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IIT Tirupati Starts its Operations from the Permanent Campus

IIT Tirupati, in the fourth year of its operations, starts making a move to its 530 acres Permanent Campus located in Merlapaka Village on Yerpedu-Venkatagiri Highway. In order to meet the immediate requirement of the Institute, a Transit Campus, to be integrated in the master plan of the Permanent Campus, has been built in an area of 37 acres within a span of one year adopting fast track construction technologies. The buildings and facilities at the Transit Campus include:

- ◆ Three hostels with G+3 floors, each to accommodate about 150 students
- ◆ A G+1 floor classroom complex with a 120-seater studio type classroom, a 90-seater classroom, a 60-seater classroom, a 90-seater Computer lab along with one staff room, and two medical examination rooms with 4-bed ward
- ◆ Two laboratory buildings to house Civil, Electrical, and Mechanical Engineering laboratories and workshop facilities
- ◆ Residential block with four apartments for essential staff
- ◆ An indoor sports complex along with outdoor sports facilities
- ◆ A dining-cum-kitchen facility for 300 persons in a batch, equipped with modern and hygienic kitchen
- ◆ BT roads with street lighting
- ◆ 500 kVA sub-station



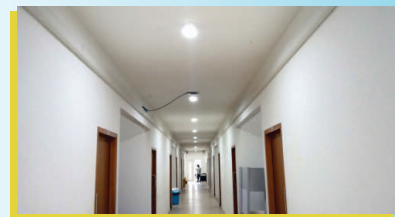
HOSTELS



WORKSHOP

Green Features of the Campus:

- ◆ Glass Fibre Reinforced Gypsum (GFRG) technology in the construction of hostels, and residential blocks
- ◆ PEB structures for laboratories, workshop, dining block, indoor sports complex
- ◆ Polished concrete flooring in the laboratories
- ◆ 48 volt DC light fittings and ceiling fans
- ◆ 220 kWp roof-top grid interactive type solar power plant
- ◆ Treated water for flushing and gardening purposes
- ◆ High Volume Low Speed (HVLS) fans
- ◆ Solar water heaters



MoUs Signed by IIT Tirupati

Nagaoka University of Technology, Japan

IIT Tirupati, and the Department of Mechanical Engineering and Department of Nuclear System Safety Engineering, Nagaoka University of Technology (NUT), Japan, signed an MoU to improve mutual understanding between the two institutions by contributing to the advancement of academic and research activities in the areas of mutual interest. The MoU aims to promote academic and educational collaboration, and exchange of students, academic and research staff between the two institutions.

Venusgeo/7iq

IIT Tirupati signed a Memorandum of Understanding (MoU) with Venusgeo/7iq for setting up a Centre for Excellence (CoE) for Product Engineering and IoT, with application to some of the major focus areas that the Institute has identified including smart infrastructure, energy, food science and engineering. This CoE will train the students to design, develop and manufacture products in the IoT domain.

R&B Department

Government of Andhra Pradesh

IIT Tirupati entered into an MoU with Roads & Buildings (R&B) Department, Government of Andhra Pradesh, chiefly to promote interaction between R&B Department and IIT Tirupati in mutually beneficial areas of transportation infrastructure, and to enhance research and development interests between R&B Department and IIT Tirupati. The principal areas of collaboration will include, but not limited to: sustainable roadway infrastructure and systems engineering.

CSIR-Central Road Research Institute, New Delhi

IIT Tirupati inked an MoU with CSIR-Central Road Research Institute, New Delhi, to promote intellectual cooperative research and scholarly exchange, and enhance high quality research acumen. The areas of collaboration will mainly focus on pavement engineering and materials, transportation systems engineering, including planning, safety, environment, and other associated civil



engineering areas such as bridges and geotechnical engineering.

Analog Devices

IIT Tirupati has entered into an MoU with Analog Devices India (ADI), Bangalore, to enhance collaboration in the areas of Digital Signal Processing and Communication.

CSIR-SERC

IIT Tirupati and CSIR-Structural Engineering Research Centre, Chennai signed an MoU to establish a programme of exchange and collaboration on the matters of mutual research interest. The major thrust areas of research include Health Monitoring, Assessment and Extension of Life of Civil and Mechanical Engineering Structural Systems.

New Academic Programmes Launched

First Batch of M. Tech admitted

IIT Tirupati has launched the M. Tech programme in the disciplines of Mechanical Engineering, Electrical Engineering, and Computer Science Engineering. A total of 58 students have been admitted in all the three branches.

B. Tech in Chemical Engineering started

IIT Tirupati, from the academic year 2018-19, increased its intake of students in B. Tech programme from 120 to 180 by launching another branch of engineering— Chemical Engineering. The Institute also revised its intake of the existing branches.

Summer Internship – 2018

The Institute gives high priority to the summer internships for the students that complement the knowledge gained at the Institute by providing them hands on training. It also provides students an opportunity to feel the work environment of an organisation. IIT Tirupati ensured a quality internship to 100% of its 3rd year students, in India and overseas.

Invited Lectures Held at IIT Tirupati

- **Prof. Biswa Datta**, Distinguished Research Professor, Northern Illinois University, Illinois, USA, delivered a talk on “Computational and Optimization Methods for Quadratic Inverse Eigenvalue Problems Arising in Mechanical Vibration and Structural Dynamics: Linking Mathematics to Industry”, on January 18, 2018.
- **Prof. Suman Chakraborty**, Dept. of Mechanical Engineering, Indian Institute of Technology Kharagpur, delivered a talk on “Microfluidics for Healthcare” on January 24, 2018.
- **Prof. S. Lakshmivarahan**, George Lynn Cross Research Professor, of Computer Science, University of Oklahoma, USA, delivered a talk on “Data Mining, Data Assimilation and Prediction - Parts of a Continuum”, on January 24, 2018.
- **Prof. Jayaram Sethuraman**, Department of Statistics, Florida University, delivered a talk on “Start-Over-After-Preempts (SOAP) Repair”, on February 1, 2018.
- **Prof. S. Mohan**, Centre for Nano Science & Engineering (CeNSE), IISc Bangalore, interacted with the faculty members on “CeNSE facilities at IISc Bangalore, and how can IITT faculty members be associated with the Centre for their research”, on February 21, 2018.
- **Prof. K. Srinivasa Rao**, First Distinguished DST-Ramanujam Professor of Mathematical Sciences at Srinivasa Ramanujam Centre at Sastra University, Thanjavur, delivered a talk on “Raman and Ramanujam”, on March 1, 2018.
- **Dr. Shrihari Sridhanran**, Associate Professor of Mathematics at IISER Thiruvananthapuram, delivered a talk on “Random Dynamics Generated by Finitely Many Rational Maps”, on May 2, 2018.
- **Prof. Kana Tomizawa**, University of Shizuoka, Japan, delivered a talk on “Current Situation and Future Possibilities of Digital Humanities”, on July 10, 2018.

7th Topical Conference of the ISAMP Organised

IIT and IISER Tirupati jointly hosted the 7th Topical Conference of the Indian Society for Atomic and Molecular Physics between January 6 and 8 on the theme, “Quantum Collisions and Confinement of Atomic and Molecular Species and Photons”. About 125 delegates attended the conference from India and abroad. The sessions were held both at IIT and IISER Tirupati.



Faculty News

New Entrants

IIT Tirupati has made 38 new offers in the recent round of recruitment held in May 2018. This is in addition to 44 Faculty members currently working in the Institute. Following faculty members have joined the Institute in the months of July and August:

S. No.	Name	Department	PhD	Previous Employment
1	Dr. Romanbabu M. Oinam	Civil Engineering	IIT Delhi	Assistant Professor, NIT Warangal
2	Dr. Roshan Srivastav	Civil Engineering	IIT Madras	Associate Professor, VIT University, Vellore
3	Dr. Bijily Balakrishnan	Civil Engineering	IIT Madras	Senior Scientist, IIT Madras
4	Dr. A. Gowri	Civil Engineering	IIT Madras	Assistant Professor, NIT Surathkal
5	Dr. Jaynarayan T Tudu	Computer Science & Engineering	IISc, Bangalore	Research Scientist, IIT Bombay
6	Dr. S. Raja	Computer Science & Engineering	IMS, Chennai	Post-Doctoral Fellow, Chennai Mathematical Institute, Siruseri
7	Dr. Parthajit Mohapatra	Electrical Engineering	IISc, Bangalore	Assistant Professor, IIT Kharagpur
8	Dr. Bharath Kumar	Humanities and Social Sciences	University of Hyderabad	Associate Professor, IIT Indore
9	Dr. Saranya Kshatriya	Humanities and Social Sciences	IIT Madras	Sr. Analyst, Ford Motor Company, Chennai
10	Dr. Ananya Lahiri	Mathematics	IIT Kanpur	INSPIRE Faculty, Chennai Mathematical Institute, Siruseri
11	Dr. Balaji Subramanian	Mechanical Engineering	ETH Zurich, Switzerland	Post-Doctoral Researcher, UC Santa Barbara, USA
12	Dr. Girish Kumar Rajan	Mechanical Engineering	Penn State, USA	Assistant Professor, Indian Institute of Petroleum and Energy, Visakhapatnam, A.P.

New Sponsored Research Projects at IITT

S.No.	Title	Funding Agency	Principal Investigator
1	Reversible Alkali Metal Based Hydrides	DST	Dr. Anil Kumar
2	Lambert W and Polylogarithm Operations in Theoretical and Applied Physics	SICI	Dr. P. C. Deshmukh
3	Enhancing QoS in Mobile edge computing	SICI	Dr. P. S. Saikrishna
4	Ab Initio Modeling of Defects in Nanoscale Materials	DST	Dr. Arun Kumar Manna
5	A Date - Intensive Groundwater Modelling Approach for Evaluating Sustainability of Groundwater Use	DST	Dr. Prasanna Venkatesh Sampath
6	Role of Institutions, Incentives and Information in Enhancing Climate Resilient Agricultural Interventions and their Impacts across States in India	ICSSR	Dr. Chandra Sekhar Bahinipati
7	Wave Propagation by Small Inhomogeneities : Applications to Medical Imaging, Effective Medium Theory and Theory of Meta-materials	DST	Dr. Durga Prasad Challa

Recent Faculty Publications

- Chandrappa, A. K., and **K. P. Biligiri**, "Effect of Pore Structure on Fatigue of Pervious Concrete", *Road Materials and Pavement Design*, Taylor & Francis, UK, 2018.
- Chandrappa, A. K., and **K. P. Biligiri**, "Methodology to Develop Pervious Concrete Mixtures for Target Properties: An Emphasis on the Selection of Mixture Variables", *Journal of Transportation Engineering, Part B: Pavements, American Society of Civil Engineers*, USA, 2018.
- Chandrappa, A. K., and **K. P. Biligiri**, "Pore Structure Characterization of Pervious Concrete Using X-ray Microcomputed Tomography", *Journal of Materials in Civil Engineering*, American Society of Civil Engineers, USA, 2018.
- Khan, V., and **K. P. Biligiri**, "Evolution of Tyre/Road Noise Research in India: Investigations Using Statistical Pass-by Method and Noise Trailer", *International Journal of Pavement Research and Technology*, Elsevier, UK, 2018.
- Mohandoss, M., S. S. Gupta, R. Kumar, M. R. Islam, A. Som, A.G. Mohammed T. Pradeep, and **S. M. Maliyekkal**, "Self-propagated Combustion Synthesis of Few-Layered Graphene: An Optical Properties Perspective", *Nanoscale*, Royal Chemical Society, 2018.
- Rajamani, M., and **S. M. Maliyekkal**, "Chitosan Reinforced Boehmite Nanocomposite Desiccant: A Promising Alternative to Silica Gel", *Carbohydrate Polymers*, Elsevier, 2018.
- Saha, G., and **K. P. Biligiri**, "Comprehensive Fatigue Mechanism Investigation of Asphalt Mixtures: A Synergistic Study of Crack Initiation and Propagation", *Journal of Materials in Civil Engineering*, American Society of Civil Engineers, USA, 2018.
- Saha, G., and **K. P. Biligiri**, "Modulus Prediction of Asphalt Mixtures using Dynamic Semicircular Bending Test: Estimation Algorithm and Nomograph Development", *International Journal of Fatigue*, Elsevier, UK, April 2018.
- Swathi, D., P. C. Sabumon, and **S.M. Maliyekkal**, "Anoxic Ammonia Removal Using Granulated Nanoscale Oxyhydroxides of Fe (GNOF) in a BR", *Journal of Environmental Chemical Engineering*, Elsevier, 6(4), 2018.
- Venudharan, V., **K. P. Biligiri**, and Narayan C. Das, "Investigation on Behavioral Characteristics of Asphalt Binder with Crumb Rubber Modification: Rheological and Thermo-Chemical Approach", *Construction and Building Materials*, UK, 2018.
- Guo, W., **Mahendran, V.**, and Sridhar, R., "Join and Split TCP for SDN Networks: Architecture, Implementation, and Evaluation", *Elsevier Computer Networks*, Vol. No. 137, pp 160-172, 2018.
- Vigneswara Raja, P., and **N. V. L. Narasimha Murty**, "Thermal Annealing Studies in Epitaxial 4H-SiC Schottky Barrier Diodes Over Wide Temperature Range", *Microelectronics Reliability*, 2018.
- Vigneswara Raja, P., and **N. V. L. Narasimha Murty**, "Thermally Stimulated Capacitance in Gamma Irradiated Epitaxial 4H-SiC Schottky Barrier Diodes", *Journal of Applied Physics*, 2018.
- Vigneswara Raja, P., and **N. V. L. Narasimha Murty**, "D-T Neutron and 60 Co- Gamma Irradiation Effects on HPSI 4H-SiC Photoconductors", *IEEE Trans. Nuclear Science*, 2018.
- Dharmendra K. Panchariya, Rohit K. Rai, **E. Anil Kumar**, and Sanjay K. Singh, "Core-shell Zeolitic Imidazolate Frameworks for Enhanced Hydrogen Storage", *ACS Omega*, 2018.
- Singh, V. K., **E. Anil Kumar**, and B. B. Saha, "Adsorption Isotherms, Kinetics and Thermodynamic Simulation of CO₂-CSAC Pair for Cooling Application", *Energy*, 160, 2018.
- **Challa, D. P.**, A. P. Choudhury, and M. Sini. "Mathematical Imaging Using Electric or Magnetic Nanoparticles as Contrast Agents", *Inverse Problems and Imaging (IPI)*, 12 (3), 2018.
- **Das, Ishapathik**, "Robust Benchmark Dose Estimation using an Infinite Family of Response Functions", *Human and Ecological Risk Assessment: An International Journal*, 24(8), 2018.
- Samanta, T., **R. Biswas**, S. Banerjee, and B. Bagchi, "Study of Distance Dependence of Hydrophobic Force Between Two Graphene-like Walls and a Signature of Pressure Induced Structure Formation in the Confined Water", *J Chem. Phys.*, 2018.
- Vuijk, H., A. Sharma, **D. Mondal**, J. Sommer and H. Merlitz, "Pseudo Chemotaxis in Inhomogeneous Active Brownian Systems", *Phys. Rev.*, 2018.

- **Raghuramaraju, A.**, "Patyam: Adyana Paddatulu," in *Bahula: Sahitya Vimarsha, Siddantalu, Prameyalu, Parikaralu*, ed. A. K. Prabhakar, Hyderabad: Perspectives, 2018.
- **Raghuramaraju, A.**, "Desire and Liberation: Biography of a Text by Vaddera Chandidas (Ed)", New Delhi: *Oxford University Press*, 2018.
- Surya Prakash R, Prasad Boggavarapu, **Madan Mohan A.**, and Ravikrishna R V, "Secondary Atomization-Vindication of New Breakup Regimes and Detailed Drop Sizing", *ICLASS-2018*, Chicago-IL, July 2018.
- S. Mukhopadhyay, and **I. Das**, "Robust Designs for Multinomial Response Models: A Method of Selecting Optimal Designs for Multivariate Spatial Experiments". International Conference on *Changing Paradigms and Emerging Challenges in Statistical Sciences (IPECS-2018)*, Department of Statistics, Pondicherry University, Pondicherry, India (Invited), January 2018.

Conference

- Gourab Saha, and **Krishna Prapoorna Biligiri**, "Conceptual Development of Nomograph to Estimate Modulus with Progressive Fatigue: An Inclusive Application of Dynamic Semi-Circular Bending Test", *97th Annual Meeting of the Transportation Research Board, National Academies of Engineering*, Washington, DC, USA, January 2018.
- N. Neethu, T. Choudhury, and **S. M Maliyekkal**, "Fe (III)-Mn (III) Embedded Oxide Adsorbent Material for Effective Arsenic Removal from Water", Proceedings of the international conference on *Energy, Environment, and Industrial Safety*, AC Tech, Anna University, Chennai, February 2018.
- **S. M. Maliyekkal**, and U. Kannan, "Development of an Affordable Point-of-Use-Disinfection System for Rural India", *International Conference on Engaging Canada and India: Challenges of Sustainable Development Goals*, India International Centre, New Delhi, June 2018.
- S. Mukherjee, **K. P. Naveen**, N. Sudarsanam, and B. Ravindran, "Efficient-UCBV: An Almost Optimal Algorithm Using Variance Estimates," *AAAI '18, The 32nd AAAI Conference on Artificial Intelligence*, New Orleans, USA, February 2018.
- **K. P. Naveen**, and R. Sundaresan, "A Double-Auction Mechanism for Mobile Data-Offloading Markets with Strategic Agents," *WiOpt '18, The 16th International Symposium on Modeling and Optimization of Mobile, Ad hoc and Wireless Networks*, Shanghai, China, May 2018.
- T. Sumanth, **K. P. Naveen**, and S. Bhashyam, "Infrastructure-Based Wireless Networks: Coverage and Percolation Properties," *SpaSWiN '18 (Workshop on Spatial Stochastic Models for Wireless Networks)*, held in conjunction with WiOpt'18, Shanghai, China, May 2018.
- Rakesh Sharma, and **E. Anil Kumar**, "Selection of Halide Salts Working Pair for Resorption-based Devices", *5th National Conference on Refrigeration and Air Conditioning*, NIT Surathkal, Surathkal, India, May 2018.
- **S. Rajesh**, and P. Veeramani, "Lim's Center and Fixed-Point Theorems for Isometry Mappings", *Annals of Functional Analysis, 10th Asian Conference of Fixed Point Theory and Optimization*, July 2018, 190 – 201.
- **Srijanani Anurag Prasad**, "Riemann-Liouville Fractional Calculus of Blancmange Curve and Cantor Functions", *Smooth and Non-Smooth Harmonic Analysis (S-NSHA) Symposium*, Iowa State University, Ames, USA, June 2018.
- **A. Raghuramaraju**, "Communicating Death: Deleuze-Guattari and Sri Aurobindo's Savitri", Plenary Lecture at an *International Conference on Contemporary Communication Cultures: Controls and Becoming's*, at University of Madras, February 2018.
- **A. Raghuramaraju**, "Alternative Modernity and Religio-Political Philosophy of M. K. Gandhi", in an *International Symposium on Secular Religiosity and Religious Secularity: Rethinking the Asian Agency in the Shaping of Modernity*, organized by U-PARL, University of Tokyo, Japan, March 2018.
- **A. Raghuramaraju**, "Secular Religiosity and Religious Secularity: Rethinking the Indian Agency in the Shaping of Modernity", organized by AAS in Asia, New Delhi, July 2018.
- **C. S. Bahinipati**, and P. K. Viswanathan, "Incentivizing Resource Efficient Technologies in India: Evidence from Adoption of Micro-Irrigation in Dark-Zone Regions of Gujarat", *NABARD chair Institute of Economic Growth seminar*, in Delhi, India, March 2018.
- **C. S. Bahinipati**, "Loss and Damage from Climate-Related Events in Odisha: Status, Issues and Challenges", *National conference on 'Transforming Odisha: Policies, Institutions and Innovations'* in Bhubaneswar, India March 2018.
- **C. S. Bahinipati**, and U. Patnaik, "Does Development Reduce Damage Risk from Climate Extremes? Empirical Evidence for Floods in India", presented at

the 4th IFMR Annual Research Seminar, Institute for Financial Management and Research, Sri City, India April 2018.

- **C. S. Bahinipati**, "Access to Water Across Smart Cities in India: Issues and Challenges", presented at the *SICI International Conference on Engaging Canada and India: Challenges of Sustainable Development Goals*, India International Centre, New Delhi, June 2018.
- **C. S. Bahinipati**, "Economic and Non-economic Loss and Damage from Droughts in Western India: Role of Irrigation and Crop-Insurance", poster presented at the *5th International Climate Change Adaptation Conference 'Adaptation Futures 2018'*, Cape Town, South Africa, June 2018.
- **C. S. Bahinipati**, "Economic and Non-Economic Loss and Damages from Droughts in Western India", presented at the *National workshop on 'Economic Costs of Climate Change in Rural India'*, at Madras School of Economics, Chennai, July 2018.

- **P. S. Dwivedi**, "Beyond Text and Textuality: Anumana as a Post-Transformational Agenda for a Theory of Poetry", the *17th World Sanskrit Conference*, University of British Columbia, Vancouver, Canada, July 2018.
- **P. S. Dwivedi**, "Metaphysics of Question: A Study in Relation to Kenopaniṣada, Praśnopaniṣada, Bergson, and Deleuze", *International Conference on Contemporary Communication Culture, Controls and Becomings*, University of Madras, Chennai, February 2018.

Recognition and Award

Dr. Krishna Prapoorna Biligiri has been nominated as Asphalt Rubber Ambassador for the Republic of India by Rubber Pavements Association and RAR-2018 Conference Chairman, South Africa, May 2018, for a period of three years (2018-21).

Institute Events

69th Republic Day Celebrations

IIT Tirupati celebrated the 69th Republic Day on January 26, 2018. The celebrations began with unfurling of the national flag by the Director Prof K. N. Satyanarayana, followed by the national anthem. The Director addressed the gathering of the faculty, staff and students. Students organised many cultural events relating to the national unity and love for the country.



The Third Institute Day

The third Institute Day of IIT Tirupati was celebrated on April 4, 2018. Mr. Anil Kumar Singhal, IAS, Executive Officer, Tirumala Tirupati Devasthanams, was the chief guest of the event. Prof. K. N. Satyanarayana, Director, IIT Tirupati, presided over the function. The event formally began with the welcome address by Prof. K. Krishnaiah, Dean, Academic Affairs, followed by the speeches of the chief guest, and the Director. The students gave excellent cultural performances on the occasion. The chief guest awarded the medals to the toppers of the various branches, and distributed prizes to the winners of various events held during the year. The vote of thanks was proposed by Dr. N. Venkaiah, Associate Dean, Student Affairs.

IIT Tirupati Launches its Logo

On the occasion of its third Institute Day, IIT Tirupati launched its logo that is designed by National Institute of Design, Ahmedabad, in consultation with all the students, faculty, and staff members. For the thematic descriptions of the logo, please visit- <http://iittp.ac.in/aboutlogo>



SPICMACAY

The first performance of SPICMACAY to promote the Indian classical music among the youth was organised at IIT Tirupati on March 12, 2018. Smt. Lavanya Ananth, a renowned artiste of Bharatanatyam, performed this classical art form explaining the nuances of this classical dance. She was accompanied by Sri Murali Parthasarathy on vocal, and Nattuvangam, Sri M. Dhananjayan on Mridangam, and Sri R. Kalaiarasan on Violin.



Tirutsava: The First Techno-Cultural Fest



Tirutsava-2018, the first ever techno-cultural festival of IIT Tirupati was held from March 2 to 4, 2018. An entwined relation of technology and culture, the festival saw a medley of events, ranging from verticals in cultural arts to those in engineering and technology. Accompanying it were special lectures by recognised in-field individuals and educational workshops.

The festival witnessed students' participation in large numbers from various institutes across the city of Tirupati and outside. The initiative of organising something at this big scale was for the most part student-driven along with a team of faculty members to mentor. A mix of activities were conducted all the three days. Technical events were a big success as a multitude of creative and innovative events brought a good inflow of ideas from the students. Alongside, a number of cultural and literary events, indulging in various forms of fine arts and literature, were also the part of the programme.



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