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IIT Tirupati Campus

The institute obtained 56th rank in the National Institutional Ranking Framework (NIRF) 2022 in the Engineering category in the first ever ranking of the institute. Our esteemed director Professor K. N. Satyanarayan Kalidindi got a second term. Simultaneously the Academic Building became fully functional along with the 240-seater Lecture Hall Complex. Another 500-seater hostel Des became functional. Under Ministry of Education, IIT Tirupati was selected as a nodal institute to represent Andhra Pradesh for the Ek Bharat Shreshta Bharat student exchange programme which took place in the month of February.

MoUs Signed by IIT Tirupati

IIT Tirupati signed MoU with **Coconut Development Board** for the project proposal "Nanotechnology interventions for process intensification for production of value-added products from coconut" under the Technology mission on coconut on 17-01-2023.

New Additions to the Family

Mr. Sunil Bharadwaj as Junior Assistant in the Department of CEE.

Invited and Special Lectures / Talks held at IIT Tirupati

- Centre for Sponsored Research and Consultancy, IIT Tirupati organized an expert talk "An Entrepreneur's Trysts with Virtual and Augmented Reality and Enterprise Sales" on 10-02-2023. Chief Guest: Mr. Hemanth Satyanarayana, Founder & CEO M/s IMAGINATE PVT. LTD.
- Centre for Sponsored Research and Consultancy and NSS team of IIT Tirupati organized "National Science Day-2023" on 25-02-2023. Chief Guest: Padmashri Prof. T. Pradeep and Prof. T. Natarajan, IIT Madras.

- Centre for Sponsored Research and Consultancy, IIT Tirupati organized an online workshop on “Role of Intellectual Property Rights for Academia” on 17-05-2023 for the benefit of the students and faculty members.
- IIT Tirupati organized “Faculty Interaction session for Product and Technology Developments” on 05-06-2023. Chief Guest: Dr. N. Kalaiselvi, DG-CSIR.

Conferences, Workshops, Symposiums Organized by the Institute

One-day workshop on Innovation and Business model

A one-day workshop titled “Beyond the Innovation - Business Model Canvas” was organized by the Centre for Sponsored Research and Consultancy (CSRC), IIT Tirupati on 16th March 2023 at IIT Tirupati jointly with T-Hub Hyderabad team.

One day curtain raiser on Next Generation Mapping Technologies

A one-day curtain raiser workshop titled “Next Generation Mapping Technologies for Built-up Infrastructure and Assets-Opportunities and Challenges” was organized by the Centre for Sponsored Research and Consultancy (CSRC), IIT Tirupati on 21st March 2023 in collaboration with IIT Tirupati Navavishkar I-Hub Foundation. The below mentioned industry experts and IIT Tirupati faculty members presented on the potential innovation and the future for the Built-up Infrastructure and Assets-Opportunities, et cetera. Prof. K. N. Satyanarayana, Director-IIT Tirupati, welcomed and presented a keynote address during the program. Lt. Gen. Anil Kapoor, Professor of Practice, IIT Tirupati, presented on Digital twin technology and Innovation.

- Dr. Ganesh Kumar PVS, Outstanding Scientist, Associate Director, NSTL
- Mr. Sudip Mazumder, Global Head of L&T
- Shri V. Balamurugan, Outstanding Scientist, Director, Combat Vehicles, Research and Development Establishment (CVRDE)
- Col N. Selva Kumar, CEO, Bridge Bharat Council for Promotion of Innovation Research and Entrepreneurship

Online workshop on role of IPR for Academia

Centre for Sponsored Research and Consultancy, IIT Tirupati organized an online workshop on “Role of Intellectual Property Rights for Academia” on 17-05-2023 for the benefit of the students and faculty members.

Two-day Computational and Applied Mathematics workshop

The Department of Mathematics and Statistics organized a two-day Computational and Applied Mathematics workshop, which P. Mariappan conducted in partnership between IIT Tirupati and IISC Bangalore. It was conducted on April 14 and April 15, 2023. NUMA funded it.

Three-day training program on Aquifer performance test

Department of Civil & Environmental Engineering, IIT Tirupati and the Groundwater and Water Audit Department of State Govt. of Andhra Pradesh (AP) organized a three-day training programme on Aquifer Performance Test from March 23-25, 2023. This programme was part of the National Hydrology Project conducted across all districts of AP.

Two-day international workshop on 5G and beyond wireless communication

A two-day international workshop on 5G and beyond wireless communication: Application to Positioning and Precision Technologies was organized jointly by the Department of Electrical Engineering Indian Institute of Technology Tirupati, Tirupati, Linkoping University, Sweden, and Technology Innovation Hub (TIH), Tirupati during March 18-19, 2023. The workshop was conducted under the umbrella of the Indo-Sweden VR-DST project titled Physical Layer Secrecy for IoT Networks with Heterogeneous Traffic. (PI from India: Dr Parthajit Mohapatra and PI from Sweden: Prof Nikolaos Pappas).

A five-day advance meteorology workshop

The Department of Mechanical Engineering has conducted a five-day “Advanced Metrology” workshop from 5th to 9th December 2022 with 30 participants. The participants are from different backgrounds such as academia, industry, and various Central Govt. laboratories. Dr. N. Venkakaiah was the coordinator for the workshop.

Sponsored Research Projects

S. No.	Title	Funding Agency	Investigator and Dept.
1.	A mathematical model for the dynamics of wiggling objects in a granular medium	Science and Engineering Research Board- SERB	Dr. Anki Reddy Katha Chemical Engineering
2.	Acoustic control of spintronic devices	Science and Engineering Research Board- SERB	Dr. Bhuktare Swapnil Sopanrao Electrical Engineering
3.	On general thermo-mechanical criteria for martensitic phase transformations from material heterogeneities	Science and Engineering Research Board- SERB	Dr. Anup Basak Mechanical Engineering
4.	Nanotechnology interventions for process intensification for production of value-added products from coconut	Coconut Development Board	Dr. Narendra Singh Chemical Engineering
5.	A test-bed for the design, development, and validation of autonomous control of fixed-wing unmanned aerial vehicles	Science and Engineering Research Board- SERB	Dr. Yujendra Bharathi Mitikiri Mechanical Engineering
6.	Fatigue damage analysis of composite laminates & structures under multi-axial variable amplitude load	Science and Engineering Research Board- SERB	Dr. Subba Reddy Daggumati Mechanical Engineering
7.	Reducing chemicals related to low global warming potential	Ministry of Environment, Forest & Climate Change	Dr. Thamida Sunil Kumar Chemical Engineering
8.	Lightweight and explainable machine learning architectures for the diagnosis of abnormalities in medical imaging	Semiconductor Research Corporation	Dr. Gorthi VRMS Subrahmanyam Electrical Engineering
9.	Design and development of algorithms for online long-term target tracking	Defence Research and Development Organisation (DRDO)	Dr. Rama Krishna Sai Gorthi Electrical Engineering
10.	Dialectics of Prakriti and Sanskriti: An ecosophical study of the select ancient Indian texts	JPN National Centre, IIT Indore	Dr. Prabha Shankar Dwivedi Humanities and Social Sciences
11.	Design of a secure and dependable RISC-V core for cryptographic applications	Ministry of Electronics and Information Technology	Dr. Vikramkumar Pudi Electrical Engineering
12.	Centre of Excellence CoE proposal on Membrane Technologies for Desalination, Brine Management, and Water Recycling	Department of Science and Technology	Dr. Shihabudheen Maliyekkal Civil and Environmental Engineering
13.	Food security and the problem of fit: examining local innovations to milk wastage in India	India-Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation and Sustainability (IC-IMPACTS)	Dr. Sanchayan Nath Humanities and Social Sciences
14.	DST's Nodal Center at IISER Tirupati (Tirupati-Chennai-Bengaluru Cluster) for the development and production of key starting materials, intermediates, and other raw materials that are required by the Health Care Sector	Department of Science and Technology	Dr. Venkaiah Chintalapudi Chemistry
15.	GPU accelerated mesh free method solution for FSI problem on Hemo dynamics and its influence on cancer treatments	Department of Science and Technology	Dr. Panchatcharam Mathematics and Statistics

Industrial Consultancies

S. No.	Title	Funding Agency	Investigator and Dept.
1.	SAW and Tandem SAW Welding of PEB Grades	Tata Steel Limited	Dr. Degala Venkata Kiran Mechanical Engineering
2.	Digital Twin Framework for Automobile Brake NVH	Altair Engineering India, Bangalore	Dr. Sriram S Mechanical Engineering
3.	Advanced soil testing for OKKA site in Kerela and OAWB site in Andaman for Coastal Marine Construction and Engineering Limited (COMACOE)	Costal marine Construction & Engineering Limited	Dr. B. Janaki Ramaiah Civil and Environmental Engineering
4.	Scale Up Calculations and Demos of 2G Bio Ethanol Pilot Plant ASN Fuels Private Limited	ASN Fuels Private Limited	Dr. Thamida Sunil Kumar Chemical Engineering
5.	Vetting of 2 Sub-soil investigation reports for city gas distribution works in Kerala	AGP City Gas Private Limited	Prof. A. Murali Krishna Civil and Environmental Engineering
6.	Structural integrity assessment for the WAAM printed tube components	Tata Steel Limited	Dr. Degala Venkata Kiran Mechanical Engineering
7.	Dynamic Analysis of Drum Brakes	TVS Motor Company	Dr. Sriram S Mechanical Engineering
8.	Assessment of strength and durability properties of stones of Sri Prasanna Varadaja Swamy Temple, Sri Kalahasti, A. P	Sri Kalahasteswara Swamy Vari Devasthanam	Dr. Behera Prasanna Kumar Civil and Environmental Engineering
9.	Structural vetting of Warehouse & assembly area at Hyderabad	Amara Raja Infra Private Limited	Dr. M. Nithyadharan Civil and Environmental Engineering
10.	Geotechnical investigations on the soil samples excavated at Pallamala MI tank and Tottambedu MI tank for soil classification and permeability tests to assess their suitability of its use for the work Augmentation of MVS scheme to Renigunta and other habitation	Rural water supply and sanitation, Govt of Andhra Pradesh	Dr. B. Janaki Ramaiah Civil and Environmental Engineering
11.	Advanced testing of soil samples for Offshore Block KG/OSDSF/GSKW/2018, Odalarevu, Andhra Pradesh	FUGRO Geotech (India) Pvt. Ltd.	Dr. B. Janaki Ramaiah Civil and Environmental Engineering
12.	Development of room temperature warm atomic vapor-based Quantum Memory	Qulabs Solutions (India)Pvt. Ltd.	Dr. Arijith Sharma Physics
13.	Laboratory Performance Report on the use of RARX in India	Circulo Tecnologico 2020 SL, Spain	Krishna Prapoorna Civil and Environmental Engineering
14.	Vetting of the design and drawings of the proposed RCC counterfort cantilever retaining wall for the SS Tank at Tadepalligudam, Eluru, Andhra Pradesh.	Public Health Division, ELURU	Dr. B. Janaki Ramaiah Civil and Environmental Engineering
15.	Witness and check the post tensioning and pre-tensioning of structural member stressing sequences in corridor no.5, Chennai.	Chennai Metro Rail Limited	Dr. Bijily Balakrishnan Civil and Environmental Engineering
16.	Developing technology for AI enables weld defect analyser	Hindustan Shipyard Limited	Dr. Degala Venkata Kiran Mechanical Engineering
17.	Welding distortion control in shipbuilding	Hindustan Shipyard Limited	Dr. Degala Venkata Kiran Mechanical Engineering
18.	Condition assessment of Sri Lakshmi Narasimha Swamy Vari Devasthanam Temple, Antarvedi, Sakhinetipalli Mandal, A.P.	Sri Lakshmi Narasimha Swamy Vari Devasthanam	Dr. Behera Prasanna Kumar Civil and Environmental Engineering

Recent Faculty Publications

Journals

Chemical Engineering

- A. V. Kumar, Palodkar, R. Gautam, N. Choudhary, H. P. Veluswamy, and S. Kumar. "Role of Salinity in Clathrate Hydrate Based Processes." *Journal of Natural Gas Science and Engineering*, 2023.
- N. Mohammad, L. Chinthalapudi, and N. Singh. "Superhydrophobic polyurethane sponge modified with polydimethylsiloxane/ zinc oxide-rGO for efficient oil or organic solvent/water separation." *Materials Letters*, vol. 348, pp. 134668, 2023.
- M. Saxena, A. K. Sharma, A. K. Srivastava, N. Singh, and A. R. Dixit. "An Investigation for Minimizing the Wear Loss of Microwave-Assisted Synthesized g-C₃N₄/MoS₂ Nanocomposite Coated Substrate." *Coatings*, vol. 13, no. 1, pp.118, 2023.
- N. S. Prasanna, N. Choudhary, N. Singh, and KSMS Raghavarao. "Omniphobic membranes in membrane distillation for desalination applications: A mini review." *Chemical Engineering Journal Advances*, pp. 100486, 2023.
- Rajasekhar, A. Gogoi, and K. A. Reddy. "Cationic stabilized layered graphene oxide (GO) membrane for shale gas wastewater treatment: An atomistic insight." *Desalination*, 2023.
- J. Vinith, V. Sunil, S. Uday Kumar, and K. Manoj. "Surface-Engineered Extracellular Vesicles in Cancer Immunotherapy." *Cancers*, vol. 15, no. 10, pp. 2838, 2023.
- M. Saxena, A. K. Sharma, A. K. Srivastava, N. Singh, and A. R. Dixit. An Investigation for Minimizing the Wear Loss of Microwave-Assisted Synthesized g-C₃N₄/MoS₂ Nanocomposite Coated Substrate. *Coatings*, 13(1), 118, 2023.
- A. Maheshwari, S. Misra, RD. Gudi, S. Subbiah, C. Laspidou. An Operational Scheduling Framework for Tanker-Based Water Distribution Systems under Uncertainty. *Industrial & Engineering Chemistry Research*, 62, 27, 10523–10541, 2023.
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- Rajasekhar, A. Gogoi, and K. A. Reddy. Cationic stabilized layered graphene oxide (GO) membrane for shale gas wastewater treatment: An atomistic insight. *Desalination*, 2023.
- S. Pathan, Sk. S. Islam, R. Sen Gupta, B. Maity, P. R. Reddy, S. Mandal, K. A. Reddy, and S. Bose. Fundamental Understanding of Ultrathin, Highly Stable Self-Assembled Liquid Crystalline Graphene Oxide Membranes Leading to Precise Molecular Sieving through Non-equilibrium Molecular Dynamics. *ACS Nano*, 2023.

Civil & Environmental Engineering

- A. Naitam, N. Meghana, and R. Srivastav. "Multimodal classification and regression technique for the statistical downscaling of temperature". *Stochastic Environmental Research and Risk Assessment*. *Stochastic Environmental Research and Risk Assessment*, pp.1-23, 2023.
- A. Singh, P. V. Sampath, and K. P. Biligiri. "Field Performance Monitoring of Pervious Concrete Pavement Systems", *Road Materials and Pavement Design*, Taylor & Francis, UK (DOI: 10.1080/14680629.2023.2176164)
- J. M. Sojan, R. Srivastav, and N. Meghana. "Regional non-stationary future extreme rainfall under changing climate over Asian Monsoon Region". *Atmospheric Research*, Vol. 284, pp.106592, 2023.
- Kannan, Uthradevi, and Shihabudheen M. Maliyekkal. "A resource-efficient and portable nanotechnology-enabled disinfection system: Performance studies and a novel strategy to recycle spent material". *Process Safety and Environmental Protection*. 171-532-540, 2023. <https://doi.org/10.1016/j.psep.2023.01.043>.
- M. Nagaraj, and R. Srivastav. "Non-linear granger causality approach for non-stationary modelling of extreme precipitation". *Stochastic Environmental Research and Risk Assessment*, pp. 1-15, 2023.
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Computer Science & Engineering

- Agrahari, Vartika, Shriram Shanbhag, Sridhar Chimalakonda, and A. Eashaan Rao. "A catalogue of game-specific anti-patterns based on GitHub and game development stack exchange." *Journal of Systems and Software*, 111789, 2023.
- B. S. Egala, A. K. Pradhan, P. Dey, V. Badarla, and S. P. Mohanty. "Fortified-Chain 2.0: Intelligent Blockchain for Decentralized Smart Healthcare System", *IEEE Internet of Things Journal*, Feb 2023.
- D. Trivedi, V. Badarla, and R. Bhandari. "Occupancy Inference using In-frastructure Elements in Indoor Environment: A Multi-Sensor Data Fusion", *Springer's CCF Transactions on Pervasive Computing and Interaction*, March 2023.
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- Asha S. Benny, G. Gopakumar, Rama Krishna Sai S. Gorthi, "Saliency and ball ness driven deep learning framework for cell segmentation in bright field microscopic images", *Engineering Applications of Artificial Intelligence*, Elsevier, Vol. 118, No. 105704, February 2023. <https://doi.org/10.1016/j.engappai.2022.105704>.

- M. Sushma and K. P. Naveen, "Offloading and Pricing Strategies for Heterogeneous Mobile Networks," in *IEEE Access*, Vol. 11, pp. 40846-40863, April 2023.
- Matthew A, Joseph L, Kiran L, Sarita V, Rama Krishna Sai S. Gorthi, et. al., "The SPHEREx Target List of Ice Sources (SPLICES)", *The Astrophysical Journal*, Vol. 949, Issue 2, pp. 105-118, June 2023.
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Mechanical Engineering

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- J. Sonowal, M. Mahajan, Muthukumar P, and R. Anandalakshmi. "Performance analysis of liquid desiccant dehumidifier system for various packing density", *Thermal Science and Engineering Progress*, 38, 2023, 101663.
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- M. S. Bhaskaran, and G. K. Rajan. "Characterizing Ocean surface contamination: Composition, film thickness, and rheology", *Marine Pollution Bulletin*, vol. 186, p. 114287, 2023.
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Chemistry

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Books/Book Chapters

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Newspaper Articles

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Civil & Environmental Engineering

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- S.M. Allabakshi, P. Srikar, R.K. Gangwar, and S.M. Maliyekkal. "Photo-Plasma: A Breakthrough Approach for Nullifying Scavenging Effect and Enhanced Removal of a Textile Dye in Wastewater", *Indo-Canadian Symposium on Water Management: Sustainability & Amp: Impact of Climate Change*, IIT Tirupati, 6th March 2023.
- S.M. Allabakshi, P. Srikar, R.K. Gangwar, and S.M. Maliyekkal. "Surface Dielectric Barrier Discharge: A Potential Plasma Reactor System in Treating Textile Wastewater" to the *Conference on Desalination, Brine Management and Water Recycling (DeSaltM 23)*, IIT Bombay, 21-22 July 2023.
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Computer Science & Engineering

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Electrical Engineering

- Goutam Ghosh, S. Vyapari and R. Viju Nair, "Comparison of Modeling Approaches for LLC Resonant Converter Based on Extended Describing Function," *2023 IEEE 11th International Conference on Power Electronics (ICPE) ECCE Asia, 2023*.
- P. Mohapatra, Dr Nikolaos Pappas (Department of Computer and Information Science (Linkoping University Sweden) and Dr Roshan Karan Srivastav (Project Director, Technology Innovation Hub - TIH, IIT Tirupati) organized a 2-day international workshop jointly with Linkoping University Sweden and TIH Tirupati under the umbrella of Indo-Sweden DST-VR project at IIT Tirupati during March 18-19, 2023.
- U. Somalatha and P. Mohapatra, "Short Packet Communication over 2-user Non-orthogonal Multiple Access Channel with Confidential Message," *2023 National Conference on Communications (NCC)*, Guwahati, India, 23-26 February, pp. 1-6, 2023. doi: 10.1109/NCC56989.2023.10068105.

Mechanical Engineering

- M. S. Bhaskaran and G. K. Rajan. "On the Non-Newtonian Rheology of Interfacial Films for Use in Wave Dissipation Models", *AIP Conference Proceedings*, volume 2584, 2023.
- Srinivas M S, Sangeeth P, Venkaiah N, Sankar MR. "State of the art on tool wear characterization in micro-milling". **Materials Today: Proceedings**, 2023. <https://doi.org/10.1016/j.matpr.2023.07.019>.
- Yuva Venkat Ajay, B., A. Chaudhary, A. Yella, & S. Sundar. "Measurement of Vibro-Acoustic Noise of Drum Brake Under Various Contact Conditions". In *INTER-NOISE and NOISE-CON Congress and Conference Proceedings*, Institute of Noise Control Engineering. Vol. 265, No. 6, pp. 1525-1534, 2023.

Mathematics and Statistics

- D. P. Challa. "Acoustic Wave Propagation by Small Bodies and Applications", *MWSW02-Theory of wave scattering in complex and random media as a part of the program on Mathematical theory and applications of multiple waves*, ISAAC NEWTON INSTITUTE(INI), CAMBRIDGE, UK, 20-24 March 2023.
- F. Ayoob, and I. Das. "Robust Credit Risk Modeling Using a Family of Link Functions", *9th International Conference on Mathematics and Computing (ICMC 2023)*, Department of Mathematics, BITS Pilani K K Birla Goa Campus, Goa, India, 06-08 January 2023.
- Harsha Gopalakrishnan and S.A. Prasad, "Labyrinth Fractals on a Quadrilateral", *Hypatian Voices: A Gynocentric National Seminar on Mathematical Sciences*, University of North Bengal, India, 16-17 March 2023.
- I. Das. "Introduction to Machine Learning with Applications to Air Pollution Data", *Workshop on Data Science Techniques*, Sri Padmavati Mahila Visvavidyalayam, Tirupati, India, 12th March 2023.
- K. Kishore, and Anupam Singh. "Matrix Waring Problem", *Workshop on Group Theory 2023*, IISER Pune, India, 13-14 January 2023.
- S. Bhattacharya, I. Das, and M. Kunnummal. "Modified Bivariate Weibull Distribution Allowing Instantaneous and Early Failures", *International Conference on Statistics, Probability, Data Science and Related Areas*, Cochin University of Science and Technology, Cochin, 04-06 January 2023.

Humanities and Social Sciences

- C.S. Bahinipati, and D. Biswal. "Risk Aversion, Safety Nets, and Food Security: Empirical Evidence from Crop-Insurance in India" presented at *Multidimensional Poverty, Food Security and the Role of Safety Nets in India*, Indian Institute of Technology Bombay, Mumbai, India, March 20, 2023.
- C.S. Bahinipati, and S. Das. "Odisha: Environment, Climate change and Natural Disaster" presented at *OEA's Odisha Vision 2036 Conclave*, NISER, Bhubaneswar, India, January 12-14, 2023.
- C.S. Bahinipati, U. Patnaik and A. Senapati. "Building Resilient States to Climate-related Extreme Events in India: Evidence from Floods" presented at the *Pre-Event of 'Resilience and Sustainability Summit: Vision 2047' - Selected as Springer Nature Award during 'Resilience and Sustainability Summit: Vision 2047'*, New Delhi, India, January 17-19, 2023.
- D. Biswal, and C.S. Bahinipati. "Risk Aversion, Adoption of Safety Nets and Food Security in India: Interlinkages between Crop-Insurance and Crop Diversification" presented at *6th SANEM Annual Economists' Conference (SAEC) 2023* on 'Building

Resilience to Shocks: Priorities, Challenges and Prospects', Dhaka, Bangladesh, February 4-5, 2023.

- Gouthami Kothakapa. and Rahul A. Sirohi. "Capital as Power: An Alternative Reading of India's Post-2011 Economic Slowdown", 26th Annual Conference of the Indian Political Economy Association hosted by GITAM University, Visakhapatnam 17-18 Feb 2023.
- Malavika and B. M. Kachhap. "Asexual Nationalism and Indian Cinema: A Queer Reading of Nationalistic Narrations", presented at *International Young Researchers' Conference: New Research in English Studies*, EFLU Hyderabad. April 26-28, 2023.
- P. Halder, and B. M. Kachhap. "Prahelika and Vyuhā: Warped Spaces and Cartographic Fear in Indian Magical Realist Cinema", presented at *12th Annual Academic Conference* of Dept. of HSS, IIT Madras. March 11-12, 2023.
- P. S. Dwivedi. "A Phronesthetic Reading of Thirukkural and Śatakātṛaya on the Comparative Scale", 18th World Sanskrit Conference hosted by the Australian National University, Canberra, Australia (January 9 –13, 2023), January 12, 2023.
- P. S. Dwivedi. Invited special lecture on "Nation, Religion, and Coloniality: Understanding the Role of Hinduism in Shaping India as a Nation," at *ICSSR sponsored National Conference on 'Nation, Nationhood and Nationalism: A Discourse on Early Indian English Literature 1794 to 1950'*, Manonmaniam Sundarnar University, Tirunelveli, Tamilnadu, March 27-29, 2023.

Awards/Achievements

PATENT

- Kalidas, Y. Method of vectorization and verification of handwritten signatures on touch sensitive hardware (Filed) 202341044775/IIT Tirupati. 2023.
- Allabakshi S. M (PhD scholar) received the first prize in "Best paper award category" from the Indo-Canadian Symposium on Water Management: Sustainability & Impact of Climate Change organized by Dalhousie University, Canada and IIT Tirupati, India held on March 6th - 7th, 2023, at IIT Tirupati.
- C.S. Bahinipati has been elected as the Executive Committee Member of Indian Society for Ecological Economics: 2022-2024.
- C.S. Bahinipati won Springer Nature Award, 'Resilience and Sustainability Summit: Vision 2047', New Delhi, India, January 17th-19th, 2023.
- G. Vajitha a PhD Scholar from Department of Civil and Environmental Engineering received the "Best poster

presentation award" at the 35th Kerala Science Congress held at Mar Baselios Christian College of Engineering and Technology on 12th - 14th, February 2023, Kerala. (Supervisor: Shihabudheen M. Maliyekkal).

- Kalidas Yeturu received Agrithon 2023 runner up prize from IITTNiF TIH Cell for Proof of concept & demonstration related to smart agriculture on 11th February, 2023.
- Krishna Prapoorna Biligiri became the Member (R&D Institutions) of Working Group on Transport, Kerala State Planning Board (2022-27).
- Krishna Prapoorna Biligiri has been selected as one of the world's top 2% scientists, Elsevier BV, Stanford University, (<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3>)
- Krishna Prapoorna, Adjunct Professor, School of Sustainable Engineering & the Built Environment, Arizona State University, USA, February 2023-Present
- Krishna Prapoorna, Co-Chair, Transportation Research Board of the USA National Academy of Sciences Subcommittee AKT20(1) "Pavement Lifecycle", April 2023 – Present
- Krishna Prapoorna, Director, Board of the Rubberized Asphalt Foundation, USA, January 2023-Present.
- Krishna Prapoorna, External Faculty Member of the Graduate Research Committee, Purdue University, USA, March 2023-Present.
- Krishna Prapoorna, Independent Director, Tinna Rubber & Infrastructure Limited, India, March 2023-Present.
- KSMS Raghavarao has been awarded the prestigious Lifetime Achievement Award by International Association of Engineering and Food. He will receive the award at ICEF14 to be held at Nantes, France in June 2023.
- S. Bera received Distinction of "Joint Early Career Researcher" by Chemistry An Asian Journal (Wiley) 2023.
- S.M. Allabakshi a PhD Scholar from Department of Civil and Environmental Engineering received first prize in "Best oral presentation award category" from the 1st Institute Level Research Scholars Symposium organized by IIT Tirupati, India, held on May 9th, 2023, at IIT Tirupati. (Supervisors: Dr. Shihabudheen M. Maliyekkal and Dr. Reetesh Gangwar).
- Uday Kumar S received Nanotechnology Alumni Award, IIT Roorkee in 2023.
- V. Sunil (MS Scholar under guidance of Dr. Uday Kumar Sukumar & Dr. K. Anki Reddy, Department of Chemical Engineering) got selected for "Khorana Program of Internships – 2023", pursuing at *Purdue University, USA*.

Events/Activities

The Department of Chemistry organised 'Chemistry Fun Experiments' on 25 February 2023 for school children at the institute as part of National Science Day celebrations.



Republic Day, 26th February 2023

The 74th Republic Day celebrations marked a harmonious blend of academic and administrative brilliance. Graced by the esteemed Chairperson of CPWD as the Guest of Honor and the Director Sir as the Chief Guest, the event radiated significance. Cultural splendor adorned the occasion, presented by the dynamic JMC crew and the talented students of IIT Tirupati. The event culminated in the dignified felicitation of IIT Tirupati staff, recognizing their dedication and contribution. This annual report encapsulates the synergy of academia, culture, and recognition that epitomized the 74th Republic Day festivities.



Institute Day, 6th April 2023

Institute Day had the esteemed presence of Chief Guest Prof. Sudhir K Jain. The event encompassed the dignified



conferment of academic awards, acknowledging outstanding achievements. Amid an aura of accomplishment, cultural performances ignited the stage, painting a vibrant tapestry of talent and creativity. Institute Day not only recognized scholarly excellence but also celebrated the diverse artistic spirit that enriches our institution, fostering an atmosphere of holistic growth and achievement.

Gymkhana Day, 22nd April 2023

Gymkhana Day, a jubilant celebration, pays homage to students who've achieved excellence in diverse domains – sports, cultural, and technical pursuits. The esteemed presence of Mr. T. Chengalraya Naidu as Chief Guest added grandeur to the occasion. A fusion of talents converged in a vivid display showcasing the prowess of our students. This event not only honored the various achievements of our students but also exemplified the spirit of camaraderie and dedication that thrives within our educational community. The Gymkhana Day stands as a testament to the multifaceted brilliance of our students and their relentless pursuit of greatness.



DST Secretary Visit to IIT Tirupati

Dr. Srivari Chandrashekar, Secretary, DST, visited IIT Tirupati on 8th March 2023. He had an interactive session with the faculty members. Prof. K. N. Satyanarayana gave a brief about the progress of the Institute and an overview of various sponsored projects undertaken by the faculty members of the Institute. The Secretary talked about the various schemes introduced by DST while the faculty members shared some of their own observations/concerns regarding the execution of sponsored projects funded by DST and SERB with him.



Students Corner

Gagan Vedhi Club

Moon Gazing Session on 1st February 2023 and on 28th March 2023 (Special Occasion)

An enthusiastic crowd participated in a two-hour moon gazing session where they were shown the moon's craters. A Visit to RSC (Regional Science Centre) on 25th February 2023 was also organised for 50 students. The trip included captivating gazing Sessions where they observed celestial objects like the ISS, Jupiter, Mars, the Moon, and constellations using RSC's telescopes. Another workshop on Orbital Simulation on 8th April 2023 was organised to introduce the students to Orbital Simulation Techniques using Python library. Astrophotography Competition took place in March 2023.



Robotics Club

Organised an Arduino Workshop on 15th March 2023 and hands-on experience was given on different mini projects like obstacle avoidance car, home security system, self-balancing robot, bluetooth controlled car, a hand-gesture control car, distance measuring tool, home automation, a timer using 9g servos for them to give a head start in the field of IoT and microcontrollers. RC escapade from 22nd April to 24th April 2023. The club conducted a RC race car competition as a Tirutsava event.

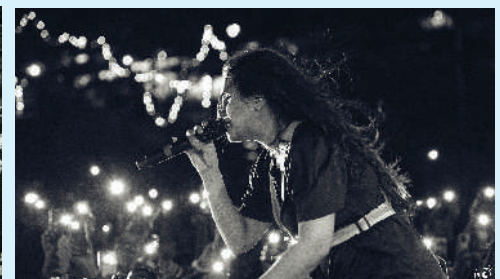
Ek Bharat Shreshtha Bharat

"EK Bharat Shreshtha Bharat" a student exchange programme by the Ministry of Education, GoI. As a part of this, 28 members from NIT Arunachal Pradesh came to Andhra Pradesh and IIT Tirupati being the Nodal institution hosted them. The NSS members actively engaged in volunteering throughout the activities.



Tirutsava - 2023: The Sixth Techno-Cultural Fest

Tirutsava is the annual festival of IIT Tirupati witnessed techno-cultural extravaganza in every respect, the event consisted of a plethora of technical workshops and captivating professional shows. This year, the famous singer Nikita Gandhi performed for the pro-show followed by DJ Nina Suerta. In addition to these pro-shows, event teams conducted various events like group dance, fashion show, KTM Bike show etc. A convergence of innovation and creativity, the event enthralled participants and spectators alike.



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