

Dear Friends,

Here we are with our first issue of 'Goonj - the Newsletter' of the Institute of Technology, Nirma University. Set up in 1995 the Institute has made an indelible mark in the education world. We have served as the cornerstone of the society and community. We feel we need to connect with all of you more. Goonj will be the reverberation of the activities and events happened in the Institute.

This issue will reflect, recall and share major advances and news of the past few months.

We invite you to visit us whenever you are near us, and absorb the environ for reflection, repose and research. The acres of greens dotted with wonderful, low-rise majestic buildings having ICT enabled classrooms, labs, staff rooms, other amenities inspire and welcome everyone

Happy reading

RANKING HIGHLIGHTS

- Ranked in the band of 101-150 by NIRF for the year 2017-18.
- Ranked 11th in the Top 20 Private Colleges - Outlook Magazine 2018.
- Ranked 8th in the Ranking of Top Engineering Colleges of Super Excellence - Competition Success Review; GHRDC Engineering Colleges Survey 2018.

INSTITUTE ACTIVITIES

The Laurels they brought home

Every year Robocon competition provides a unique challenge to test student's technical skills and innovative thinking, and every year we tackle the challenge with our perseverance, skills and resilience. The legacy of Robocon championship winning does not happen on that day, it started in 2002 when we won our first championship.



We are 8 times National level winners of this competition. Team Nirma Robocon won the national event of 2018 beating around 113 teams of various engineering institutes across the country including IITs and NITs.

This year Team Nirma Robocon, represented India at ABU International Robocon event held at NinhBinh, Vietnam during 24 - 27 August 2018. The team won "ROHM Award" for the Innovative Design.

Mitsubishi Electric Cup



Team CON-SOL-E 2.0, of IC Department, won the silver cup with a cash prize of Rs. 75,000 in the prestigious National level Mitsubishi Electric Cup 2018.

The team has developed an IoT based sorter machine for quality control in manufacturing industries. The event saw 32 teams competing with each other. It was an enthralling experience.

SAE Baja

Another signature activity of ITNU is Sae Baja participation. The months of preparation and test runs of the ATVs by the Team Stallions in the campus is a sight to behold. The exhilaration became palpable. This year also Team Stallions participated in the prestigious SAE BAJA Competition and won the first position for Endurance Test in m-Baja and received Rs 1.00 lac cash prize. Team Stallions also won the overall third position for m-BAJA and won Rs. 75,000 cash prize amongst 150 national teams.



NEW INITIATIVES

New initiatives are proposed and implemented seeing the global to local needs and demands of all the stakeholders. Few of the recent initiatives we have taken:

- Collaborations with the top USA and Canadian Universities leading to preapproved MS programmes, summer internships and joint research projects.
- Introduction of interdisciplinary minor specialization programmes for B.Tech. students in-
 - Entrepreneurship
 - Computer Engineering (All branches except CE/IT)
 - Robotics & Automation
- New disciplinary Minor Programmes –
 - Internet and Web Development
 - Internet of Things
- New courses for B. Tech Students
 - Design Thinking
 - Law and Engineering

ACADEMIC COUNCIL MEET

The Faculty of Technology and Engineering meet was held on August 24, 2018, and 42nd Academic Council meet consisting of eminent academician and practitioners was held on September 27, 2018. The Council deliberated upon the new initiatives and future directions.

IRNSS RECEIVERS

ITNU is part of the initiative by Space Application Centre (SAC), at ISRO, to test its new navigation system IRNSS (Indian Regional Navigation Satellite System), ISRO has installed IRNSS to test the independent regional navigation system across different geographical locations receivers in many Institutions and Organizations.

LUMINARIES IN ITNU

- Smt. Nirmala Sitharaman, Hon'ble Defence Minister of India
- Smt. Nirmala Wadhvani Hon. Minister of State Women & Child Development
- Air Marshal RK Dhir PVSM AVSM VM ADC AOC-in-C SWAC
- Shri Gautambhai Shah Mayor of Ahmedabad City
- A VM AK Gupta VSM, SMSO
- Shri Vallabhbhai Kakadiya Hon. Minister of State, Road & Transport
- Air Marshal DS Rawat AVSM VSM, SASO
- Padma Vibhushan Shri Dr Anil Kakodkar, President, National Academy of Sciences India; Chairman, Rajiv Gandhi Science & Technology Commission; Member & Former Chairman Atomic Energy Commission
- Shri S Sriram, General Manager, Marketing at Mitsubishi Electric India Pvt. Ltd
- Shri Pratul Shroff CEO – Einfochips
- Shri Peesh Upadhyay, Sr. Vice President, HR and Admin, Gujarat Gas Limited.
- Shri Ravin Vyasji, Director and Head, Avbodh Knowledge Foundation Ltd. located at Ahmedabad
- Shri Tushar Thakkar; Founder and Director of Param Labs located at Ahmedabad and Dubai
- Ms Rajul Shah, Co-Founder of AgileCube Technologies and Krosswall
- Shri Ramani Iyer, District VP, ISA District'14, Asia-Pacific
- Shri Jagdish Shukla, Ex. VP ISA District'14
- Shri Sanjeev Chaudhary, Secretary, ISA Gujarat Section

EXPERTS FROM OVERSEAS

- Dr Pauline Rankin, Associate Vice-President (Research and International), Carleton University
- Associate Dean Peter Partell - Assoc. Dean, Academic Affairs & Admin, Thomas J. Watson School of Engineering & Applied Science, Binghamton University
- Ms Lisa Gallagher Assistant Dean – Research and Grad Studies, Watson School
- Mr Katsunori Ushiku, Managing Director, Mitsubishi Electric India Pvt. Ltd
- Mr Makoto Yokoyama, Director, FAID, Mitsubishi Electric India Pvt. Ltd
- Mr Hiroshi Kitamura, General Manager- R&D, Mitsubishi Electric India Pvt. Ltd.
- Dr Banu Ormeci, Professor, Civil & Environmental Engg. Dept., Carleton University on Waste Water Engineering Associate Dean John Bay , Research and Grad Studies, Binghamton University on Cyber Security
- Dr Rishi Gupta, Associate Professor, University of Victoria, Canada on “Non-contact Non-Destructive Evaluation techniques for structural health monitoring

EXPERT LECTURES

- Dr Sambit Patra, Surgeon & National Spokesperson, Bharatiya Janata Party
- Shri Saurabh Shukla, Founder News Mobile and Partner, Republic TV
Shri Arnab Goswami, Founder, Republic TV
- Shri R. K. Sharma, Vice President, HOWE Engineering Projects (I) Pvt. Ltd, Ahmedabad
- Dr A. Jayaraman, Vice President, International Committee on Space Research-COSPAR, Paris and Former, Director, National Atmospheric Research Laboratory, ISRO on atmospheric science and effect of technological development and lifestyle on climate change
- Dr Raghu Raghavendra, Vice Dean for Global Strategies, University of Southern California, USA delivered an expert lecture to Research Scholars
- Dr Subhash Chandra, Chairman – Essel & Zee Media Group, MP-Haryana, on Magic of Belief
- Shri Sanket Thakkar, Director - IConflux Technologies Pvt Ltd on Start-up after MCA, a success story
- Shri Pratik Patel CEO & Co-Founder - Yudiz Solutions Pvt Ltd on How to choose your career! And Digital Revolution

- **Prof. C.H. Solanki**, Professor, Applied Mechanics Department, SVNIT, Surat on Geotechnical Aspects of Foundation Engineering
- **Colonel. Ravinder Singh** from Indian Army on Disaster Management and Role of Youth in Disaster Management
- **Prof. Sudhirkumar V Barai**, Professor, Civil Engineering Department, IIT Kharagpur, on Big Data Analytics in Structural Health Monitoring
- **Shri Manish Sheth**, Director, Trident Realtors Pvt. Ltd. on Explanation of Basic fundamentals of developing of Design aid SP16
- **Dr Manish Shah**, General Manager at iNDEXTb (Industrial Extension Bureau-Organisation of Government of Gujarat on Introduction of GDCR & Urban Planning

B.TECH ORIENTATION



The young and eager faces of B.Tech. new batch brought new promises and potentials to the campus. A week-long orientation session with the aim to give a more tangible feel to them of the campus and community was structured. The sessions helped students to learn about campus resources and connect with their branch and faculty. Orientation week provides students with a smooth transition from school to university and exposed them to the new set of skills and knowledge they need to acquire.

M.TECH ORIENTATION



We welcomed 210 students aspiring to do Masters in Technology from ITNU. An Orientation programme to make them connect with ITNU was organised. The sessions not only provided them with an overview of the academic and research opportunities offered by the institute but also acted as a transitory platform to understand the institute and its culture.

Shri K K Nirala, Director, Technical Education was invited as the Chief Guest of the Valedictory function of Orientation Programme.

RESEARCH PROJECTS

Few recent ongoing sponsored research projects :

Identification of Road Material and Distress for Major Roads of Gujarat Using L and S Band Airborne SAR (NISAR) from SAC-ISRO to Prof. H. A. Dalwadi and Dr P. R. Patel

Identification of Perched Water Table Areas in Irrigated Tracks using Airborne SAR Data (NISAR) from SAC-ISRO to Dr P. R. Patel, and Shri R. L. Mehta (Scientist, SAC-ISRO)

Study and Development of Domain Adaptive Classification Algorithm for Advanced Earth Observation and Annotation System from NISAR AO, ISRO to Dr Tanish Zaveri (EC), Dr Priyank Thakkar, Prof. Pooja Shah

Development of a comprehensive technique for soil moisture estimation using L & S-band airborne polarimetric SAR data from NISAR AO, ISRO to Dr Sanjay Garg, Dr Priyank Thakkar, Dr Vijay Ukani, Arundhati Ray Misra (SAC), Dharmendra Pandey(SAC)

Land Cover Classification of Polarimetric SAR Image/Data for Agricultural and Urban Region From NISAR AO, ISRO to Dr Samir Patel (PDP), Dr Vibha Patel, Prof. Tarjani Vyas

Mining agricultural cover from SAR images and measuring necessary crop parameters using IOT framework to estimate water and irrigation requirement for agricultural use from NISAR AO, ISRO to Dr Madhuri Bhavsar, Prof Swati Jain, Dr Zunnun Narmawala, and Prof.Vivek Prasad.

Trajectory Planning for Robotic Arm for Automatic Damage Detection & Recognition of First Wall Tile Images in Tokamak using Image Processing and Machine Learning from Board of Research in Nuclear Science(BRNS) to Dr Swati Jain and Dr Priyanka Sharma.

Design Against Radiation Effects(DARE) ASIC Standard Cell Library for VLSI Circuits from DRDO to Dr N. M. Devashrayee and Dr N. P. Gajjar.

SAR Polarimetry for detecting ocean surface targets from ISRO to Dr Alka Mahajan, Dr Madhuri Bhavsar, and Prof Payal Prajapati.

Optimizing Parallelisation of Legacy Code on appropriate HPC platform from BRNS to Dr Madhuri Bhavsar, and Dr Gaurang Raval.

Proactive solutions for Achieving Trust in Cloud Computing using Machine Learning Approach from Department of Science and Technology (DST) to Dr Madhuri Bhavsar.

TRAINING PROGRAMMES ORGANIZED

Advances in Thermal Engineering and Fluid Science
from June 19 - 30, 2018 – Dr A M Lakdawala

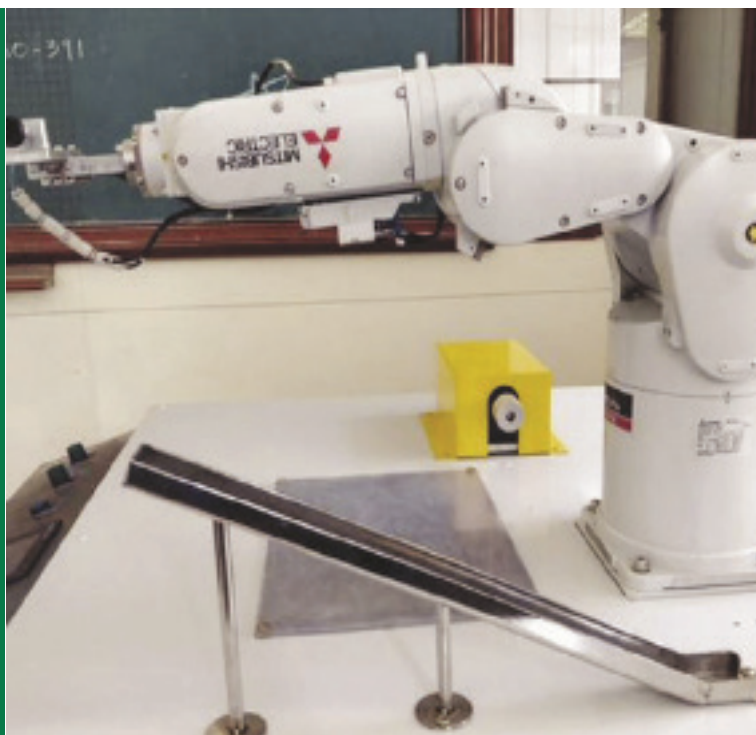
Wheel Industrial Automation from June 25 - July 7, 2018
– Dr J B Patel & Dr D M Adhyaru

Hands on Experience in Advanced Laboratory Practices
in Electrical Engg June 25 - July 7, 2018
– Dr Siddharthsingh Chauhan

Current Trends in Sustainable Infrastructure development
from June 2 - June 15, 2018 – Dr Parul Patel

Models of Computation, Validation and Verification from
June 25 - July 7, 2018 – Dr Zunnun Narmawala

“Robot trainer kit” worth Rs. 26.8 Lakhs from Mitsubishi
Electric India Pvt. Ltd for IC Department.



MoUs

Higher education institutes need to be dynamic and robust. With research and consultancy in its flank, they need to be globalized and internationalized as well. Understanding this, ITNU has MoUs with premiere organisations so as to provide varied perspective, myriad expertise and multitude of experiences and exposures to both the partner. Few of the agencies we have collaborated with are :

- JK Lakshmi Cement Limited
- Building Energy Efficiency Project (BEEP)
- INFOSYS Technologies, Bangalore
- enti INNOVATIONS Pvt. Ltd.
- Mitsubishi Electric India Pvt. Ltd.
- NORD Drive Systems Pvt. Ltd.
- Tata Consultancy Services iON
- Gujarat Industrial Development Corporation
- IBM Technologies

PATENTS FILED

Automated Synchronized Crack Monitoring System:
Inventors are Prof. A. I. Patel

Prof. H. K. Kapadia; Prof. J. J. Barve; Prof. D. Joshi;
Prof. P. V. Patel and Prof. S. P. Purohit

A Novel Composition for Alkali Activated Paver Blocks
and A Process Thereof: Inventors are Dr Urmil Dave &
Prof. Sonal Thakkar

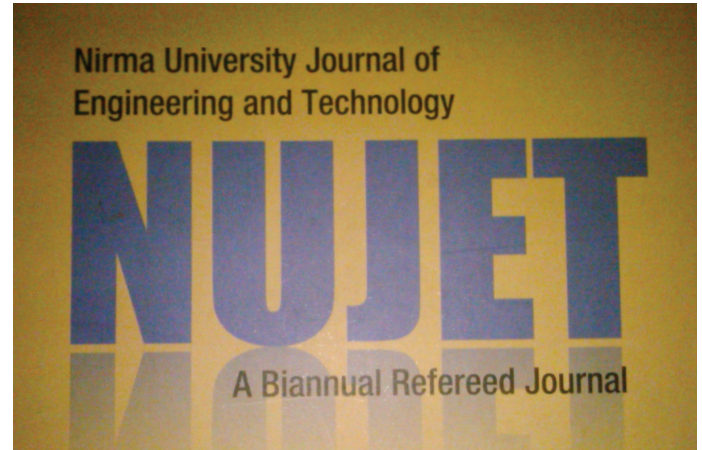
Smart Modbus based device: Inventors are Dr D. M.
Adhyaru and Mr Pallav Gandhi

Comparison of the Guide Vane Mechanism of Francis
turbine and Pump as turbine: Inventors are Dr S. V Jain
and Dr R. N Patel

- Dr Fixit Institute of Structural Protection & Rehabilitation
- InspirOn Engineering Pvt Limited
- Central Building Research Institute, Roorkee
- Ahmedabad Textile Industry's Research Association
- Institute of Plasma Research
- Indian Institute of Technology, Gandhinagar
- Piramal Pharmaceutical Development Services Pvt. Ltd
- Intas Biopharmaceuticals Ltd
- Cadila Pharmaceuticals Ltd.
- B.V. Patel Pharmaceutical Education & Research Development (PERD)
- Indian Space Research Organization
- Physical Research Laboratory
- JK Lakshmi Cement Limited
- Building Energy Efficiency Project (BEEP)
- INFOSYS Technologies, Bangalore
- enti INNOVATIONS Pvt. Ltd.
- Mitsubishi Electric India Pvt. Ltd.
- NORD Drive Systems Pvt. Ltd.
- Tata Consultancy Services iON
- Gujarat Industrial Development Corporation
- IBM Technologies
- Dr Fixit Institute of Structural Protection & Rehabilitation
- InspirOn Engineering Pvt Limited
- Central Building Research Institute, Roorkee
- Ahmedabad Textile Industry's Research Association
- Institute of Plasma Research
- Indian Institute of Technology, Gandhinagar
- Piramal Pharmaceutical Development Services Pvt. Ltd
- Intas Biopharmaceuticals Ltd
- Cadila Pharmaceuticals Ltd.
- B.V. Patel Pharmaceutical Education & Research Development (PERD)
- Indian Space Research Organization
- Physical Research Laboratory
- University of Southern California
- Binghamton University, New York
- Florida Atlantic University
- Carleton University, Canada
- University of Georgia, Athens, Atlanta
- Columbia University
- IOWA State University*, US
- University of Houston, US

THE BUZZ

New Issue of NUJET is out



The journal serves as a reliable means for prompt dissemination of quality research work of all disciplines of engineering. It is accepted in the approved UGC list, indexed by Google scholar and is registered with Open Archive Initiative (OAI) thus giving wide visibility to articles.

FACULTY AND STAFF AWARDS AND RECOGNITION

9th ABP NEWS National Education Awards Institute of Technology, Nirma University has been awarded as Outstanding Educational Institutes (West) by National Education Awards 2018,

Dr Madhuri Bhavsar received ISTE best engineering college teacher award.

Prof. P N Kapil received "Dronacharya Award" during the BAJA SAE India 2018 Competition organized by SAE (Society for Automotive Engineers) at NATRIP, NATRAX Facility Pithampur (Nr. Indore), Madhya Pradesh, India for the best faculty mentor to the student team in the e-BAJA.

ALUMNI INITIATIVES

Alumni talks by-

Mr Tushar Thakker on "Recent Trends in Augmented Reality and Virtual Reality"

Mr Churchil Bhatt on "IT for Global Financial Markets"

Ms Khyati Bhatt on "Becoming future ready with nonverbal communications"

STUDENTS ACTIVITIES

NSS camp

NSS Unit of Institute of Technology, Nirma University conducted a 7 day residential camp in Motipura village, Dist. Gandhinagar . The group of 20 students initiated many activities pertaining to cleanliness and awareness, and worked closely with local gram panchayat officials, and local people.



IDEA LAB

Idea Lab nurtures the creative and entrepreneurial potential in engineering students. It provides a small seed-funding for early-stage exploration of an idea, helping move from the ideation to the prototype stage. This year it has seen the fruition of 30 such projects; funded to the tune 7 lakhs plus by the institute. These novel projects mentored by the faculty were exhibited and were appreciated for their design, innovation, and application.



Jayneel Vora and Shriya Kaneriya were granted the prestigious IEEE-Globecom2018 Student Travel Grant (STG) from IEEE ComSoc. They have been awarded a travel Grant of USD 700 to attend IEEE-GLOBECOM, one of the flagships/A star conference organized by IEEE ComSoc itself since 1954, from December 9th – 13th 2018 in Abu Dhabi UAE.

Electronics and Communication Student Organization organized a workshop “Gunj” for specially abled kids to illuminate the importance of science and art in our daily lives.

AUTOCALYPSE AND ROBOCALYPSE

An automobile workshop for school students, is an extension activity organized by Mechanical Engineering Department every year since 2011. This is the 8th of its kind in continuation. From the last year, along with Autocalypse, a robotic workshop ROBOCALYPSE was also introduced for school students. Total of 206 students from 15 schools have participated in this two days event.



Tata Crucible Hackathon 2018

Three students from EC Sem-IV (Karan Shah, Stuti Garg, Vivek Talwar) stood first at Tata Crucible Hackathon 2018 for the event "The Haystack Mathematician Challenge". Its a part of open innovations challenges of the TATA group.

NEWSMAKERS



Fenil Shah has become the latest International Master (IM) from Gujarat

Times of India- Ahmedabad

Nirma University girl tops city in CAT results

DNA Correspondent
correspondent@dnaindia.net

For 22-year-old Aditi Kaviya, an engineer, appearing for CAT 2017 was a cakewalk. With impulse reading as her hobby and strong background in Quantitative Aptitude, Aditi scored 99.98 percentile, and the only girl who topped the city. Aditi, who is currently in her 4th year of B. Tech in Chemical Engineering from Nirma University was expecting a good score however never expected to



top the city. Speaking to DNA, she said: "My exam had gone very well."

PIECE OF ADVICE

While many say do smart work and not hard work, my success mantra is that hard work is extremely important. Short cuts do not help. I worked for the test for 1.5 years and everyday would prepare for 3 hours consistently.

This score comes to me as a surprise. I think what worked for me was strong vocabulary.

thanks to reading and my background in Quantitative Aptitude."

While she played Tennis before her graduation, she could not pursue it as a hobby as engineering and preparing for CAT did not allow her time. She said, "My university is very strict with attendance so attending college from morning till 6.00 in the evening and then CAT coaching classes did not allow much time for me to do any other activity. To take a break I used to read fiction novels.

DNA - Ahmedabad

VAUDEVILLE 2018

Vaudeville is the cultural colloquium organized by Institute of Technology, Nirma University every year. It was organized on August 28th - 29th, 2018. The theme for this year was 'Superheros - explore one within'. Around 30 events were organized during the fest under the broad category, namely: Dance; Singing; Arts and Painting; Drama; Literary events; Fun Zone; gaming events, and Mr and Miss. ITNU. The event saw a huge participation of more than 600 students as the registered participant. Eminent experts from various fields were invited to judge the events. A rotating trophy is also introduced to be offered to the department that has maximum points based on the winners, participants and audience.



A visit to Percolation well (RWH system), Sewage Treatment Plant and pervious concrete pavement to explain it's functioning for the students of B.Tech. first year as a part of best environmental practices by Nirma University.



International Society of Automation, Students' Chapter of Nirma University, has organized an All Gujarat Instrumentation and Control Engineer's Meet on 20th September 2018 at Nirma University, Ahmedabad, Gujarat.