/ICE</p> <p>28.Sri.C.Rajayogam,Helper – II /MBA</p> <p>29.Sri.T.Natarajan,Helper – II/Director Office</p> <p>30.Sri.D.Ravi,Helper – II,O/o /Dean (R&amp;C)</p> <p>31.Sri. C. Nallathambi,Mechanic ‘B’ Grade/EMD</p> <p>32.Sri. Mohan Raj,Helper – III/EMC</p>		
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	<p>33.Sri. P. Boopathy,Helper – III/Civil</p> <p>34.Sri.S.Rajkumar, Helper –III/O/o Dean (SW)</p> <p>35.Sri.K.Susendran,Mechanic ‘A’/EMD</p> <p>36.Sri.M.Maheswaran,Helper –III/EMD</p> <p>37.Sri. P.Pannerselvam,Helper –III, EMD</p> <p>38.Sri.N.Balasubramanian, Helper –III, EMD</p> <p>39.Sri.T.Gopinath,Helper –II, ECE</p> <p>40.Sri.R.Manikandan, Helper –III,Civil</p>		
11	Shri. P. Robinson, Helper-III, Department of Chemical Engineering	“Network Security Administration” during organized by Engineering Staff College of India, Hyderabad	19 to 22 <sup>nd</sup> March 2013
12	<p>1. Shri. M. Viswanathan, Junior Engineer, Department of Instrumentation and Control Engineering</p> <p>2.Shri. K. Muruganandam, Technical Officer Grade-II, Computer Support Group</p>	“Earthing Practices in Electrical Installations” at Hyderabad on organized by Engineering Staff College of India, Hyderabad.	5 <sup>th</sup> to 7 <sup>th</sup> March 2013
13	Prof. S. Raman Sankaranarayanan, Professor, Department of MME	(user group meeting) on “ThermoCalc” at Hyderabad on organized by M/s. Bhanu Scientific Systems Pvt. Ltd., Hyderabad	18 <sup>th</sup> March 2013
14	Shri. M. Pushparaj, Mechanic ‘A’, & Shri. S. Arokiadoss, Mechanic ‘C’, Chemical Engineering	“Safety at Workplace” at Chennai on organized by Abba Carrier guidance and Counseling, Nungambakkam,	7 <sup>th</sup> March 2013

		Chennai	
15	1. Dr. J. Sarat Chanda Babu, HoD, Chemical Engineering, 2. Dr. A. Seshagiri Rao, Assistant Professor, Chemical Engineering	“Management capacity enhancement for Administrators” at IIM Kozhikode organized by NPIU, New Delhi.	12 <sup>th</sup> to 22 <sup>nd</sup> March 2013

**List of Equipments Procured for the year 2012-2013**

Sl. No.	Name of the Equipment	PKG code	Type of Procurement	Purchase Year	Cost of the Equipment
1	LABVIEW Software (ICE)	60	Direct Contract	March 2012	1,18,673/-
2	ELVIS-NI-II (ICE)	61	Direct Contract	March 2012	2,48,748/-
3	VISSIM (VISual SIMulation) (CIVIL)	34	Direct Contract	April 2012	3,85,350/-
4	Cube 5 (CIVIL)	30	Direct Contract	May 2012	4,58,698/-
5	Ergo Cycle (PRO)	7	Shopping	May 2012	1,48,850/-
6	Tread Mill (PRO)	6	Shopping	May 2012	3,66,400/-
7	HAZ-DUST Environmental Air Monitor (CIVIL)	37	Shopping	May 2012	5,51,250/-
8	Concrete Pan mixer (CIVIL)	25	Shopping	May 2012	1,42,800/-
9	Digi Mortar Mixer (CIVIL)	23	Shopping	May 2012	89,250/-
10	Concrete Permeability Apparatus (CIVIL)	24	Shopping	June 2012	1,40,123/-
11	Accelerated Steam Curing tank (CIVIL)	26	Shopping	June 2012	2,52,000/-
12,13,14	Demountable mechanical strain gauge (CIVIL)	27	Shopping	June 2012	64,733/-
15	Digital Eddy Current with Accessories (NDT)	111	Shopping	July 2012	6,62,663/-
16	Method Study Equipments (PRO)	8	Shopping	September 2012	1,31,675/-
17	PV modules (EEE)	76	Shopping	October 2012	3,54,700/-
18	Electrochemical Machine (PRO)	4	Shopping	October 2012	8,01,191/-
19	Melting Furnace (MME)	88	Shopping	December 2012	8,76,857/-
20	RF Signal Generator (ECE)	40	Shopping	January 2013	3,87,100/-
21	Ericsson Cup Tester (MECH)	13	Shopping	January 2013	6,85,125/-
22	Slow Speed Diamond Cutter	19	Shopping	February 2013	6,65,106/-
<b>TOTAL</b>					<b>75,31,292/-</b>

**OFFICE OF THE DEAN (IC & SR)**

Projects sanctioned during 2012-13	12			
Total amount sanctioned in Rs. Lakhs	564.87			
<b>Details of some of the projects sanctioned</b>				
Dr.G. Kannabiran	MBA	DIT	2012-2015	155
Dr.S.P. Kumaresh Babu	MME	CMPDI	2012-2016	215
Dr.B. Ravisankar	MME	SERB	2012-2015	36.8
Dr.N. Ramesh Babu	MME	SERB	2012-2015	39.03
Dr.T. Sivasankar	CHL	MOEF	2012-2014	24.8

**I: Work carried out on the infrastructure for Virtual learning - National knowledge Network (NKN) and Virtual class room**

National knowledge Network (NKN) is set up under National Mission on Education through Information and Communication Technology (NMEICT). This enables high speed network connectivity (1 Gbps) between all the IITs, NITs and R&D as well as defence laboratories funded by Central government. A Virtual Class Room (VCR) has been set up in LH9 in central lecture hall complex of NITT as a part of NKN project. This has a full-fledged video conferencing system costing Rs. 30 lakhs. An amount of Rs. 11.8 lakhs was also sanctioned as a part of this project for civil work and man power for 1 year. The VCR at LH9 was inaugurated by Dr. Rajaram Nithyananda, Chairman, BOG of NITT in the presence of Dr. S. Sundarajan, Director, NITT in September 2012.

In addition to hardware based VC solution, a s/w based VC solution using VIDYO software is also offered as a part of NKN project. Periodic training is also organized by National Informatics Centre (NIC) on the use of VCRs and vidyo software.

Special lectures by eminent persons are arranged by planning commission periodically through the NKN.

A three month long course (delivered two days a week) on Advanced Materials and Processes for the DRDL Scientists was conducted during Oct.-Dec. 2012 and was made available both at DRDL Hyderabad and NITT through video conferencing (NKN). Some of the speakers delivered the lectures from Trichy to Hyderabad and vice versa. One of the outcomes of this exercise is that the faculty members of NITT have established a very good contact with DRDL labs and a number of R&D projects for DRDL are on the anvil.

Another two month long course on Advanced Control Systems was conducted during Jan – March 2013. Lectures in this course also were delivered through VC as in the case of earlier course.

Conversion of Ten class rooms in LHC as virtual class rooms

Since the lectures delivered through VCR have been very effective, it is proposed to arrange more guest lectures by faculty and alumni through VC. To enable this, more class rooms are proposed to be converted as VCR. In the long term, it is proposed to convert many seminar/conference halls into full fledged VCR. To create an immediate impact, ten rooms in LHC have been converted as VCRs with minimum investment.

Installation of mixers and audio visual network (LAN) cabling has been completed in the following 10 class rooms in LHC : 6, 8, 12, 17, 111, 112, 113, 114, 116, 117.

This provides both audio and video connectivity between a class room and one or more locations anywhere within the globe. One can use video conferencing software such as Skype, GoToMeeting, Vidyo, Life Size etc. for classes handled by a remote teacher.

Conversion of other class rooms in LHC as virtual class rooms

Steps have been taken to convert the other class rooms in LHC as virtual class rooms.

**A number of departments have already started using VC using vidyo:**

- The talks by Dr. Madhavan Swaminathan from Georgia tech, USA to the students of Electronic packaging were arranged on 12<sup>th</sup> and 14<sup>th</sup> March. This lecture was also broadcasted in the portico of administration block. The video of the student/faculty who asked the question was zoomed and sent to the remote speaker.
- Five guest lectures during the short term course on new avenues in chemical sciences research during 18-22 March 2013 were delivered using this s/w.
- Two lectures during Synergy 2013 were delivered using this s/w.
- The three day symposium on FEM by Department of Civil Engineering also used the vidyo for sharing the video and audio between LH9 and LH8 throughout the session.

New Video conferencing system and software

The VC software (both Skype and Vidyo) presently used by us, do not have provision for recording the lectures and also require internet bandwidth for access. It is proposed to procure a VC s/w, which can be installed in our LAN and can be used for recording the lectures from both local and remote sites. This will facilitate the students to revisit the lectures through the LAN. The purchase order

has been issued. With this in-place, the e-learning activity is bound to pick up momentum.

## **II: Steps taken for popularisation of NMEICT**

An amount of Rs. 10 lakhs was received from MHRD for this purpose. With this, a Two Day Workshop was conducted on NMEICT on 11<sup>th</sup> & 12<sup>th</sup> Feb.2013. About 100 faculty members of Arts/ Science /Commerce/Medical/Law and Engineering/Technology/Management/ Agriculture colleges attended the workshop. Lectures from experts from IITB, IITM, NIC, Amrita, IGNOU, MHRD were arranged.

## **III. Entrepreneurship Development**

E- Week 2013 has been organized from February 01-07, 2013. The events such as Quiz, Public Awareness Campaign Video, School Event, Panel Discussion and Top Tycoon have been organized for a span of one week on all evenings and the school event was conducted on Sunday morning. The valediction ceremony for the events of E-Week 2013, conducted by the Entrepreneurship Cell of NIT-Trichy, was held on the February 07, at the EEE Auditorium in the NITT campus from 5pm to 7pm. Dr. S. Sundarrajan, Director, NITT was the Chief Guest for the event and distributed the prizes.

- Paisa Inc., an initiative of the Entrepreneurship Cell of NITT, is aimed at spreading the spirit of entrepreneurship among the students of our college and beyond through the newsletters.
- Genesis 2013 was organized on 9<sup>th</sup> March 2013. The Speakers of the day are Mr. Mukund Mohan (CEO of Jivity), Mr. Subramaniam Krishnamurthy, (Managing Director, Masibus Automation & Instrumentation (P) Ltd), Ms. Maalavika Manoj (a 20 year old singer-songwriter, Mr. Sameer Bharat Ram (A first generation entrepreneur who runs a water management company), Mr. Kaustav Sen Gupta (Award-winning academician, Youth Ethnographer) and Ms. Ira Trivedi (critically-acclaimed, best-selling author of What Would You Do To Save the World? (2006)).
- Ventura, NIT Trichy's International Business Plan Competition was conducted on the 10<sup>th</sup> March, 2013 by the Entrepreneurship Cell of NIT Trichy. The event received funding support from Chhattisgarh Tourism Board, Canara Bank and NITT.

## **IV: Utilization Certificate**

- Software based on MS-Excel is developed to update the individual project accounts of PIs, which make the preparation of utilization certificates easy and fast.

## **V: Project Proposals & Interaction with Funding Agencies**

- Coordinated the project evaluation meeting of Armaments Panel of DRDO on 18<sup>th</sup> January, 2013 with the following experts. The Director, TBRL, Dr. Manjit Singh and Director NIT, Trichy Dr. Sundararajan was present. The other experts are Prof. K. Rammamurthi, IIT, Chennai. Dr. G. Jagdeesh, IISc, Bangalore; Prof VK Jindal, Panjab University, Chandigarh; Shri. A C Sharma, TBRL, Panel Coordinator; Dr. PK Soni, TBRL; Ms. Ritu khurana, TBRL
- Coordinated the Collaborative research activities with BRNS-DAE on joint research work in the area of developing CFD tool for the prediction of the flame reactor behavior with the Chemical and Mechanical Engineering Departments of NITT
- Successfully conducted DST – PAC (16 PAC Members & 30-35 PIs) meeting at our institute on December 14-15, 2012 for reviewing the DST projects and new proposals.
- Steps have been taken for conducting DST Group Interaction Workshop for FAST TRACK projects at our institute.

## **VI: Recruitment**

- The templates for the appointment of SRF/JRF and extension of their service in the respective sponsored project and sanctioning of the fellowship were made available in our intranet server (pearl).

## **VII: Setting-up of NITT Radio Station**

- Purchase order has been placed
- Applied for license for operating the radio

## **VIII: Developing Software to Monitor Day-To-Day Activities of R&C Office**

- All the prepared templates viz., (PI or staff requesting for the proceeding for TA under their research project/ the consultancy work; for passing the project bills towards contingency, for passing the project bills towards equipment purchase, Sample Accounting Performa for sponsored projects in MS-Excel sheet) were made available in the intranet (pearl) for faster processing of the files.
- MS-Excel based software is developed for keeping track of the status of funding and on-going project expenditures (enhanced version under progress)
- Data entry has been completed.
- Authentications are under progress as PIs have to evaluate their account by showing their records.
- Development of web-based project monitoring system is under progress.

## **IX: Memorandum of Understandings (MoUs)**

- MoU with Mitac is signed and been followed up for exchange of both students and faculty members
- Students exchange under IAESTE is also explored
- Collaboration with Biomedical Engineering Department of Manipal University is initiated.
- Follow up meetings with State University New York, Binghamton were conducted and seminars on Health systems and electronic Packaging are scheduled this week (19<sup>th</sup> and 20<sup>th</sup>)
- Initiated MoU activity with M/s. High Energy Batteries, Tiruchirappalli

- Initiated MoU activity with M/s. Tafe, Madurai.
- Initiatives are made in inviting French students for internships, which may lead to MoU with top Universities of France.

**X: Inviting Project Proposals & Encouraging Faculty to Get More Projects**

- Initiated Research Development Fund (RDF) through institute overheads of sponsored projects to PIs for enhancing their research activities further.
- Interaction with Armament panel of DRDO – Encouraged faculty to apply for sponsored projects. Project review is in January 2013.
- Visits to DRDL and RCI, Hyderabad were arranged for our faculty members – Project proposals are under preparation.
- Interaction with NFTDC and GTRE scientists is arranged. Visit to GTRE to explore the areas of research for collaboration.
- Started inviting experts from industry and academia through video conferencing mode for both delivering lectures and possible collaboration. (Prof. Jagadeesh Kumar, IIT Madras)
- Many such interactions are proposed to be arranged.

**XI: Purchase Activities of R&C Office**

- Purchase of various items necessary for the popularization of VCR taken up. Total cost Rs. 44 lakhs. This includes: Web cameras, Handy cameras, Multi-party conferencing system, LED TVs, equipment's for Community radio station.

## PHYSICAL EDUCATION

Notable achievements like prizes, awards won by our students for the year 2012-13.

Sl.No	Game	Award	Name of the Tournament	
1.	Basket ball (Women)	Winners	SHAURYA '12, Conducted by I.I.T Kharagpur from 12.10.12 to 14.10.12	
2.	Shuttle Badminton (Women)	Winners		
3.	Table Tennis(Men)	Winner		
4.	Volley Ball (Women)	Winners		
5.	Volley Ball (Men)	Runners		
6.	Athletics: Vivek.S            High Jump Ashwin Nair        100m T.Federick          400m Anurag Baraik     Triple Jump 4X100m Relay Prachi Desai       Shot put Sneha priya        Discus Renuka              100m Long jump Serin Mathew      200m	Gold Bronze Bronze Bronze Silver Silver Bronze Bronze Bronze		
7.	Aquatics: Hari Prasad        50m Free Style 100m Free Style 400m Free Style Athip.T              400m Free Style 1500m Free Style 100m Back Stroke 200m Back Stroke Srihari              200m Breast Stroke 200m Free Style 1500m Free Style Sanjay              100m Back Stroke 100m Butterfly 50m Butterfly 200m Back Stroke 4X100m Free Style Relay Over All ChampionShip	} Gold Silver } Gold } Silver } Gold } Bronze } Gold } Gold NIT Trichy		
1.	Basket Ball (Men)	Winners		All India Inter NIT Tournaments from 2 <sup>nd</sup> to
2.	Basket Ball (Women) Diksha Gohlyan	Winners Best Player		
3.	Chess (women)	Winners		
4.	Hand Ball Ayan Das Adhikary	Winners Best		

		Player	5 <sup>th</sup> Feb'2013 at NIT Trichy	
5.	Table Tennis(Men) C.Pradeep Chandhar	Winners Best Player		
6.	Table Tennis (Women)	Runners		
7.	Tennis (Men)	Winners		
8.	Tennis (Women) Naveena.T	Winners Best Player		
9.	Kabaddi	Runners		
	Over All ChampionShip	NIT Trichy		
1.	Volley Ball (Men)	Winners		All India Inter NIT Tournaments from 1 <sup>st</sup> to 3 <sup>rd</sup> March'2013 at NIT Surat
2.	VolleyBall(Women)	Winners		
3.	Shuttle Badminton(Women)	Runners		
1.	Hockey Nivethan	Runners Best Goal Keeper	All India Inter NIT Tournaments from 22 <sup>nd</sup> to 24 <sup>th</sup> March 2013 at NITK Surthkal	
2.	Aquatics: Athip.T  K.Sona  50m Free style 100m Free style 400m Free style 50m Back Stroke  50m Breast stroke 50m Free style 400m Free style 100m Breast stroke	Silver     Silver  Bronze		
3.	Athletics(Men)  200m  Ashwin Nair  T.Frederick Christopher  Vivek  400m 800m 1500m  Tiple J High Jump  4X100mRelay 4X400mRelay  Athletics (Women)	Silver Silver  Gold  Silver Gold  Bronze Gold  Gold	All India Inter NIT Tournaments from 22 <sup>nd</sup> to 24 <sup>th</sup> March 2013 at NITK Surathkal	

	Anisha	100m	Gold	
200m			Silver	
	Serin		Silver	
	200m		Bronze	
1500m	Jiya		Gold	
			Gold	
Jump	Serin	Long	NIT	
	Renuka	Long J	Trichy	
		4X100mRelay	NIT	
		4X400mRelay	Trichy	
	Over All Championship(Women)			
	OverAllChampionship(Men&Women)			

## NATIONAL CADET CORPS (Air Wing)

“A” flight has started regular parades from August 5, 2012 with total strength 50. Forty parades each of duration 2 hours were conducted. The two hours of parade consists of 40 minutes of foot & weapon drill followed by 80 minutes of theory classes on the subjects like General Service Knowledge, Aero-modeling, Air Frame, Aero-engine, Principles of Flight, Health and Hygiene, First aid etc.

NCC Cadets performed the National Salute, delivered speeches and sang patriotic songs on Independence Day (Aug 15, 2012) as well as on the Republic Day (Jan 26, 2013).

Six of NCC cadets have attended Combined Annual Training Camp from 13th May, 2012 to 22nd May 2012 at MNUJN Higher Secondary School, Madurai organized by 3(TN) Air Sqn(Tech) NCC, Trichy. Eleven of NCC cadets have attended NCC Inter-Unit Competition(IUC) Camp from 13th June, 2012 to 22nd June 2012 at NIT Trichy organized by NCC Group Head Quarter. Trichy. Forty two of NITT NCC cadets have attended Combined Annual Training Camp (CATC) 2012-13 conducted from 22nd December 2012 to 31st December 2012 at Periyar Maniammai University, Vallam, Tanjore by 3 (TN) AIR SQN (TECH) NCC,Trichy. In all the camps participated, NIT Trichy cadets performed excellently and won many awards.

NCC cadets have participated in the GREEN'DEAVOUR rally from Kannagi statue to Mahatma Gandhi statue along the Marina beach road at Chennai on 15th Sep' 2012 organized by Festember '12 Team. The GREEN'DEAVOUR rally focuses on the importance of going green and incorporating sustainable techniques as part of modern living. The rally went on successfully spreading awareness about environmental hazards, caused by today's modern lifestyle and our collective carbon footprint.

The A-Flight NCC cadets of NIT, Trichy belonging to 3 TN Air Squadron Tech NCC, helped the Doctors in administering the polio vaccine on 20th Jan, 2013. Cadets visited Ward no. 3 and Ward no. 4 of Thuvakudi Malai and helped in administering the polio vaccine to the young children and also helped in crowd control.

On the 25th of January, 2013, the A-Flight NCC cadets of NIT, Trichy observed Voter's Day and went on a campaign to promote awareness about Voting. They stressed on the importance of voting and how it is such an important right for every citizen of India. They went on a rally through the Staff Quarters of National Institute of Technology, carrying banners and distributing pamphlets while shouting slogans.

A-Flight of NIT-Trichy organized a blood donation camp at NITT, as a gesture to motivate people to serve the society through their selfless acts. The camp was aided by Tanjore Government Medical College, who provided the medical faculty, equipments and expertise. The camp witnessed an overwhelming turnout. There was an active participation from students and faculty of the college as well as outsiders with 128 donors within four hours of camp.

**Thirty Cadets appeared for 'B' certificate examination and twenty cadets appeared for 'C' Certificate examination which was conducted by NCC Directorate on 23rd Feb', 2013 and 23rd March, 2013, respectively.**

## NSS ACTIVITIES

Total of 678 NSS Volunteers have been registered for the Year 2012-2013.

NSS Volunteers arranged a drug abuse and drug addiction awareness programme for I year students.

Nearly 50 volunteers were engaged for temple cleaning activities at Erumbeeswarar temple at Malai kovil, Tiruverumbur.

NSS volunteers participated and assisted Steward Committee for the smooth conduct of Convocation 2012.

Apart from regular activities, an annual special camp was conducted from 18.02.2013 to 24.02.2013 at nearby villages viz., Ayyampatti, Valavanthankottai, Thirunedungulam. The following important activities were performed by our NSS volunteers.

1. Free Eye camp is organized in association with Vasan Eye care at our campus
2. Tree plantation activities
3. Sports competitions were conducted for both primary and high school students and prizes were distributed for winners
4. Awareness programme on health and hygiene was conducted
5. Pulse polio awareness programme was conducted
6. Quiz and painting competition were conducted for village children
7. Spoken English and computer classes were conducted for high school students
8. NSS volunteers visited and interacted with orphanage people at Thirunedungulam and provided dinner for them.

## **Students' Events and Activities**

## **FESTEMBER, PRAGYAN AND NITTFEST**

### **FESTEMBER**

Festember, the annual cultural extravaganza hosted by the students of NIT Trichy, is one of the most distinguished and resplendent fests in south India. Held towards end of end of September, Festember has been attracting the brightest talent from all over India for over 3 decades. Since its inception in the 1970s, Festember has been serving not only as a platform to showcase talent, but also a confluence of students from all over India. Powerful speeches, witty rebuttals, melodious songs, variety of quizzes from technology to gaming and entertainment, a variety of dance and arts events sees dynamic, pro-active and enthusiastic participation from students across various colleges of the country. Festember'12 saw a staggering participation of 8000 students from cities like Chennai, Bangalore, Mumbai, Cochin, etc. all participating in an atmosphere of healthy competition.

A plethora of events, performances, activities and absolute entertainment has made Festember one of South India's biggest in its genre. Awarded the best cultural event of the year by State Govt. of Tamil Nadu in 2005, Festember has been sponsored by corporates including Airtel, Vodafone, Coca Cola, Pepsi and Nimbuzz. In addition to the host of events, Festember also brings star performers to campus in the much anticipated Pronites.

Pronties are one of the most anticipated events at Festember, and without fail ensures that each day of Festember ends on a glorious high. Each day offers a different genre from Carnatic music to Rock Music, Drama, Stand-up Comedy and Cine- Music. Over the Years many big names such as Karthik, Sivamani, KK, Euphoria, Mother Jane, Naresh Iyer, Javed Ali and Suraj Jagan have mesmerized audiences with their performances.

Workshops at festember provide participants with a brilliant opportunity to revitalize skills and discover hidden talents. They help uniting mind, body and soul in pleasurable and recreational activities that require nothing less than interest and whole-hearted participation. Each year, Festember brings alive what a large section of the populace would have always wanted to do at some point in their lifetime. Festember brings to plate a wide variety of workshops such as Salsa, Digital Photography, Creative Writing, Pottery, Crossword Solving, Overall Styling, Archery, hypnotism and cartoon making just to name a few.

Also there are plenty of 'informals' that range from adventure sports to adaptations of tele-match games, that lift spirits of all those who attend Festember. To add to this, there is lip smacking food as over 10 top restaurants set up shop to keep your taste buds occupied.

Every edition of Festember comes with something new and the previous edition of Festember included an online photography competition and a fashion show promoting the country's ethnic culture. The other firsts of Festember'12 were an open air theatre, Festember Social Responsibility, and a curtain raiser Dance and Music Competition held in the City Centre Mall in Chennai.

Several social responsibility initiatives were undertaken as part of FSR, and the highlight was the 'Greendeavour Rally' at Marina Beach to promote environmental consciousness. Under the Gold Dustbin initiative, waste materials from every room in the hostels were collected and disposed. In the run up to the cultural festival, students also visited Synthika Trust Office in Lalgudi for celebrating the birthdays of 55 physically challenged children and arranging for them a free medical checkup.

## PRAGYAN

Pragyan, the international Techno-Management festival of NIT Trichy has been a scintillating celebration of Technology since 2005. The 2013 edition of Pragyan had a lot more to offer. This year Pragyan had an array of prestigious events, brilliant guest lectures, scintillating exhibitions and fantastic informal events under its umbrella.

Pragyan 2013 preserved the tagline “Let’s Celebrate technology”.

Pragyan saw a lot of new things in its 9th edition:

1. Smart cards were introduced for the food court in Pragyan.
2. It was the highest budget for any fest in South India
3. Pragyan marketing generated more than 26 lakhs through sponsors
4. More than 112 companies partnered with Pragyan
5. Record breaking, more than 4500 people attended Pragyan
6. First time ever, there were 10,000 onsite registrations
7. Path breaking, 10 lakh visitors including 2 lakh unique visitors were there on Pragyan website, [www.pragyan.org](http://www.pragyan.org)
8. This edition of Pragyan was highly organized wherein all events and workshops received an overwhelming feedback
9. Online procedures were introduced for purchasing materials, fund request and reimbursements
10. Hospitality and PR online modules for accommodating people and dispatch of certificates and cheques on the spot were done this year.
11. Pragyan apps(android and windows) were released
12. Pragyan conducted events all-round the year :
  - September -- ONLINE Inductions
  - October -- Pragyan Campus Connect (a fun filled talk by the final years to the freshmen of NIT Trichy, guiding them towards a better engineering life)
  - November -- Disha (a Pragyan social responsibility, initiative at BHEL, which was a career awareness program for the 11<sup>th</sup> and 12<sup>th</sup> grade students of Trichy )

- December -- Srishti -- a mobile making workshop for the first time outside Tamil Nadu, at Vishakapattanam
- January -- Pragyan Open quiz at IIT Madras (Quoting, Mr.V.V. Ramanam, the legend in the quizzing world, he said, “This is the best Open Quiz he has seen thus far)
- February -- Guide to Trichy (one stop solution for all requirements in Trichy), a Pragyan marketing initiative.

13. ROBOWARS - one of the highlight events in Pragyan

14. PRAGYAN'S GOT TALENT..First time by any fest in India

### **Guest Lectures at Pragyan’13:**

- Atul gurtu
- Rohan dixit
- David Christian
- Anil kakodkar
- Chris Phillips
- Tessy Thomas
- Sharad kale
- Richard noble
- Steve furber

### **Workshops at Pragyan’13:**

- Tall structure design
- Underwater robotics
- Android App Development
- Automotive systems Nikon photography
- Rubix cube
- Sixth sense robotics six sigma
- Viral Media Workshop
- Statistical techniques by Goldman Sachs
- Mobile making workshop-SRISHTI

### **Infotainment Shows at Pragyan'13:**

- Pragyan's got talent
- Thallavattam band performance
- Viral Media Comedy night out
- Fire show and Robo dance
- 3 D mapping show

### **Exhibitions at Pragyan'13:**

- Vintage cars CVRDE
- Augmented reality
- Multitouch interactive screen
- DRDL
- Ham radio

## NITTFEST

The National Institute of Technology, Tiruchirappalli (NITT) was blaring with energy and was filled with the spirit of competition in the air during their inter department literary and cultural fest- NITTFEST. Organized during the 21<sup>st</sup> to 24<sup>th</sup> of March this fest has always been a great platform of opportunity and creative talent for all the students. What started off as a simple dance competition from the REC (Regional Engineering College) times it has grown by leaps and bounds to become a 4 day long theme based festival to celebrate raising levels of ability and capability.

The events fall under six different categories- arts, cultural, design and media, English, Hindi and Tamil literary events with the number of events summing up to 73. This tests the capability of the students in every possible field of creativity. A Hindi standup comedy show(hahakar), cooking without fire, gaming, an acting competition named act-a-thon were some of the new events which did not fail to attract enthusiastic participation.

The theme this year has given ample scope to experiment with ambience-“African tribal” with the tag line “Get Wild”. The fest centered areas were transformed to resemble the jungles and tribal worlds of Africa. The main Public Relations (PR) desk was under a thatched roof, hanging lanterns shaped like blazing torches adorned the area with the food stalls and tribal faces were the shape of the mementos given away.

The prelims of the literary events had started a few days earlier and the on the 21<sup>st</sup> of march-day zero of NITTFEST, the inaugural ceremony took place and the fest officially began. In the spirit of the theme the students had an unconventional yet, excitingly novel way of declaring the fest open. A torch was lit by the director Dr. S. Sundarrajan and other dignitaries of the college. the word NITTFEST was spelled out with wood, sticks and other such material and the glowing torch completed the ‘I’ of NITTFEST. Representatives from each of the 12 departments also lit torches symbolizing their zeal. This was followed by the Qawwali competition. The 12 teams fought in the ‘sufiana’ style.

They also designed an eye catching website that was again theme oriented. All the rules of the events, the schedule of the fest, partners, contacts and every other detail about the fest was on the website which was mobile compatible. The scores were regularly updated on the lcd screen in the main PR desk as well as the website. This explained students cheering for their departments looking at a screen or their phones.

Rushing to venues, attending the event and hurrying to the next one, watching their department perform, cheering them, booing the others, petty fights about being the better department and organizers managing the crisis situations raised the heat and speeded the pulse of the fest in the days that followed.

The battle of bands, the manoranjan competition and the choreo night-popularly, the events that took place on the NITTFEST nights, attracted maximum cheering crowd and clearly the dance competition-choreo nite was the favorite and most looked forward to and not without reason.

The choreo nite marked the end of NITTFEST. The department of Electronics and Communication Engineering emerged to be the winners closely followed by the departments of Computer Science and Engineering and the Department of Civil Engineering. The department that wins three times in a row would get to keep the RECAL (REC alumnus) trophy to themselves and no department has achieved such a feat yet. NITTFEST concluded as grandly as it commenced with the students energies at the same peak, with the winners rejoicing and the other already thinking about the next NITTFEST!

### PHASE III: Final Shortlisting and Ventura Finals

All the teams which went through the mentoring round were asked to submit their revised B-Plans. These plans were further shortlisted and the top 8 teams were invited to NIT, Trichy for the Ventura Finals on 10th March. The description of the B-Plans which made it to the Ventura'13 finals is given below:

1. Fuzion Crafts International - Sector: Social Entrepreneurship
2. Eureka Med - Sector: Bio Medical
3. Flying Magnetoos - Sector: Recycled Products
4. Ikshu Kanan - Sector: Social Entrepreneurship
5. Clean up - Sector: E-commerce
6. Kiwi Ecovision - Sector: Renewable Energy
7. Inu - Sector: social networking
8. Tagmuse - Sector: Internet Website

The judges for Ventura'12 finals were:

- Mr. Mukund Mohan - CEO of Jivity and Microsoft Startup Accelerator. Founded 17 startups, all of which have been funded by Y Combinator of Silicon Valley.
- Mr. Gagan Agawal –Incubation Head, Indian Angel Network
- Ms. Marie Banu – Director- Centre for Social Initiative and Management (CSIM), a project of Manav Seva Dharma Samvardhani Trust. She is also the Chief Editor of the tabloid 'Conversations' published by CSIM

The finals were held on 10th March on the NIT Trichy campus. All teams were given 20 minutes for their presentation. This was followed by a 15 minute question answer session with the Judges. An additional 10 minutes was provided to any team which wished to do a product demonstration.

The judges were remarkably impressed by the level of competition, noted that many of the plans reflecting socially conscious, green and profitable innovation mirrored the need of the hour.

### POSITIVE IMPACTS OF VENTURA'13:

- A total of 4 teams were chosen for incubation by Indian Angel Network and are currently in talks.
- There was a marked increase in the number of Social Significance B-Plans in the Ventura'13 edition.
- There was a substantial increase in participation from NIT, Trichy as compared to Ventura'12.



# REPORT

## PAISA INC. :

Paisa Inc., an initiative of the Entrepreneurship Cell of NIT-Trichy, is aimed at spreading the spirit of entrepreneurship among the students of our college and beyond.

With the above motto, this unique newsletter also hopes to help create a brand value for E-Cell among the entrepreneurship community as a whole.

### SHORT TERM GOALS:

- To make Paisa Inc. a regular feature on campus. We have started with e-copies due to the lack of funds but aim to introduce hard copies next semester. For this we will need to generate funding either on campus or beyond.

- Content: Make it the one-stop magazine for all students interested in entrepreneurship.

### LONG TERM GOALS:

- After cementing our position on campus, we aim to make Paisa Inc. available to all interested parties off campus as well. This will be initially achieved with the assistance of our partner E-Cells in other colleges.

- Later on we aim to follow the model of several college magazines abroad to make it viable to interested students and non-students.

## UP AGAINST THE WALL STREET



'Up Against the Wall Street', an event designed to celebrate and promote the spirit of entrepreneurship among the youth kicked off with 'Auction Madness' in the EEE auditorium of NIT Trichy. The event comprised of a preliminary round where a total of 50 teams comprising of 130 participants were given a task of sort out individuals among a vast group to make a team the statistically best team within a limiting budget and time frame.

After this the top ten teams were selected for the main round which began with the auction of franchises. This was followed by auction of individuals to form the best statistical team and a negotiation round where teams could buy/ sell to/ from other teams. The event was designed to test quick thinking and proper budget management skills and received a great reception from the audience as the entire EEE auditorium was filled.

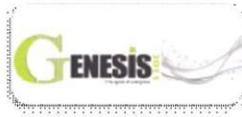
## E-DAYS

### BREAK EVEN

This was an event held for testing the creativity amongst the contestants. This event tested their spontaneity, creativity and mainly market vision. This Event was based on the following parameters: negotiation, pricing sense and marketing.

This event was a massive success hauling more than 160 participants and 44 teams primarily consisting of students from first year. This event was conducted in the barn and was led by the most elite of second year e-cell members. The event split the entire contests into two: one had to market shampoos and the other soaps. It began by the auction of the commodities in question and teams could bid and buy one. The whole point of this that all the groups had to come up with innovative strategies to save the company they just bought and possibly even lead it into a success.

Finally the judging was done by e-cell on various legit factors. Winners were chosen from both groups. This event was a massive success and couldn't have taken shape if it weren't for the "out of the box" thinking and the hard-work of the second year e-cell members and the guidance of the fourth year e-cell members.



# REPORT



Genesis was successfully organized in Lh 109 in NIT-Trichy campus, on 9th of March 2013. Organized by the Entrepreneurship Cell of NIT Trichy, Genesis is an Innovative Entrepreneurship Meet held annually.

Six speakers from various backgrounds came down to NIT Trichy campus to share their views on the theme “ Empowerment of Indian middle class youth “.

The event started at morning 10'o clock with Mr. Kaustab Sen Gupta , an Associate Professor at NIFT, Chennai, is an award winning academician. He has established the Theory of Adopted Differentiation which defines the root of Indian youth segmentation.

It was followed by a very interactive talk by Mr. Mukund Mohan , who is the CEO, Microsoft Startup Accelerator. Mr. Mohan is a serial entrepreneur, and has founded & sold 17 companies incubated by the Y-Combinator in the Internet and Mobile domains.

It was the turn of the famous 19 year old singer songwriter , Ms. Maalvika Manoj. She has represented India at Harvard leadership summit and is the ambassador for the Girl Child Project in Tamil Nadu.

After the Lunch session , It again started with the very useful session by Mr. Sameer Bharat Ram who is a Chennai based entrepreneur. He runs Brandmuni, an advertising brand consulting company. He is also the Chief Editor of the widely acknowledged Brew Magazine.

Post his session was the session from Ms. Ira Trivedi , is a critically acclaimed author and a former Miss India pageant contestant. MBA from the Columbia University, she is a regular speaker at most of the premiere institutions across the country.

The day ended with a very interactive and a beautiful talk by one of the NIT Trichy's alumnus , Mr. Subramaniam Krishnamurthy , is currently the M.D. of Masibus Automation & Instrumentation Pvt Ltd. An Electronics & Comm. Engineering graduate from the NIT Trichy, he has been recognized as a Distinguished Alumni of NITT.

*Over 400 students from the campus participated in the brainstorming sessions, which is a mammoth number. All in all, a power packed event for the students of NIT-Trichy in an era where entrepreneurs are getting harder and harder to find.*

### QUIZ

A general Quiz was organized as a part of E-Week 2013, on the 5th of February (the third day of E-Week) at the A2 Hall. Over 80 students turned up for the quiz (40 teams of 2 students per team).

A comprehensive test of business-related facts, gadgets, entrepreneurship, sports and entertainment encompassed five rounds. The format and nature of the rounds were distinct and really proved to be very beneficial and enjoyable for the participants. A fairly large audience was present at the venue to add to the rich atmosphere.



### SCHOOL EVENT

NEN E-Week, organized by E-Cell, NIT-Trichy commenced on Sunday, the 3rd of February, with an immaculately-designed event for students from schools nearby the NIT Campus. The event saw enthusiastic participation from 3 major CBSE schools in Trichy, Chinmaya Vidyalaya, Kendriya Vidyalaya and Sri Vignesh Vidyalaya.

The preliminary round of the event was a written round which was conducted for the Grade 7 and Grade 8 students. The questionnaire had 6 questions to test their aptitude and situation-analyzing skills. A total of 620 students took the preliminary test, and 25 students from each school were shortlisted for the finals.

The finale of the School event entitled 'Best from Waste' was held on the same day (Sunday) at NIT Trichy, in which the participants had to make an innovative model out of the waste materials that we provided. 65 students came down to our campus along with their parents to take part in their event. The students were divided into teams of 4. Each team was given a virtual credit of Rs. 50 each. They were provided with scrap materials like old newspapers, cardboards, used bottles, cups, sketch pens, thread, ice-cream sticks, and so on.

### PUBLIC AWARENESS CAMPAIGN VIDEO

The NEN E-Week team of E-Cell, NIT-Trichy went to Thuvakudi, a neighboring area in the suburbs of Trichy, to interact and interview a group of self-made individuals who are one of the most significant sections of the Indian economy. The trip was undertaken to shoot a video for E-Week, in concordance with the theme 'Innovate for India'. "Entrepreneurship is the greatest job creation tool", Barack Obama had once stated, and we wanted to see exactly why.

### PANEL DISCUSSION

The 'Panel Discussion' event was held as a part of E-Week 2013, organized by E-Cell, NIT-Trichy, on the 5th of February at the EEE Auditorium. The event was designed to be a discussion by members of a panel on topics pertaining to entrepreneurship and the theme of E-Week, 'Innovate for India'

Over 50 students took part in the event. The topics were selected by members of E-Cell, and were specifically primed to be interesting and thought-provoking so as to inspire a dynamic and conclusive discussion among the members of the panel. Four topics were chosen: 'Defence Strategy of India: What is holding us back?', 'Why do students pursuing engineering make a transition to jobs other than engineering?', 'India banned from the Olympics: good or bad?', and 'Is India safe for women?'



### TOP TYCOON

The second day of E-Week was organized by E-Cell, NIT-Trichy on 4th February 2013. The 'Top Tycoon' event was slated for this day. The aim of the event was to test the ability of participants to analyze a particular location and plan a virtual venture suitable for the location and tackle issues like licensing and registration, traffic generation, manpower utilization, advertisement and investor funding. The event was held at the EEE Auditorium, and witnessed participation from 50 teams (over 150 participants).

## APEKSHAA

A group of enthused students from NITT went over just mere care for the less privileged of the society and set to action to prove them equal and work toward their benefits, and thus was formed “APEKSHAA”- the Hope to serve the SOMEONE SOMEWHERE who needs YOU, as the name explicates. Youth need to feel the importance of their service to bring about change in the world that cares for them and in turn expects some out of each one of them. Our purpose is to help the less privileged of the society in the best possible ways we can and also to create awareness among the youth on what can be done by them too. This year too like ever, the organization has made tremendous achievements with the guidance (7<sup>th</sup> Year in consecution) of our staff advisor, Dr. R. Murugesan. Here are some thoughts and works of the club put forward; that if did invoke even the slightest concern toward serving such people, shall serve our purpose.

The main concern at hand is that on average, poor children enter better schools with far fewer vocabulary, language, and social skills than their middle-class peers. The club simply cannot inoculate children in one year against the ravages of a life of deprivation. We as students and as educated persons can do good by tutoring them Spoken and written Basic English. As a head start to this plan, we have been tutoring students in The R.E.C middle school, a Tamil medium school in our university’s campus. The club also teach them basics of Computer Science which has become an inevitable pre-requisite of intellect these days. We organized WHIZKID’13 – an initiative to identify true intellect amongst school children and reward them and also reward schools who concentrate on overall development of the child’s personality.



*Serving food to children at Annai Ashram*

The club organized a communal event on the eve of Independence Day for the habitants of its campus to provide a platform to promote communal harmony and bridge the gap between various sectors of people here. The club also collected funds to aid one of our late non-teaching staff’s children’s education as they were undergoing a financial crisis.

Apekshaa Club organized JOY OF GIVING WEEK- Trichy Chapter. The Joy of Giving Week (JGW) is a "festival of philanthropy" that aims to become a part of the Indian ethos. This week bought a phase of joy to young kids whose life is filled with ordeal. Events such as Kalpavriksha, (the wish tree) was organized to give them a hope of better tomorrow by fulfilling the meagre but important wishes. The Cultural events awakened the competitive spirits among the children. Members of these clubs visited ashrams and made donations to lend a helping hand to these poor orphans.

The club also organized various fun events at the Apekshaa Stall during Festember and Pragyam to raise funds for charity. Sold handicrafts and greeting cards made by

members of the Organization. Organised awareness talks and various events to awaken the spirit of social service among the mass.

The club members visited Annai Ashram which is a home to over 200 orphaned or poor girls on Women's day. Provided them with dinner and various basic amenities. Educated on them about the various problems women face in the society and the numerous opportunities they can avail.

This club's main concern at present is to extend a great help for the mentally retarded. It is possible to achieve this goal by bringing about positive changes in societal awareness, attitudes and beliefs about this condition. This Organization will work ever for the best interests of the needy and also work towards instigating others to realize the importance of serving the needy and SPREADING SMILES.



*A Kid at Malarchi playing with Apekshaa Members*

## ConnectNIT

ConnectNIT was formed in the year 2005 as a TEQIP networking project with aim of uniting geographically separated NITs. Within span of 8 years ConnectNIT team has worked on various projects.

This year (2012-13) ConnectNIT team has worked mainly on three projects:

1. NIT Talks ([www.talks.nitt.edu](http://www.talks.nitt.edu)) is a website wherein eminent alumni of NITs have published their recorded videos. This website has three sections namely Entrepreneurs, Academicians & Corporates. Recorded videos help young engineers to choose the career path they can follow considering the experience of alumni who has touch heights in the field. Also, this project helps in improving brand value of NITs. ConnectNIT team has received good response from alumni society RECAL in continuing this project. In Phase-1(2012-14), we have a target of 50 Alumni from three NITs i.e. NIT Trichy, NIT Surathkal & NIT Warangal.
2. ZENITH ([www.zenith.nitt.edu](http://www.zenith.nitt.edu)) was inter NIT quiz competition organized by ConnectNIT team with aim of spreading knowledge and reducing gap between NITs. This year Zenith saw participation from 5 NITs namely NIT Surathkal, NIT Calicut, NIT Puducherry, NIT Goa & NIT Trichy. Preliminary round of Zenith was conducted at respective NITs by ConnectNIT team and top two teams were brought to NIT Trichy for finale. Aim of Zenith is to spread message of Unification among NITs. Also, Zenith serves as a platform for inter NIT discussions on various issues and thus aims for joint efforts in achieving vision 2020 for NITs.
3. This year (2012-13) ConnectNIT new website is developed which has different sections including discussion forums, current news, chats etc. This year our team has worked on implementing various projects including video chats, GRE/GMAT/CAT preparation discussion forums, Placement discussions and other areas which can reduce information gap between NITs. Our team aims to reduce existing gap between faculty, alumni and students of different NITs through various projects.

ARCHITECTURE  
CHEMICAL  
CIVIL  
COMPUTER SCIENCE & ENGINEERING  
ELECTRICAL AND ELECTRONICS  
ELECTRONICS AND COMMUNICATION  
INSTRUMENTATION AND CONTROL  
MECHANICAL

METALLURGICAL AND MATERIALS  
PRODUCTION  
PHYSICS  
CHEMISTRY  
MATHEMATICS  
COMPUTER APPLICATIONS  
MANAGEMENT STUDIES  
HUMANITIES

