

PARIPRASHNA : An NIT Puducherry Newsletter



Vision

To be among leading Indian Institutes for excellent, relevant and value based technical education and research.

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From the Director's Desk



It gives me immense pleasure to present the first issue of NIT Puducherry Newsletter "Pariprashna". "Pariprashna" in Sanskrit means 'Unceasing quest, unfolding Perspectives'. Apt to its name, this issue reports on a number of significant events and achievements of NIT Puducherry, an Institute of national importance. Upon our vision to build a brand name for NIT Puducherry, this newsletter is an infant step towards it. The emphasis of Pariprashna is, to synergize and showcase the talents and achievements of the young and vibrant Institute to the global audience. After occupying our permanent campus, the infrastructure development is at a good pace. With highly committed faculty, I wish the students excel in their respective disciplines. As a young Institution, we are continuously revamping the curriculum and syllabus to keep pace with the dynamic change of the demands of the industry. We intend to start few post graduation courses with a perspective towards research and development. I am proud to claim that our faculty have received research grants from various organizations for research and development. As it is evident from this newsletter proceedings, we are contributing to the social and economic development of the surrounding regions through Unnat Bharat Abhiyan, NSS activities, Swacch Bharat Abhiyan, etc., I congratulate the editor, Dr. Narendran Rajagopalan, for the good work within a short time span. As a closing note, I wish that "Pariprashna" reaches a larger audience and puts NIT Puducherry on the global arena of technical excellence.

Dr. Yog Raj Sood
Director

National Level Workshop on Recent Advancements in Nano Technology



The Department of Chemistry organized a national level workshop on recent advancements in Nanotechnology "RAN 2017" at NIT Puducherry, Karaikal. Dr. A. Subramania, Professor, Pondicherry University, Dr. S. Anandan, Professor, National Institute of Technology Trichy and Dr.J.Mathiyarasu, Principal scientist, Central Electrochemical Research Institute Karaikudi gave lectures on the various topics of Nanotechnology, Nanomaterials-Past and Present, Nanostructured Solar Cells, Metal-polymer nanocomposite and its values. The workshop was convened by Dr.D. Ragupathy, Assistant Professor, Department of Chemistry.

A Workshop on 'Changing Paradigms of Management Education'



The Department of Humanities, NIT Puducherry organised a student Workshop on the topic 'Changing Paradigms of Management Education' on 5th April 2017 .The Workshop aimed at giving a exposure about the relevance of management skills in one's life, and opened new vistas to management education, especially for the third year and final year students. Dr. Ruchi Tewari and Dr. Paragi Shah from the Amrut Mody School of

Management, Ahmedabad Univeristy Gujarat, served to be the Resource persons for the same. Dr. Smrutisikta Mishra, Assistant Professor in English, NIT Puducherry co-ordinated the workshop.

National Workshop on LaTeX and Research Methodology

The Department of Electronics and Communication Engineering successfully organized the two days National workshop on LaTeX and Research Methodology on January 20 - 21, 2017 at NIT Puducherry. Dr Harigovindan V P and Mrs. Boopathi Rani were the Coordinators of this National Workshop. The following faculty members of NIT Puducherry served as the resource persons: Dr. G. Aghila (Professor, CSE), Dr. Amrtha Bhide (Asst. Professor, Physics), Dr. Ajay Kumar Mishra (Asst. Professor, Physics), Dr Harigovindan V P (Asst. Professor, ECE) and Mrs. Boopathi Rani (Asst. Professor & HOD, ECE). The Registrar (i/c) inaugurated the workshop. Totally, 45 participants attended the workshop, out of these 35 participants are from other institutions (external participants). Participants had given very good feedback about the training programme.



National Workshop on "Hands on Training in Applications of Power Electronics and Control Systems"



The Department of Electrical and Electronics Engineering organized a three days National workshop

on Hands on Training in Applications of Power Electronics and Control Systems on May 18 - 20, 2017 at NIT Puducherry. Dr. K. Chandrasekaran, AP/EEE, Dr. T. Vinopraba, AP/EEE, Dr. G. Koperundeivi, AP/EEE and Dr. A. Venkadesan, AP/EEE were the Coordinators. The Director inaugurated the workshop. Around, 50 participants attended the workshop, out of these 40 participants were external participants.

A Guest Lecture on Micromachining and Modeling of Cutting Force



Dr. U. Srinivas Rao, Assistant Professor, Department of Mechanical Engineering, IIT(BHU) Varanasi, visited our campus and delivered a lecture on "Micromachining and Modeling of Cutting Force" on 14-03-2017 (Tuesday) from 9.30 am to 10.45 am. It was attended by all students on Mechanical Engineering.

Faculty Development Program for NIT Puducherry Faculty



In line with its vision to achieve excellence in technical education, a faculty development program on "Outcome Based Educational Model through Cyclic Instructional Model" was organized from 22nd May 2017 to 27th May 2017 at NIT Puducherry. It was inaugurated by the Director, NIT Puducherry and Dr. T. G. Sambanthan, Professor, NITTTR, Chennai was the Chief Guest for the function. All the faculty of the Institute attended and appreciated the significance and process of the model, delivered

by the resource persons Dr. T. G. Sambanthan, Professor, NITTTR, Chennai and Dr. P. Sivasankar, Assistant Professor, NITTTR, Chennai. The program was successfully coordinated by Dr. G. Aghila, Professor, NIT Puducherry.

Department of Civil Engineering Commences at NIT Puducherry

The department of civil engineering at NIT Puducherry starts offering its academic programs, B.Tech and PhD in Civil Engineering from the forthcoming academic year 2017-18, onwards. Further, the department has plans to widen its infrastructure and laboratory facilities in a rapid manner. This research driven department presently conducts a research study on "Seismic Vulnerability Assessment of Heritage Structures in the State of Himachal Pradesh" after winning a comprehensive research grant for about Rs. 34, 54, 600 from the Seismology Division, Ministry of Earth Sciences, Government of India.

Infrastructure Development at NIT Puducherry

The permanent campus of NIT Puducherry receives High tension electricity connection in May 2017 and also the progress of the road work with-in the campus is in good pace.

NIT Puducherry welcomes the New Director

Dr. Yog Raj Sood, Professor, Department of Electrical and Electronics Engineering, NIT Hamirpur, took charge as Director, National Institute of Technology Puducherry on 28th April 2017. All the faculty and staff of NIT Puducherry gave a warm welcome to the Director. With over 30 years of experience and many research papers to his credit, his vision is to promote NIT Puducherry as one of the leading Institutions of technical excellence.



Hostel Day Celebration at NIT PY Hostels

The in-mates of NIT Puducherry hostels celebrated Hostel Day celebrations on 28th April 2017 evening. The function was followed by special dinner. The Director participated and interacted with the in-mates of the Hostels.



impact on human body and brain. He also discussed how to deal with its abuse. This talk was coordinated by Dr. Amrtha Bhide.



Book Donation Camp organized by UBA Committee

Unnat Bharat Abhiyan committee members Dr. Ragupathy D, Dr. Narendran Rajagopalan, Dr. S. Babu along with other student volunteers organized the Book Donation Camp at NIT Puducherry in continuation with their visit to Tiruvettakudy village during December 2016. With the generous donation of students and staff, a total of around 155 books were collected, topics ranging from general knowledge to technology. These books were donated to the library of Tiruvettakudy village on 19th April 2017.



NIT Puducherry celebrates Ambedkar Jayanthi

The SC/ST Cell of NIT Puducherry celebrated Dr. B.R. Ambedkar Jayanthi on 14th April 2017 which was attended by the faculty, the staff and the students of the Institute.



A Talk on Drugs and Addiction

National Institute of Technology Puducherry in association with Central Bureau of Narcotics organized a talk on awareness Drugs and addiction for the welfare of the student fraternity. Dr. A. Venkadesh Babu, IRS, Assistant Narcotics Commissioner, Central Bureau of Narcotics, Chennai explained the various facets of the issue of drugs, its

NIT Puducherry donates Blood!

National Institute of Technology Puducherry organized a Blood Donation camp on 3rd February 2017. 85 units of blood with rare blood group was donated to JIPMER. The camp was funded by PACS, Pondicherry Aids Control Society, Puducherry. This event was coordinated by Dr. Amrtha Bhide.



Swacch Bharat Abhiyan Drive at NIT Puducherry

A Swacch Bharat Abhiyan drive to convert the waste to worth was conducted at NIT Puducherry. Nearly two hundred and 10 koligrams of plastic, thermocol and carton materials were collected and disposed, resulting in Rs. 1,470/- revenue to the Institute. Dr. Amrtha Bhide, as NSS Coordinator organized this initiative.



The Cultural Team Makes us Proud!

The cultural team of NIT Puducherry participated in district level cultural show on 25th January 2017. The theme of the cultural show, was "Empowering and Educating Voters". The first prize for the competition was bagged by NIT Puducherry.

NSS Activity on 26th January 2017

As NSS Activity "One Student One Sapling" Program was launched by the NSS Coordinator, Dr. Amrtha Bhide on the Republic Day 26th January 2017.



GYANITH'17 : A Technical Festival from NIT Puducherry

NIT Puducherry celebrated GYANITH'17, a technical festival from NIT Puducherry on 26th February 2017. As part of the festival, Dr.A.Venkadesan, AP/EEE co-ordinated debate competition organized by ONGC, Karaikal for the NIT Puducherry students. He also co-ordinated project and Science Expo competition organized by Innovation Club, NIT Puducherry for engineering/school students. Mr Sangineni Rohit, B.Tech EEE IV year student organized a guest lecture from ONGC, Karaikal for the festival.



NIT Puducherry Celebrates Sports Day

NIT Puducherry celebrated Sports Day on 7th and 8th April 2017. The Chief Guest for the inaugural function was Mr. Kamaraj, International Volley Ball Player and Mr. Manogar, International Volley Ball Player, for the valedictory function. 14 games, 20 athletic events for boys and girls respectively and 6 events for the faculty and staff were conducted. The winners were awarded with trophies and certificates by the chief guest. The complete event was well organized by Dr. S. Babu, Students Activities and Sports Officer(SASO).



Conference Publications

- Sheraz Ali Shah, Narendran Rajagopalan, "A Study on Constrained Application Protocol for the Internet of Things", IEEE International Workshop on Internet of Things and TV White Spaces (WIOT' 2017), January 12 - 13, 2017 at Pune, India.
- Pugazhenth. A, L. S. Kumar, "Image Contrast Enhancement by Automatic Multi-Histogram Equalization for Satellite Images", IEEE International

Conference on Signal Processing, Communications and Networking (ICSCN 2017), 16th to 18th March 2017, Chennai.

- Rohith Sangineni, A.Venkadesan, K.Sedhuraman, "Simplified Space Vector Modulation Technique for Induction Motor Drives," Proc. IEEE - International Conference on Innovative Research In Electrical Sciences (IICRES-2017), E.G.S Pillay Engineering College, Nagapattinam, Tamil Nadu, India (Accepted for Publication).
- G.Bhavana, D.Haneesha, A.Venkadesan, K.Sedhuraman, "Comparison of Feed forward and Cascade Neural Network for Harmonic current estimation in Power electronic converter," Proc. IEEE - International Conference on Innovative Research In Electrical Sciences (IICRES-2017), E.G.S Pillay Engineering College, Nagapattinam, Tamil Nadu, India (Accepted for Publication).
- K. Chandrasekaran, A. Venkadesan, Madhusmita Mohanty, "Tracking the Global Maximum Operating Point under a PSC using Cluster Gravitational Search Algorithm," Proc. IEEE - International Conference on Innovative Research In Electrical Sciences (IICRES-2017), E.G.S Pillay Engineering College, Nagapattinam, Tamil Nadu, India (Communicated).

Journal Publications

- Jasmine Kaur, *Yog Raj Sood*, Rajnish Shrivastava, "Optimal Operation of Self-Sustainable Green Microgrid in Deregulated Power Sector", International Journal of Energy Environment and Carbon Credits, STM, Vol. 6, No 3, Jan 2017, ISSN: 2249-8621, pp. 19-25, *SJIF: 4.312*.
- Digambar Singh, *Yog Raj Sood*, Deepak, "Recent Techno-Economic Potential and Development of Solar Energy Sector in India", accepted for publication in IETE Technical Review, Taylor and Francis, April 2017, *Impact Factor: 1.304*.
- Anuj Banshwar, Naveen Kumar Sharma, *Yog Raj Sood*, Rajnish Shrivastava, "Real time procurement of energy and operating reserve from Renewable Energy Sources in deregulated environment considering imbalance penalties", International Journal of Renewable Energy, Elsevier Publishers, ISSN: 0960-1481, Vol. 113, June 2017 pp. 855-866, *Impact Factor 3.404*.
- Boopathi Rani, R. and S. K. Pandey (2017) ELC metamaterial based CPW-fed printed dual-band antenna. Microwave and Optical Technology Letters, Wiley Interscience, USA, 59, 304-307, *Impact Factor: 0.545*.

- Boopathi Rani, R. and S. K. Pandey (2017) A CPW-fed Circular Patch Antenna Inspired by Reduced Ground Plane and CSRR Slot for UWB Applications with Notch Band. Microwave and Optical Technology Letters, Wiley Interscience, USA, 59, 745 - 749, Impact Factor: 0.545.
- A.Venkadesan., S.Himavathi., K.Sedhuraman., A.Muthuramalingam. (2017) Design and FPGA Implementation of Cascade Neural Network Based Flux Estimator for Speed Estimation in IM Drives, IET-Electric Power Applications, Vol.11, No.1, pp. 121-131.

Faculty Accomplishments

- Dr. G. Aghila, Professor, Department of Computer Science and Engineering, was invited as the chief guest for the inauguration function of 5-day national workshop on "Digitization of Resources using Open Source Software DSPACE" organized by INFLIBNET Gandhi Nagar Gujarat India and Department of Computer Science Central University of Tamil Nadu during 20th - 24th March, 2017 and gave a talk on the topic "IPR & Copyright Issues in Creating and Managing of Institutional Repository".
- Dr.Sendhil Kumar Natarajan, Assistant Professor & Head, Department of Mechanical Engineering has passed in Energy Auditor exam held by Bureau of Energy Efficiency and is a Certified Energy Auditor (EA-16227).
- Dr.Sendhil Kumar Natarajan, Assistant Professor & Head, Department of Mechanical Engineering is one of the Co-Principal Investigator in DST-UKIERI collaborative project entitled "Methanol Fed High Energy Density Fuel Cell System with Novel Catalyst and Flow Field Design". The total cost of the project funding is Rs.1.2679 Crore (for both UK partners and Indian Partners) for a period of three years.
- Dr.Sendhil Kumar Natarajan, Assistant Professor & Head, Department of Mechanical Engineering, attended five days Technical Training on Solar Photovoltaic Power Generation; Design, Installation and Challenges, from 30th Jan 2017 to 3rd Feb 2017 at National Productivity Council, Centre of Excellence for Training in Energy Efficiency, Chennai.

- Dr Amrtha Bhide, Assistant Professor, Department of Physics has participated in the deliberations on "Rural Community Engagement Unnat Bharat Abhiyan and Social Responsibility" held at National Institute for Micro, Small and Medium Enterprises, Hyderabad during 9-10 March 2017.
- Dr.K.Chandrasekaran received a research project titled "Design and Development of Power Quality Controller for Micro Grid", Earlier Career Research Award (SERB), DST, Delhi. Ref: ECR/2017/000468.
- Dr.T.Vinopraba, AP/EEE attended one day workshop on "An Overview on Medical Device Regulation", April 6 2017, IIT Madras.
- Dr.T.Vinopraba, AP/EEE attended one day workshop on "Trends in Process Control", 21st April 2017, IIT Madras.

Students Accomplishments

- The project "Smart Irrigation Systems" has been selected and recommended for the financial support (around Rs.5000/-) under innovation club. Project Team: Nitin Reddy, Danish, Shyam, B.Tech EEE III year. Guide: Dr.G.Koperundeivi, AP/EEE.
- Kavya Shree B.Tech EEE III year and Abhishek Kumar Singh B.Tech Mechanical Engineering III year have received internship from L & T construction.
- Mr. Maurya Reddy, B.Tech EEE IV year student has secured 99.93 Percentile in CAT 2017 examination and got admission in IIM, Kolkatta.
- Mr. Jawahar Babu, Research Scholar, EEE Department attended two days National workshop on "LaTeX and Research Methodology", 20 Jan 2017- 21 Jan 2017, National Institute of Technology Puducherry.
- Mr. Jawahar Babu, Research Scholar, EEE Department attended Three days workshop on "Integrated Process Design and Control", 02-02-2017 to 04-02-2017, National Institute of Technology Tiruchirappalli.

Quote

"When I am working on a problem I never think about beauty. I only think about how to solve the problem. But when I have finished, If the solution is not beautiful, I know it is wrong."

- Buckminster Fuller

B.Tech and M.Tech Graduating Students Batch - 2017



Editor



I take immense pleasure and consider it my proud privilege to work for this first edition of the Newsletter from the NIT Puducherry's editorial board. I am humbled for having been entrusted with the responsibility to duly plan and bring out this Newsletter. I take this opportunity to express my sincere gratitude to the honorable Director for his endearing encouragement, support and the trust bestowed upon me. I would like to thank all the HODs, the faculty and the staff for providing me with the necessary information and timely help as and when required. I hope that the accomplishments of NIT Puducherry soar even higher with every future issues to come.

*Dr. Narendran Rajagopalan
Assistant Professor
Department of Computer Science and Engineering*

Quote

"There is only one nature - the division into science and engineering is a human imposition, not a natural one. Indeed, the division is a human failure; it reflects our limited capacity to comprehend the whole."

- Bill Wulf