

NIT TRICHY DIGEST — AUGUST 2016 —



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Contents

	<i>Page</i>
<i>1. Independence Day Celebrations.....</i>	<i>1-3</i>
<i>2. Symposium & Self sponsored program</i>	<i>4</i>
<i>3. Workshops</i>	<i>5,6</i>
<i>4. Journey to Khardung La</i>	<i>7</i>
<i>5. TEDxNJITricky</i>	<i>8</i>
<i>6. Inauguration of MTS</i>	<i>9</i>
<i>7. Research on Productivity in HE.....</i>	<i>10</i>
<i>8. Visit of Faculty to DJAT,Pune.....</i>	<i>10</i>

Independence Day Celebrations (Freedom Fortnight)

The Independence Day celebrations were conducted by the A-Flight NCC of NIT Trichy in front of the Administrative Block to mark the 70th Independence Day of our country.

The Independence Day celebrations commenced with the prayer song followed by the guard of honour in the presence of our Director Dr. G. Kannabiran, Hon'ble Deans and the faculty members.

As part of his speech, the director said in his Independence Day address “Today NITT is leading the Higher Education system. We are being ranked as one of the top NITs and we are ranked top 12 institutions in the National Institution Ranking Framework and we all should be happy about being in such a position. In recent past we won many awards which includes the CII award for best industry linked Institution, The FICCI award for socially responsible institution. The Ministry of Skills and Development Award for as highly impact Entrepreneurship Campus and many others. Last year 5 out of 10 Cargill Fellowships Award has come to NITT students. These achievements obviously push us to move forward and establish leadership in technical education.”

The NCC cadets and the children of the faculty members created an enthusiastic and patriotic environment and the celebrations came to an end with the National Anthem.



As suggested by the Ministry of Human Resource Development, NIT Tiruchirappalli celebrated “Azadi 70 – Yaad Karo Kurbani” (Freedom Fortnight) a fortnight of events revolving around the theme of “Independence and Freedom Struggle” to re-instil the spirit of freedom struggle and national movement among the younger generation.

The following events were conducted as part of Freedom Fortnight Celebrations:

1. Essay writing competition

Titled “ India of my Dreams” many students wrote their wish about future India. They wrote about uplifting the poor, modernizing the villages, improvement in infrastructure which would make India a role model for the rest of the world.



2. India quiz



The main objective of this quiz was to spread the general awareness about India’s rich and varied heritage among future torch-bearers of the nation. The topics were galore-ranging from sports, Indian Mythology, geography, politics, contemporary history and Indian film industry among others.

Independence Day Celebrations

3. Make in India

Many eminent personalities such as Dr.T.K.Singha (GM,HAPP), Shri A.Maruthamuthu Arjunan (GM,BHEL Trichy), Mr.Srinivasan (MD,JP MORGAN) graced their presence and delivered mind awakening lectures to the students



4. Start-Up India



The guest panel consisted of young and recently graduated entrepreneurs of NIT-T who had come to inspire the students as well as inculcate the art of entrepreneurship and their valuable experiences which they had gained from their start-up's. These entrepreneurs explained their start-up's, how the golden idea struck them and the hardships they faced to execute their projects into the upcoming start-up market.

5. Road Safety Awareness

Thirty volunteers of Pragyan Social Responsibility team joined hands to conduct Rashmi, a Traffic Road safety awareness event. It was aimed at spreading awareness about the dangers of using high beam headlights. Filter stickers were distributed to almost 600 vehicles.



6. Swachh Bharath



The students were split into three groups of 50 in each. The first set of students handled the lawn near the Diamond hostel zone. The second group cleaned the surroundings of shops near Coral hostel, while the latter group focussed on clearing junk in food court area of Neelkesh. The efforts of the students proved to be fruitful as students became aware of their social duty to the nature.

7. Ashram visit

The children from Anbagam Ashram will fondly remember how they spent time at NIT,Trichy, with members of Apekshaa, a student run club of NITT. They were accompanied by other children of their age group who took an active part in the numerous competitions conducted by Apekshaa on the eve of Independence Day.



8. Yoga & Karate



In order to groom the students to be regular and active throughout the day, yoga and karate classes were conducted for students in the morning from 6.30 a.m. onwards for an hour. This would give an exposure to our own traditional martial arts and also to start every day afresh.

9. Painting Competition



The objective of the competition was to inculcate a sense of pride and patriotism among the participants. With the theme being – ‘ Independence / Freedom Struggle of India’, the candidates portrayed their thoughts and ideas on the canvas.

10. School Visit

As a part of social activities, students of NITT visited Thuvakudi Panchayat Union School on August 15, 2016. Students of NITT conducted various competitions for the children like sports, speech, handwriting, essay writing, memory test etc.,



11. Greeting Card Competition



The participants came up with brilliant ideas and were very creative with their greeting cards with surpassed all expectations. Their cards reflected the amount of respect they have for India. They scribed inspirational quotes by various freedom fighters on their own creative way.

12. Slogan writing Competition

The participants were asked to showcase their feeling and patriotism through their slogans. They took ideas and help for their slogans through the ideals of eminent Indian orators and freedom fighters like S.C. Bose and Mahatma Gandhi.



13. Exhibition



The exhibition displayed:

1. Khadi products from Tanjore
2. Poombuhar handicrafts from Trichy
3. Patanjali products

14. Beti Bachao Beti Padhao

The event was sponsored by TNPL, Rane and TRW which was aired on All India Radio. The event was organized to showcase and spread awareness to educate young girls. The event was held to help the children of the temporary staff of NITT. Each girl child was given a kit consisting of Oxford Dictionary, Notebooks and a stationary set.



DEPARTMENT OF COMPUTER APPLICATIONS
VERSION 2016, 20-21 August 2016

Version, an all India MCA meet, started in 1991, to bring forth a new idea of establishing, the tradition of organizing, annual inter-college technical event that would highlight the emerging trends in the world of technology in addition to providing a platform, for the exhibition of technical expertise. It is a national level technical symposium.

Every year Version has a central theme and this year, the bar has been raised. **Version** fervor is back with a fresh fangled theme, “**WITAURA**” encapsulating wit for intelligence and aura for surrounding, Witaura, traces its roots from the term Intelligent Surrounding. The theme WITAURA focuses on the fact that each and every element in the surrounding should be connected including humans. The inter-connected aura aims to make the life of people go in ease.



Silver Jubilee Edition of VERSION is inaugurated by Mr.K.Purushothaman, Senior Director, and NASSCOM on 20th August 2016.



Version 2016 team released a silver Jubilee magazine VERSION COMPENDIUM speaks about footpath of VERSION and includes articles on latest technologies by students of MCA

Thematic Talk titled “IOT Insights - Smart city and connected vehicle” by Mr.Prasan Dutt, Product Lead- Embedded Platform, Vajra Infotech, Hyderabad was held on 20th August 2016 for the students and participants.13 events were conducted and 29 colleges from all over India were participated in the events including NIT Warangal, NIT Surathkal, NIT Jamshedpur, PSG Tech, University of Hyderabad and Sastra and so on. Finally, University of Hyderabad has won the overall championship.

ENERGY MANAGEMENT AND ENERGY AUDIT (1st -5th August, 2016)

One week self-sponsored program on “Energy Management and Energy Audit” was organized successfully by the Department of Energy and Environment, NIT Tiruchirappalli. Speakers came from different firms such as AMSET Energy, Uttam Industries, EID Parry Ltd., ECO Energime Engineers, and L&T had given lectures on energy management and conservation in thermal and electrical systems, auditing techniques, climate changes and policies needed for developing countries specially India. Overall 40 participants attended the workshop and received a clear view on energy production, auditing and conservation techniques. Hands on experience on energy audit instruments as well as renewable energy production techniques were given to participants. Positive responses were received from the participants and speakers regarding the workshop.



TEQIP II Sponsored Workshop on Data Analytics Concepts and Techniques for Business Intelligence from 08/08/2016 – 13/08/2016

Coordinators : E.Sivasankar and Dr. G.Muruganatham



The Objective of the workshop was to disseminate the knowledge of Data Analytics Concepts and Techniques for Business Intelligence to young faculty members and research scholars, to promote the Data Analytics research in multidisciplinary fields. In this workshop, 52 candidates participated including 23 participants from other institutions. The participants were from Anna University, Mepco Schlenk Engineering College, BIT, Kumaraguru College of Technology, Pondicherry University, etc., Faculty members, Ph.D. Scholars, MS Scholars and M.Tech Students were also attended the programme. The programme was inaugurated by Dr. G. Kannabiran, Director, NIT, Tiruchirappalli and presided by Dr. R. LeelaVelusamy, HoD of CSE department.

Dr.E.Sivasankar, Assistant Professor, NITT took the first session on “Introduction to Data analytics”. This was followed by “Statistical thinking for Data Science and Analytics” by Dr. M. Sivagnanasundaram, Associate Professor, IMT, Hyderabad. Dr.K. Muneeswaran, Senior Professor of MSEC, Sivakasi delivered lectures on Machine Learning and its applications. Mr. Naresh Kumar BG, Product Manager, Zarget, Chennai delivered the lecture on Business Intelligence for Marketing and Web Analytics. Dr.G. Muruganatham, Assistant Professor, NITT delivered the concepts of Business Intelligence. Dr. CT. Vinu, Assistant Professor, IIM- Trichy who delivered lecture on Data Visualization for Business Intelligence. Mr. S. Karthick, Assistant Professor, TCE- Madurai provided the concepts on Clustering high dimensional data with live examples.

Mr. Vignesh Raja, Senior Engineer, CDAC, Chennai provides hands-on session on Big Data Analytics. Dr. C. Deisy, Assistant Professor, TCE- Madurai conveyed the concepts of Text Data Analytics for Business Intelligence. Dr. S. Sridevi, Assistant Professor, TCE- Madurai introduced the Temporal Data Analytics for Business Intelligence using various algorithms. Dr.J. Jagadeesh Jayanand, Vice President, Accenture, Bangalore conducted a training session on Knowledge Management. This was followed by Mr. A. Santhosh Kumar, Senior Data Scientist, ADF Data Science Pvt Ltd, Chennai who delivered the concepts on Data Analytics for BFSI sectors.

The last day was handled by Dr.Somayajulu DVLN, Professor, NIT, Warangal. He conveyed many ideas on OLAP and Predictive Data Analytics. The last session was on “R Programming” by Mr. Solai Murugan, Senior Engineer, CDAC, Chennai. He gave hands-on training to the participants. At the end of the session, the coordinators distributed the certificates to the Participants.

Conceptual Mechanisms of Transport Operations in Chemical and Biochemical Processes August 22-27, 2016 (Under TEQIP II)

Coordinators: Dr.Meera S Begum, Dr.K.N.Sheeba



The objective of this course is to disseminate the mechanisms of transport operations to those teaching in academia/undertaking research/ working on chemical and biochemical engineering principles in industrial processes.

The field of chemical engineering involves physical and physical-chemical changes in inorganic and organic materials and to some extent in biological materials. The field also overlaps more and more with other process engineering fields of ceramic engineering, process metallurgy, agricultural food engineering, waste water treatment engineering and bioengineering. By combining science and engineering, we can break these seemingly different processes into a series of distinctive steps called transport operations. Some of the most common examples of transport analysis in engineering include heat conduction (energy transfer), fluid flow (momentum transfer), and molecular diffusion (mass transfer).

Workshop on Characterization of Materials for Advanced Applications Under TEQIP-II **Coordinators: Dr.M.C. Santhosh Kumar and Dr.R.Justin Joseyphus**



The TEQIP-II sponsored workshop on characterization of materials for advanced applications was held during August 4-6, 2016. The workshop was organized by the Department of Physics (NDT programme). The workshop had nearly 40 participants from various colleges, universities and institutes; in addition to internal participants from NITT. The participants were from various disciplines such as Physics, Chemistry, Nanotechnology, Mechanical Engineering, Metallurgy, NDT etc. and most of them were teachers or research scholars. Experts from NIT-T, Cochin University of Science and Technology, Kochi, BHEL Trichy, ARCI Chennai, Bharathiar University and Pondicherry University delivered lectures on various characterization

techniques such as nondestructive testing and other advanced characterization techniques. The participants had interaction with the resource persons and visited the laboratories in NIT-T. They lauded the efforts of our Institute in organizing such interdisciplinary workshops.

Report on Teqip – II Sponsored Workshop “Cyber Security and Forensics” , 5th – 7th August 2016 **Coordinators: Dr. M.Brindha, Dr. B.Nithya and Dr. R. Mohan**



The workshop on Cyber Security and Forensics is held in NIT, Trichy from August 5th to August 7th, 2016 to address the important issues in cyber security and the protection of information systems and network infrastructure. The workshop brought together leading researchers from academia and industry for a comprehensive update on security, risk management, research and development issues. The wide spread use of internet has given exponential rise in sophisticated attacks on sensitive information like Smartphone attacks, credit card details, confidential messages and other financial information. Also with the development of 4G services, business and banking transactions using mobile phones, there is a significant increase in mobile malware. Hence, there is a demand for cutting-edge research and

development attempts in Cyber Security in order to make the IT infrastructure resilient against these different kinds of threats.

The course has been structured with an Introduction to cryptography followed by lectures on cyber security, provably secure encryption schemes, one way functions and Pseudo random generators. Then comes the need for recovery of digital evidence to deal with criminal activities, employee malfeasance, computer intrusions, civil disputes or government and regulatory inquiries. With proper cyber forensic tools, it is possible to recover digital evidence from computers and smart phones that can be useful in a wide range of criminal investigations. Computerized records can help to establish the events occurred, where victims and suspects are, with whom they communicated, and may even show their intent to commit a crime. Introductory lectures on Cyber Forensics, followed by Disk and Live Forensics plus Mobile and Network forensics were covered in this part of the forensics course. The workshop agenda had total of 6 sessions of technical presentations. Dr. M. Sethumadhavan Professor from Amrita University, Dr. Kunwar Singh, Assistant Professor from NITT, Dr. C. Balan, Joint Director, CDAC, Trivandrum, Dr. C. Pandurangan, Professor from IIT, Madras and Dr. M.Brindha, Assistant Professor, NITT delivered their lectures. The workshop was successfully ended with the valedictory function followed by certificate distribution to all 43 participants.

Journey to Khardung-La by Roshini G.Somkuwar

It all began when I saw an Facebook post for the second season of the TVS sponsored “Himalayan Highs with Anam Hashim”. I applied and cleared all preliminary stages of the audition process and was selected for final round for which I was flown to Bangalore. After the driving sessions, grueling psychographic and physical endurance tests, I was chosen to be one of the 10 women riders to go for the expedition on a TVS Scooty Zest (110cc) to Khardung-La. Initially, only my brother was supportive but my parents eventually came through after much convincing from both our sides. My father is a retired army officer and he was understandably concerned about the risk I was taking as he was familiar with the state of the roads in Ladakh.

The 10 women were selected out of the 50,000+ entries from all over India that included a variety of professions and a broad age group of 21 to 49 years. Our journey began at Mandi, Himachal Pradesh fully clad in our riding gears, helmets, shoes and backpacks. The smooth roads were particularly challenging to drive due to the presence of hairpin bends, with the road becoming exceedingly narrow at some points and some very steep inclines. After crossing Rohtang pass (10,044ft.), it was difficult for us to ride continuously for 6 hours over narrow rocky roads made slippery and muddy due to relentless downpour as the Scooty was light weight and prone to skidding if abruptly braked. It was a perilous situation where I had to constantly face my innermost fears and keep riding on.

Soon enough we crossed Baralachala Pass (16,042 ft.), Lachulangla Pass (16,613 ft.) and the second highest Taglangla Pass (17,582 ft.). Due to the risk involved, we drove only during daytime and rested in tents at nightfall in Sarchu and Pang, HP. We rode along the riverside, through valleys and beautiful snow peaked mountains, on craggy roads and via the 3 km long tunnel. We were faced with uncertain climates, challenging terrains and treacherous water crossings. As we had to keep ourselves constantly hydrated, we were forced to relieve ourselves in the wild. After all this, the only thing that kept our spirits high was the positive response we received from the passers-by we came across while driving.

On the 10th day, we started from Leh, Ladakh to Khardung-La. The initial distance of 15kms was smooth riding but soon it turned bumpy as we scaled uphill. Due to the reduced oxygen levels at higher altitudes, it became increasingly difficult to breathe but the view from the top made it all worthwhile. Standing on top of the world surrounded on all sides by snow-capped mountains, the realisation that we've accomplished what we set out to do a mere 10 days ago was a feeling I'll never forget. While we posed for the cameras, we were approached by the managers of India Book of Records with the trophy and certificates. This was a huge surprise to all of us and needless to say a very emotional moment for everyone involved. Now we can proudly declare to the whole world: We've conquered Khardung-La on the scooters.

There was no place for self-doubt when you're thrust into an unimaginable situation where you've to think on your feet. You're forced to confront situations head-on with courage and confidence. During this journey of a lifetime, I learnt to overcome my deepest fears and achieved my dreams in the process. Follow your heart and live fully, at the end of the day that is all that matters.

Roshni G.Somkuwar
101112038, 5th year Department of Architecture



TEDxNITTrichy Report



NIT Trichy after being licensed for the 2nd year in a row hosted yet another edition of TEDxNITTrichy. The event was a day-long event that featured 6 diverse, yet brilliant speakers and 2 performances.

After receiving an overwhelming lot of traction, the audience was finally curated to 100 diverse people from all backgrounds to ensure diversity. The event had students from several different colleges in Tamil Nadu.

The speaker line-up included Dr. Sivakumar (Director of DRDO, CVRDE), Balaji Viswanathan (VP Products, Invento, Quora Celebrity), Shilpa Joshi (Director of Green Build Products), Prasad Pillai (Founder of Raksha SafeDrive), Girish Gopalakrishnan (Alumnus, Founder of Wiksate) and Pronita Saxena (Founder of Citizengage). The speakers visited from around India and abroad.

The 2 performances that happened were by the Dance Troupe of NIT Trichy and the a Mridangam and flute player named, Nandan, a student of sophomore year. The

feedback received at the event from the attendees, speakers and sponsors was quite phenomenal; several said the event was convened to international standards. Hospitality of all speakers and attendees was well taken care of.

The videos for the event are anticipated to be pushed onto the TEDx YouTube Channel by the end of September. The channel has over 4 million subscribers on the internet.

The attendees had several audience engagement activities like the TEDx Bingo, and Photobooth amidst lunch and networking sessions to really spark ideas and catalyze conversation among them. This along with all the interaction with each speaker truly provided every attendee a TED-like experience here at NIT. The ambiance for the event which included the stage setting and the Barn hall was truly world-class, with round table conference seating arrangement and lunch, to really give it a polished feel. New ideas for the day included several in lines of Defense Research, Waste management, sustainable development, and education, truly widened the mindscape of all attendees, and gave their thoughts a new direction.⁹

The event was followed by a session of Coffee Table Talks with Balaji Viswanathan at the Lecture Hall which basically involved a discussion of how we could mend the Indian education system.

All in all, the event was a grand success, with great talks and conversations that people would really take back and catalyze on.



Marine Technology Society (MTS) - NIT TRICHY STUDENT SECTION

Marine Technology Society (MTS) is an international community of ocean engineers, technologists, policy makers and educators. Dr. R. Venkatesan, Scientist – G (Chair, MTS India) was the keynote speaker of the ICDMSDR'16 conference from National Institute of Ocean Technology Chennai during February 2016. He encouraged the students to join MTS as a Student Section. He explained the benefits of Scholarship Opportunities, Internship Programs, Higher Education Guide and Mentorships as becoming members of the Chapter.

An enthusiastic group of 53 B.Tech students from Department of Civil Engineering gathered to join the section during May, 2016. The student representatives proposed an activity list at the gathering of MTS India section on 13th July, 2016 at Westin Hotel, Chennai during MTS conference. They presented their proposal of activities by the student section in the presence of Ms. Donna Kocak, MTS President, USA. The students appreciated for their enthusiasm and efforts. It was followed by a poster presentation in which the participating team from NIT Trichy won the second prize.

Recently, after a review by the MTS, Board of Directors, the section of NIT Tiruchirappalli was officially approved in August, 2016. Meanwhile the students had conducted two gatherings and discussed the future course of actions. The plan for the year 2016 includes participating in competitions and taking up academic projects in the realm of Ocean Technology. The formal inauguration of MTS – Student Section NIT Trichy is scheduled on 16/09/2016. The copy of MTS board approval is given below.



Opportunity runs deep™

Dr. R. Manjula
Department of Civil Engineering
President (Ladies Club)
National Institute of Technology
Tiruchirappalli - 620 015 India
Tamilnadu, India

Dear Dr. Manjula,

WELCOME ABOARD!

The Marine Technology Society (MTS) would like to welcome your new Student Section NIT Trichy to the Society. We are honored to have you with us and look forward to working with you to grow the NIT Tricky Section in the future.

As new our newest Student Section you will receive the following benefits;

- All Charter Members automatically receive 1 year free membership.
- All Charter Members will receive the MTS Journal for free for one year.
- Discount Access to MTS events globally.
- \$500/annually to support your Student Section events and activities.
- Student Section Members are eligible to apply for MTS Scholarships.
- Six electronic Issues the MTS Newsletter *Currents*.
- Free career Services on the MTS website.
- Opportunity to attend the Student Leadership Conference @ Oceans Conference annually.
- The entire MTS community is available to you as mentors and advisors!

We want to hear from you! Please keep us up to date on your events, send us photos and join us on the MTS [Facebook](#) page and be part of the growing MTS community on-line!

If you have questions, please reach out to Josh Cohen, MTS, Director of Membership for support at Josh.Cohen@mtsociety.org we are here to help and support you.

Thank you.

Sincerely,

Kevin J. Traver
Executive Director

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Research on Productivity in Higher Education

Dr. G. Kannabiran has been involved in an Asian Productivity Organization (Tokyo, Japan) sponsored Research project on **Measuring Productivity in Higher Education**, as a national expert from India through National Productivity Council. Experts from nine Asian countries participated in this project. He attended a coordination meeting during 24-26 November, 2015 at Bangkok, Thailand for effective implementation of the research project.

National experts and few other experts from leading economies were invited to attend the Conference on Raising Productivity in Higher Education, Jakarta, Indonesia during 29 August-1 September 2016 for sharing and validating their research findings. Dr. Kannabiran shared his initial findings based on exploratory studies that he conducted in select institutions under CFTI.



N.I.T.Trichy Professor Invited by Defence Institute of Advanced Technology (DIAT), Pune



Dr.S.Raghavan, Professor, Electronics and Communication Engineering, N.I.T., Tiruchirappalli was invited by the Defence Institute of Advanced Technology, Pune to review a research progress on a Microwave Engineering topic 'Photonic Band Gap and Coplanar Waveguide'. Considering his expertise in the field of 'Microwave Engineering', Dr.Surendra Paul, the Vice Chancellor and the former distinguished Scientist of Indian Space Research Organization (ISRO) felicitated the Professor.

Defence Institute of Advanced Technology (DIAT) is the premier Deemed University under the development of Defence Research and Development (DRDO), Ministry of Defence, Government of India. The academic disciplines include Aerospace, Mechanical, Radar and Navigation, Laser and Electro optics, Modelling and simulation. Energetic materials and Polymers, Computer sciences, Nano Technology and other areas related to tri Services. The institute offers Post graduate programmes and Research education in addition to teaching National Defence Academy students.

Send your feedback to: directorsec@nitt.edu / 0431 2503002