NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI
- A GLIMPSE

Prof. Mini S. Thomas
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National Institute of Technology,
Tiruchirappalli, Tamil Nadu
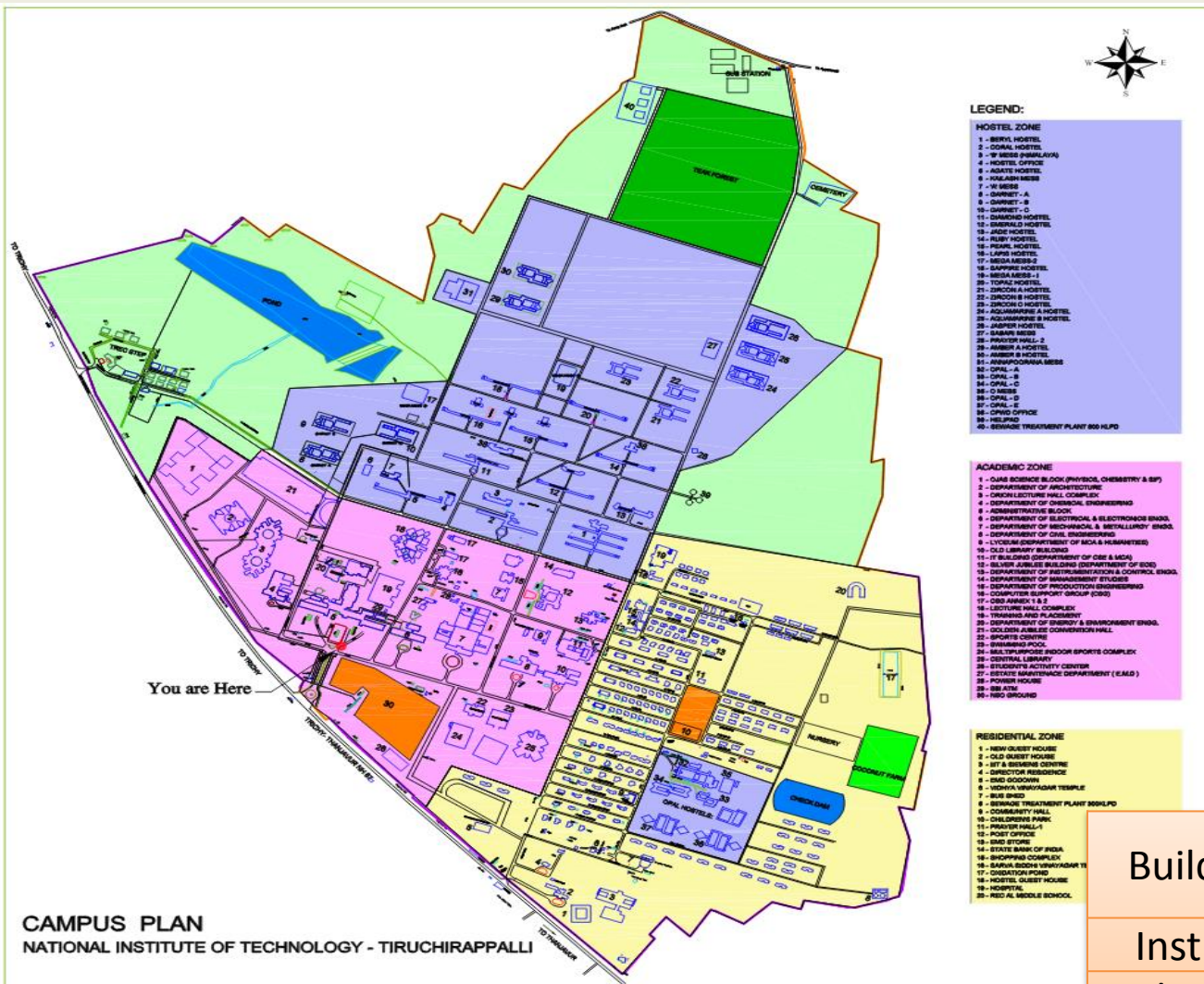director@nitt.edu

Welcome !

Campus Map

CAMPUS PLAN
NATIONAL INSTITUTE OF TECHNOLOGY - TIRUCHIRAPPALLI

Campus spread over an extent of 777.77 acres

Building Type	Plinth Area (m²)
Instructional	39249
Administrative	10579
Amenities	43748
Residential	23673

Humble Beginning

- **NIT Tiruchirappalli (REC-T) was set up in 1964 in rural surroundings with a view to develop the local environments**

- **Represents National Character with 50% of students from other States of India. (23% Girls)**

- **Students from other countries under DASA, ICCR etc**

- **Partnering with Industries and Academia since inception**

- **First NIT to start MBA and MCA programmes**

Milestones of
NIT, Tiruchirappalli

- **1964 : Admitted First Batch of UG students**

- **1979 : Autonomous for PG Programmes**

- **1986 : Autonomous for UG Programmes**

- **1989 : Silver Jubilee**

- **2003 : Deemed University**

- **2007 : Under NIT Act (Parliament)**

- **2014 : Golden Jubilee**

- **2016 : Ranked 12th Among Engg Inst & First Among NITs (NIRF)**

Where are we today??

- **NIRF 2017 11ᵗʰ Among Engg Institutions, top among NITs**

- **QS Asia University Rankings 2018 / Top 250**

- **FICCI University of the year 2017 (above 30 years)**

- **CII-AICTE best industry linked institute**

- **FICCI excellence award for social responsibility (2017)**

- **FICCI excellence award for Employability (2016)**

- **FICCI excellence award for Visionary ideas (2016)**

- **ASSOCHAM Award for best institute to use ICT tools in education**

- **High-Impact Entrepreneurship Campus awarded by Ministry of Skills Development and Entrepreneurship**

NIRF / Overall : 34
NIRF / Engineering : 11

QS Asia University Rankings 2018

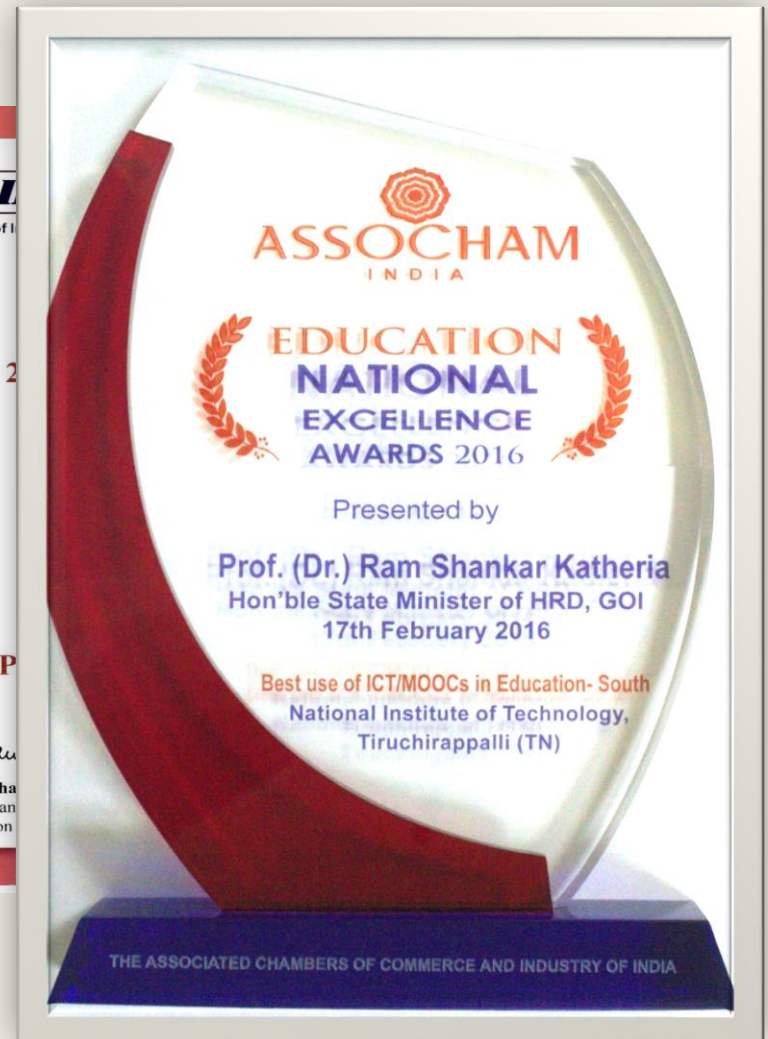**We are 23rd in India & 228th in Asia**
Only NIT in the list

UNIVERSITY OF THE YEAR 2017

- **FICCI HIGHER EDUCATION SUMMIT 2017**

AWARDS

All India Council for Technical Education

Confederation of I

5th University-Industry Congress: Global Higher Education Summit 2015

AICTE – CII Survey of Industry-Linked Technical Institutes 2

Hindustan Unilever Limited

**HUL Award for
Best Industry-Linked NIT / IIT / IIIT**

Awarded to

NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPP

Dr Anil Dattatraya Sahasrabudhe
Chairman
All India Council for Technical Education

Mr Pradeep Banerjee
Executive Director
Hindustan Unilever Limited

Mr Vijay Tha
Chairman
CII National Committee on

ASSOCHAM
INDIA

EDUCATION
NATIONAL
EXCELLENCE
AWARDS 2016

Presented by

Prof. (Dr.) Ram Shankar Katheria
Hon'ble State Minister of HRD, GOI
17th February 2016

Best use of ICT/MOOCs in Education- South
National Institute of Technology,
Tiruchirappalli (TN)

THE ASSOCIATED CHAMBERS OF COMMERCE AND INDUSTRY OF INDIA

Core Strength

- **Highly qualified and dedicated Faculty**
- **Quality students-First Choice for NIT aspirants**
- **Contemporary curriculum with industry focus**
- **Choice based flexible curriculum**
- **Surrounded by Large and SME industries**
- **Excellent Infrastructure and amenities**
- **Congenial academic and living environment**
- **International Fellowships/Internships**
- **Excellent Placements**
- **Opportunities for all-round development**

Vision and Mission

- **Vision**
  - **To provide valuable resources for industry and society through excellence in technical education and research**
- **Mission**
  - **To offer state-of-the-art undergraduate, postgraduate and research programmes.**
  - **To generate new knowledge by engaging in cutting-edge research.**
  - **To undertake collaborative projects with academia and industries.**
  - **To develop human intellectual capability to its fullest potential.**

Vision and Mission

- **Mission 1**
  - **To offer state-of-the-art undergraduate, postgraduate and research programmes.**

- **Academic Programmes**
- **Admission process**
- **Digital Initiatives**
- **E-governance (Integrated MIS)**

13th Convocation (12.8.2017)

Chief Guest
Padma Vibhushan
N. R. Narayana Murthy
Founder, Infosys

Doctor of Letters
(Honoris Causa)
on
Shri N. Chandrasekaran
Chairman, TATA Sons
(Alumnus MCA)

B. Tech.	B.Arch.	M. Tech.	M.Sc.
814	46	444	71

MCA	MBA	MS	Ph.D.	Total
88	64	37	85	1649

Academic programmes

UNDER GRADUATE PROGRAMMES (9 +1)

1. Bachelor of Technology (8 Semester)
- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electrical and Electronics Engineering
- Electronics and Communication Engineering
- Instrumentation and Control Engineering
- Mechanical Engineering
- Metallurgical and Materials Engineering
- Production Engineering

2. Bachelor of Architecture (10 Semester)
- Architecture

Academic programmes

II. POST GRADUATE PROGRAMMES

- **Master of Technology (4 Semesters) / [21]**
  - **Energy Engineering**
  - **Chemical Engineering**
  - **Process Control and Instrumentation**
  - **Transportation Engineering and Management**
  - **Construction Technology and Management**
  - **Structural Engineering**
  - **Environmental Engineering**
  - **Computer Science and Engineering**
  - **Power Electronics**
  - **Power Systems**
  - **Communication Systems**
  - **VLSI System**
  - **Industrial Safety Engineering**
  - **Thermal Power Engineering**
  - **Material science and Engineering**
  - **Industrial metallurgy**
  - **Welding Engineering**
  - **Industrial Engineering and Management**
  - **Manufacturing Technology**
  - **Non-Destructive Testing**
  - **Data Analytics (new)**

- **Master of Architecture (4 Semesters)**
  - **Energy Efficient and Sustainable Architecture**
- **Master of Science (4 Semesters) [3]**
  - **Computer Science**
  - **Chemistry**
  - **Physics**
- **Master of Business Administration (6 Trimesters)**
- **Master of Computer Applications (6 Semesters)**

III. Master of Science (By Research)
  - **All Engineering Departments**

IV. Doctor of Philosophy
  - **All Departments**

M Tech Sponsored Seats Introduced

Admission Process

B.Tech. / B.Arch.	JEE Main
M.Tech. / M.Arch.	GATE
M.Sc.	Entrance test + qualifying degree examination marks
MBA	Common Admission Test (CAT) + UG (CGPA) + Written Test + GD + Interview + Work experience
MCA	NIT MCA Common Entrance Test (NIMCET).
MS (by research)	GATE
Ph.D. Stipendiary Category, Other fellowship , Project category, Non-Stipendiary Category, Part-time (External, On campus)	Written Test + Interview

Top Rankers

Examination	Rank
JEE Main	27 students < AIR 2000
NIMCET	Top 50 Scorers Top 10 Rank students join NIT-T
CAT	30 students > 90 % Percentile

Student Strength (Total)

Programme	Male	Female	Total	
B.Tech.	2693	687	3380	
B.Arch.	141	81	222	
Total (UG)	2834	768	3602	3602
M.Tech.	791	173	964	
M.Arch.	11	23	34	
M.Sc.	64	93	157	
MCA	189	77	266	
MBA	103	58	161	
MS (by Research)	153	12	165	
Total (PG)	1311	436	1747	1747
Ph.D.	747	316	1063	1063
Overall Strength				6412

Curriculum Design

- **Flexible curriculum: Kakodkar Committee Recommendations**
  - **Choice based curriculum with Honors and Minors**
  - **Flexibility in Content Delivery, Flipped class rooms (Digital mode)**
  - **Flexibility in the modes of assessment for every subject (Tailor made)**
  - **Leading to a Deterministic Course Plan**
  - **Teacher - facilitator, Students learning at their pace**

- **Minors and Open Electives**
  - **There are three set of electives**
    - **Programme Electives**
    - **Open electives**
    - **Minor electives**

Digital Initiatives
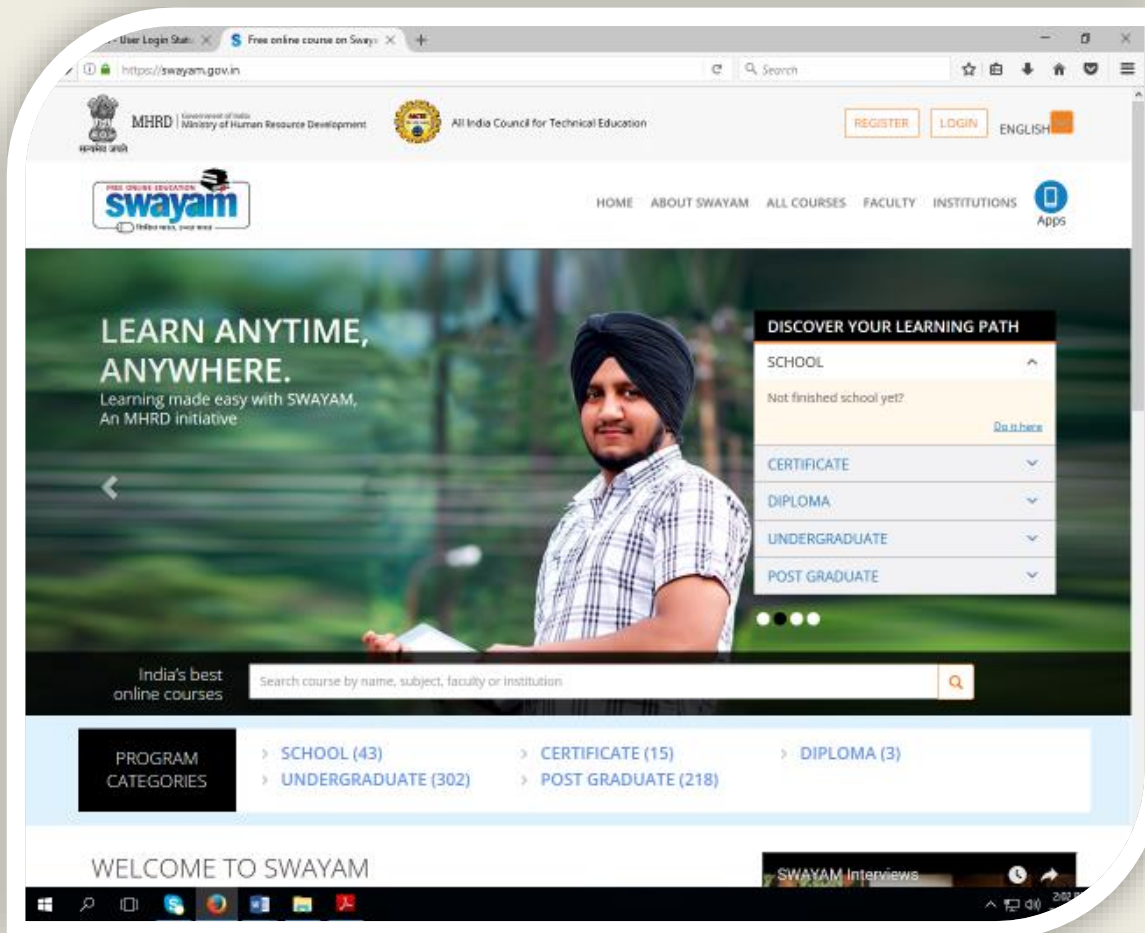
SWAYAM PLATFORM

Up to 6 credits by MOOCS

Internet Connectivity

- **Campus wide LAN , 10 Gbps**

- **1 Gbps shared connectivity by National Informatics Centre (NIC) using Bharat Sanchar Nigam Ltd (BSNL) and Railnet as a part of National Knowledge Network (NKN) and National Mission on Education through Information & Communication Technology (NME-ICT).**

- **Connected 150 Mbps (1:1) leased line from Software Technology Park of India (STPI)**

Vision and Mission

- **Mission 2**
  - **To generate new knowledge by engaging in cutting-edge research.**

- **Publications**
- **Sponsored Projects**
- **Patents**
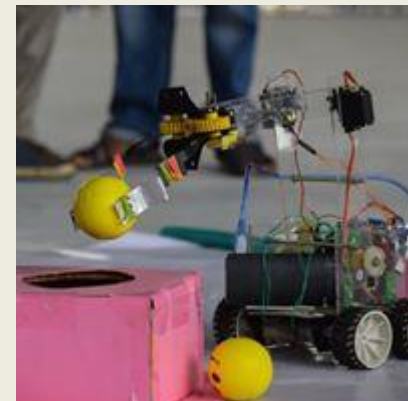
Publications

Research papers in Journals / International (SCI and SCI Expanded)	405
Conference (International)	226
Conference (National)	53
Sponsored Projects	36
No. of Ph.Ds awarded	85
No. of Patents obtained / applied for	7
No. of books / books chapters published	23
Fellowships / Internship / Abroad Visits (Faculty / Students)	101
Industrial Lectures	69
Guest Lectures	214
Technical Symposium / Conferences	62

Year	Scopus	Web of Science
2017 (till date)	541	359
2016	616	582
2015	551	527
2014	603	490

GIAN courses	7 Completed + 6 Approved + 3 (Under Consideration)

Sponsored Projects

Sl. No	Financial Year	Sanctioned Projects	
1.	2017-18 (till date)	19	
2.	2016-17	32	
3.	2015-16	33	
4.	2014-15	15	
5.	2013-14	19	
	Total	118	

UKIERI		**6**	

Sponsoring Organization

Patents

2014-15		2015-16		2016-17		2017-18	
No. of patents filed	No. of Patents Acquired	No. of patents filed	No. of Patents Acquired	No. of patents filed	No. of Patents Acquired	No. of patents filed	No. of Patents Acquired
7	1*	2	1*	2	Nil	24	Nil
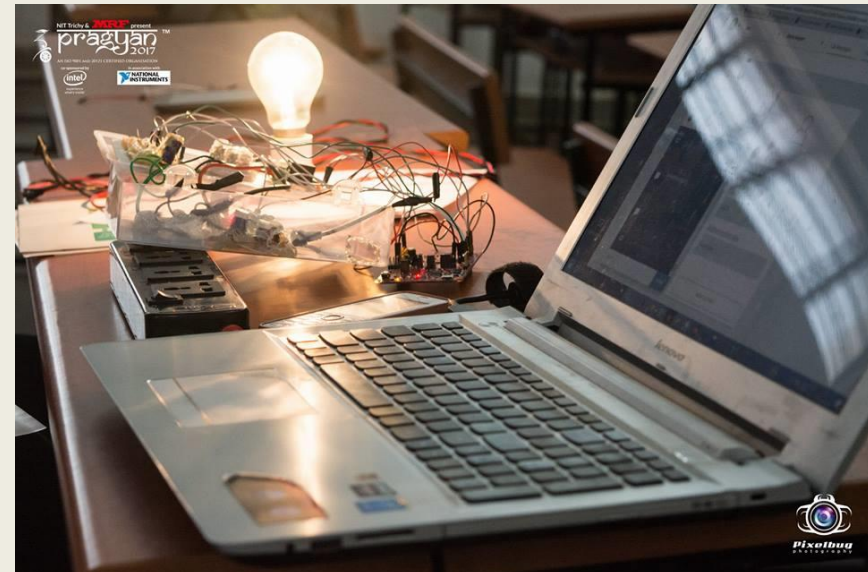
Vision and Mission

- **Mission 3**
  - **To undertake collaborative projects with academia and industries.**

- **Centre of Excellences**
- **MOUs with Academic Institutions**
- **MOUs with organizations**
- **Industry-Sponsored Scholarship**

Centre of Excellence in Manufacturing (Siemens)

- **10 State-of-the-Art laboratories**
    - **Product Design and Validation Lab**
    - **Advanced Manufacturing Lab**
    - **Automation Lab**
    - **Electrical Lab**
    - **Energy Studies Lab**
    - **Process Instrumentation Lab**
    - **Mechatronics Lab**
    - **Test & Optimization Lab**
    - **Internet of Things(IOT) Lab**
    - **Machines Lab, which will have the robotics lab, CNC controller lab, CNC machines lab and the rapid prototyping machine lab)**

- **Training the trainers, Training and certification of students, Provide consultancy to industries, Seminars and Conferences**

Other Centres of Excellence

- **Centre of excellence in Transportation Engineering**

- **Centre of Excellence in Corrosion and Surface Engineering**

- **Electronic System Design and Manufacturing**

- **Center for SME Research & Development**

- **Planning more Interdisciplinary Centres**

MOU / Academic Institutions

IIT Madras

NIT Surathkal

University of Leicester, UK

The University of Michigan-Dearbon, (USA)

Dr. B. R. Ambedkar Institute of Technology, Port Blair

NIT, Uttarakhand

INDUSTRY/RESEARCH COLLABORATIONS

Industry-Sponsored Scholarship

Name	Total Nos.
Steel Scholarship	10
OP Jindal	3
Tata Consultancy Services	2
ABB Global Industries Private Limited	1
Avery Dennison Foundation [Spirit of Invention]	1
Cargill Fellowship	4
Deity Fellowship Marine Technology Scholarships RECAL scholarship	32 2 37

13 students completed DAAD, 4 MITACS and 2 SN Bose fellowships in 2017

7 Students completed Summer Internship in Nanyang Technical University (NTU) this summer

Vision and Mission

- **Mission 4**
  - To develop human intellectual capability to its fullest potential.

- **Placement**
- **Guidance and Counseling Cell**
- **Innovation and Entrepreneurship Development**
- **Industry Institute Interaction Cell**
- **Co-curricular Activities/ Pragyan**
- **Extra curricular Activities/Festember/Sports/NITTfest**
- **Student Council**

Placement Statistics (2010-2017)

- **Close to 100% of Under Graduate and over 80% of Post Graduate Placements**
- **PG placement is one of the highest in the country**
- **Top notch companies : D E Shaw, Hyundai, GE, GM, L&T, AFCONS, Oracle, Tata Group, Texas Instruments etc. are regular visitors.**
- **MNCs: Microsoft, Amazon, nVidia, Pepsi, Schlumberger, etc**
- **Number of PSUs visit the Campus**
- **MNC Consulting firms like Goldman Sachs, Morgan Stanley, PwC, Ernst & Young etc. (visit only IITs / IIMs)**

Placement Statistics (2010-2017)

PG % ■ UG %

No. of Companies: 209, 223, 224, 222, 230, 222, 256 (2010-11 through 2016-17)
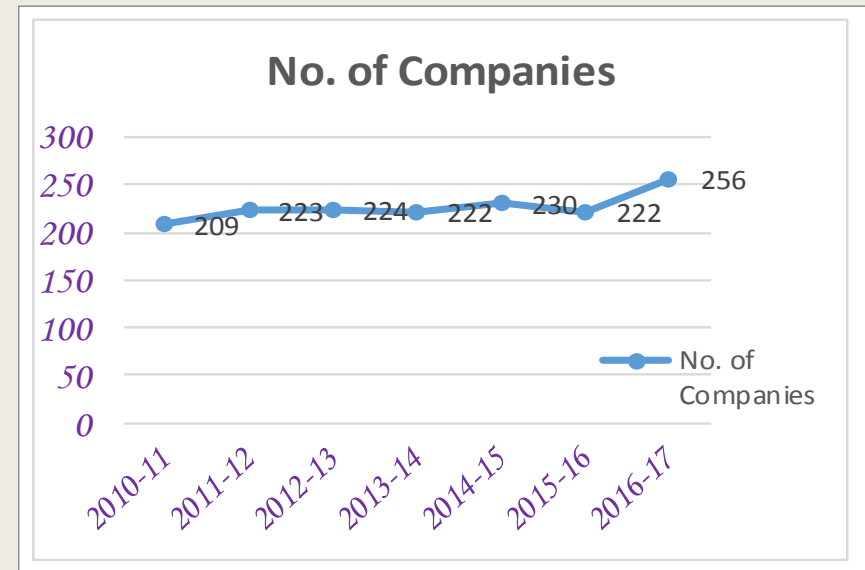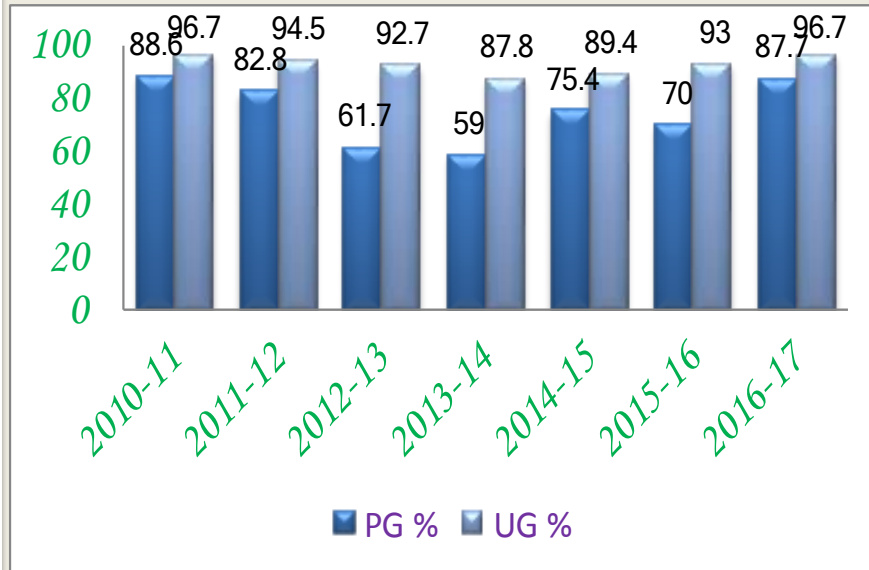
The campus attracts over 250 companies – Highest amongst all NITs and on par with older IITs.

Guidance and Counseling Cell

- **Located at the Central Library building**
- **Professional counselor available everyday**
- **Students are extensively making use of the facility**
- **Objectives**
  - **To focus on student-centered strategies to improve their performance through active mentors/counselors.**
  - **To assist students, faculty and staff in learning difficulties, enhancing harmonious relationship, behavioral development and adjustment problems.**
  - **To improve their overall personality and help them to meet challenges in their life.**
  - **To improve the academic performance of weak students through Equity Action Plan**

Entrepreneurship Development

- **E-cell (Entrepreneurships Development Cell)**
  - Started in 2005, E-cell helps in the development of entrepreneurial ecosystem associated with the youth and the student community globally.
  - E-Cell aims:
    - To motivate and inspire students to take up the challenge of entrepreneurship.
    - To equip them with necessary skills and provide all possible assistance.
    - Promote creative thinking and an entrepreneurial mind-set among the students.
    - Promote innovations and help convert them into market accepted products.
    - Events: Ventura, Genesis, Ideas challenge, etc.
  - Campus Innovation Challenge..

Entrepreneurship Development

- **CEDI (Centre for Entrepreneurship Development and Incubation)**
    - **Section 8 Company of NIT, Tiruchirappalli**
    - **offers Incubation facility along with financial, physical, technical and networking supports and services to entrepreneurs with potential for commercializing innovative ideas in the areas of ICT (CSE/IT) and Electronics.**
    - **CEDI facilitates incubation of new enterprises with a seed funding of INR 25 lakhs, along with mentoring support. CEDI has admitted 10 Incubatees.**
    - **Business and Management Capacity Development of Rural Women Entrepreneurs of India and Sri Lanka**

Industry Institute Interaction Cell

- **To integrate feedback from Industry and Alumni**
- **To offer courses to suit requirements of Industries**
- **To enhance the employability of students**
- **MHRD mandate of 25% of lectures to be delivered by Industry experts.**
- **Industry experts to Offer Global electives**

- **Organizations Participating & Topics (Select List)**

BHEL, Trichy	**CFD**
CISCO	**Advances in OS**
Sun Micro Systems	**Data Centre Management**
BARC	**Prognosis in Electronics**
IBM India	**Cloud computing**
Exeter Group	**Software Engineering**
TCS	**Product Development**
Chennai Petroleum	**Instrumentation**
C-DAC	**Design Techniques**
CISRA-CLRI	**Safety Techniques**
Intel India	**Electronic Packaging**

Co-curricular Activities / Pragyan

- **Pragyan- Annual techno-managerial fest**
- **Inception-2005**
- **India's largest techno-management fest**
- **An ISO 9001:2008 Certification in 2012**
- **An ISO 20121:2012 Certification for Sustainable Event Management in 2014.**
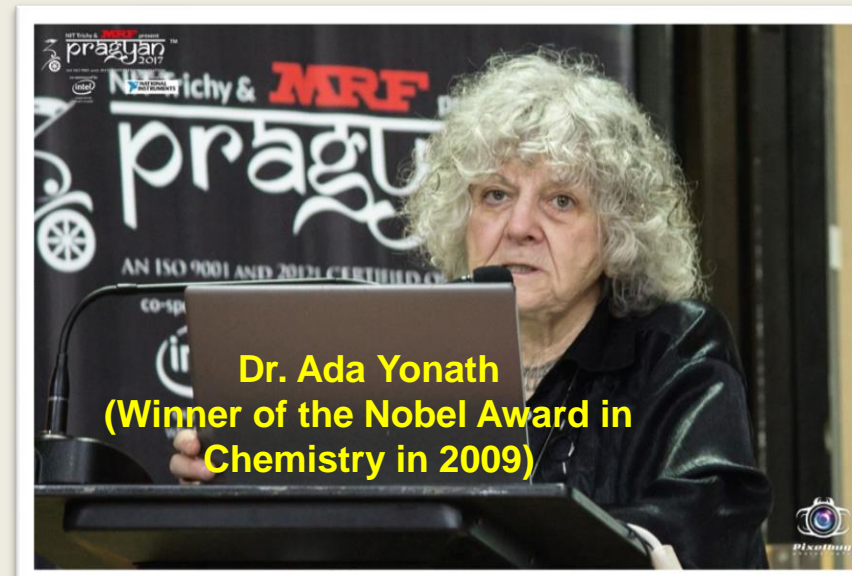
Dr. Ada Yonath
(Winner of the Nobel Award in Chemistry in 2009)

Extra curricular Activities

FESTEMBER

- **Annual cultural festival of the Institute.**
- **Started in 1975.**
- **Largest fest in South India.**
- **10,000+ students from over 500 colleges**

Festember 2017

- **NITTFEST**
  - An inter-departmental Cultural fest

Sportsfete

STUDENT COUNCIL & Tech Clubs

- **Very active Student Council**

- **Interface between Administration and Students**

- **Democratically elected, with representation from**

  UG, PG, Ph. D

Technical Clubs

- **Each Department has a technical Association**

- **In addition, student clubs fro Specific activities**

NSS and NCC

Alumni Institute Interaction Cell

- **Information and Engagement of Alumni**
- **NIT Brand Enhancement**
- **Distinguished Alumni Award (DAA) & Young Achievers Award (YAA) (158 awardees till now)**
- **Alumni Day Celebrations: 13th August 2017**
- **Co-ordination of Alumni Contribution: Institute & Departments & Students**
- **On-line Newsletter**
- **Hall of Fame**

RECAL
- **REC Middle school**
- **Scient**
- **IOT lab**
- **Generous donations**

Notable Alumni

- **N. Chandrasekaran, Chairman, TATA SONS (MCA first Batch)**
- **T. Sankaralingam, Former CMD of NTPC**
- **R. Chandrasekaran, Managing Director, Cognizant**
- **Dr. K. R. Sridhar, CEO Bloom Energy, USA**
- **K. Muralidharan and R.Sundar Sankara Eye Foundation**
- **R. Krishnan, Director, BHEL**
- **S. Janakiraman, Founder, Mindtree**
- **Lt.Gen (Retd) K.S.Venugopal, AVSM**
- **Vice Admiral (Retd) S.K.K.Krishnan, AVSM**
- **Air Marshal P. Kanakaraj, AVSM**
- **Gen-Y tech entrepreneurs like Vivek and Hari of "Interviewstreet" (2008 batch) making it big with silicon valley**

Outreach Activities

Social Responsibility and Inclusivity

- **Unnat Bharat Abhiyan (5 villages)**
- **JEE Coaching (2 villages)**
- **HumaNITTy**
  - **The students of NIT, Tiruchirappalli experiences the power of Volunteering, when they kick-start the Joy of Giving Week celebrations on 2nd October, the Gandhi Jayanthi every year from 2013**
  - **Year long Social activities**

Community Radio Station FM 90.8

- **Broadcasts programmes through CRS**
  - **English / Hindi Spoken Tutorials.**
  - **Personality development programmes in Hindi / English / Tamil for the benefit of student of NIT-T and the students of schools, Arts, Science and Polytechnic colleges in the neighborhood.**
  - **Career guidance and counseling.**
  - **Development of skills in Arts, Music, Debate and Group discussion.**
  - **Application submitted for license.**

Future Plans

Strategic Plan

- **Strategic Planning Group (SPG)**

  – **Focus on 2022 and beyond**

  – **SPG- Team of Faculty and Deans**

  – **Working Group- HoDs / Dept Reps, Ads**

NBA CHAIRPERSON
Prof. Surendra Prasad
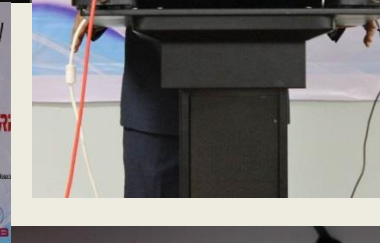**Inaugurated the workshop on 5th Oct 2017**

➢ Industry Engagement
➢ Research Funding
➢ Inclusive Technical Education
➢ Directions for Curriculum & Delivery
➢ Entrepreneurship Development
➢ Alumni Engagement
➢ International Ranking & Accreditation

Future Plans

- **5 year action plan to break into the top 500 world ranking**

- **15 year Strategic plan to get into the top 100**

  - **Increase Perception**
  - **Increase Diversity**
  - **Create Innovation/Incubation Centres / Research Parks**
  - **Encourage Innovation & Entrepreneurship**
  - **Create Centres of Excellence with Industry Support**
  - **Reward High Quality Publications / Increase Ph.D.**
  - **Sponsored M.Tech. / Ph.D. / EDP Programs for IRG**
  - **IPR creation**
  - **Industry Interaction**
  - **Public Visibility/Perception Ranking**
  - **Smart Campus**

Thank you..

director@nitt.edu