



Celebrating 50 Years of Excellence

July 2022 Newsletter

Symbiosis Institute of Technology, Pune

Electronics and Telecommunication Engineering Department

Department Vision:

To emerge as a leading source for Electronics and Telecommunication engineering, fostering globally proficient engineers to meet the demands of evolving industry and society.

Department Mission:

- **M1:** Foster collaboration with industry to facilitate the acquisition of cutting-edge technologies and contribute to the generation of up-to-date knowledge, enhancing employability and sustainability.
- **M2:** Encourage innovation, research, and development, creating an environment conducive to higher education, entrepreneurship, and lifelong learning.
- **M3:** Cultivate leadership qualities infused with social and ethical values, providing a platform for their development.

Program Educational Objectives (PEOs):

- **PEO1:** Graduates will possess a strong foundation in science and engineering fundamentals, along with analytical skills to effectively solve real-world problems.
- **PEO2:** Graduates will gain technical proficiency in Electronics and Telecommunication fields and scale new heights in profession through lifelong learning.
- **PEO3:** Graduates will embrace professionalism, ethical conduct at all levels and constantly evolve in a multidisciplinary approach leading towards sustainability.
- **PEO4:** Graduates will leverage their engineering knowledge, effective communication skills, leadership qualities, and teamwork spirit to serve society and contribute positively to their community.

Guest lectures organized:

- The guest speaker **Mr. Mangesh Bharati**, CEO , MD Electrosoft Pvt. Ltd. Amravati has delivered a comprehensive lecture on “*How to design LED Display board*” 3rd February 2022 for the benefit of B. Tech students.
- The guest speaker **Mr. M.D.N. Akash**, "Cloud Engineering Analyst - Searce Inc. Mumbai, India has delivered a comprehensive lecture on “*Career in Cloud Computing*” on 11th February 2022 for the benefit of B. Tech students.
- The guest speaker **Mr. S. Phanindra Reddy**, Data Engineering Analyst - Accenture AI, Hyderabad, India has delivered a comprehensive lecture on “*Blockchain & Web 3.0*” on 26th February 2022 for the benefit of B. Tech and M. Tech students.

Value added course:

- A value added course on “**Project to Product: Beginners Course on Technopreneurship**” has been introduced for the benefit of B. tech students. The objective of this course is to combine the engineering thinking (CDIO) with entrepreneurial behaviour leading towards the creation of purpose-driven technopreneurs. The course consists of 30 hours of theory and practical sessions. The coordinators for the event were Dr. Vikram Shete.

Student achievements:

- **Dinesh Reddy** of E&TC department (2018-22 batch) has scored 303 marks in GRE.
- **Chetna Singh** of E&TC department (2018-22 batch) has cleared IELTS and GRE exam.
- **Harshita Sarang Kulkarni** of E&TC department has (2017-21 batch) has received scholarship to pursue Masters in Electric Engineering and Information Technology at Hochschule Darmstadt - University of Applied Sciences in Darmstadt, Germany.
- **Namrata Tadanki** of E&TC department has (2017-21 batch) has received scholarship to pursue Masters in Data Science and Business Analytics at ESSEC Business School in Cergy, France.
- **Yogitha Shamsunder** of E&TC department has (2017-21 batch) is pursuing masters in Electrical Engineering at California State University, Long Beach, USA.

Department publications:

- MVV Prasad Kantipudi, S. Vemuri and V. Sanipini, "Deep Learning-based Image Super-resolution Algorithms - A Survey", International Journal of Computing and Digital Systems, vol. 11, no. 1, pp. 413-421, 2022.
- H. B, J. Moses C and MVV Prasad Kantipudi, "VLSI Architectures of Booth Multiplication Algorithms – A Review", International Journal of Computing and Digital Systems, vol. 11, no. 1, pp. 265-275, 2022.
- Vigneysh, T., Velamuri, S., MVV Prasad Kantipudi, & Viriyasitavat, " An intelligent robust cascaded control scheme for renewable energy based microgrid", Expert Systems, vol.1, no. 1, pp. 01-17, 2022.
- "Nagababu, G., Puppala, H., Pritam, K., & MVV Prasad Kantipudi, ""Two-stage GIS-MCDM based algorithm to identify plausible regions at micro level to install wind farms: A case study of India"". Energy, vol. 248, no. 1, pp. 123594, 2022."
- V. U. Maheswari, R. Aluvalu, MVV Prasad Kantipudi , K. K. Chennam, K. Kotecha and J. R. Saini, "Driver Drowsiness Prediction Based on Multiple Aspects Using Image Processing Techniques," in IEEE Access, vol. 10, pp. 54980-54990, 2022.
- Rani, S., Ghai, D., Kumar, S., MVV Prasad Kantipudi, Alharbi, A. H., & Ullah, M. A.," Efficient 3D AlexNet Architecture for Object Recognition Using Syntactic Patterns from Medical Images", Computational Intelligence and Neuroscience, vol. 2022, pp. 7882924, 2022.
- MVV Prasad Kantipudi , M., Aluvalu, R., Maheswari, U., & Raisinghani, M. S, "Insights on Implications of Cognitive Computing in Leveraging Online Education Systems", International Journal of Online Pedagogy and Course Design (IJOPCD), vol. 12 (1), pp.1-16, 2022.
- Dixit AS, Kumar S. "A low profile antipodal Vivaldi antenna with improved front-to-back ratio and sidelobe levels for 5G applications". Int J RF Microw Comput Aided Eng. 2022; e23277. doi:10.1002/mmce.23277
- Dixit, A.S., Kumar, S. A Fermi-Dirac Function-Based Antipodal Vivaldi Antenna for mmWave Applications. J Infrared Milli Terahz Waves, 2022. <https://doi.org/10.1007/s10762-022-00854-6>
- R. R. Patil and S. Kumar, "Rice-Fusion: A Multimodality Data Fusion Framework for Rice Disease Diagnosis," IEEE Access, vol. 10, pp. 5207-5222, 2022. doi: 10.1109/ACCESS.2022.3140815.
- Patil, R.R., Kumar, S., Rani, R. . Comparison of artificial intelligence algorithms in plant disease prediction. Revue d'Intelligence Artificielle, Vol. 36, No. 2, pp. 185-193, 2022. <https://doi.org/10.18280/ria.360202>
- Patil, R.R., Kumar, S.," Priority selection of agro-meteorological parameters for integrated plant diseases management through analytical hierarchy process", (2022) International Journal of Electrical and Computer Engineering, 12(1), pp. 649-659. <http://doi.org/10.11591/ijece.v12i1.pp649-659>
- A Dinesh ; Advitya Singh ; Ujwala Kshirsagar ; Anand Raj ; Sarathi Byale ; Priti Shahane, "Design of 32nm Phase locked loop for 5G Technology", in IEEE Xplore, DOI10.1109/DELCON54057.2022.9752787
- "T. Pawase ,A. Malhotra, A. Mahajan ""Circularly Polarized Flexible Dual-Band Microstrip Antenna Using Kapton Material"", International Journal of Microwave and Optical Technology , 17(2), pp. 149–160, 2022"
- Sekhar, R., D. Sharma, and P. Shah. "Intelligent Classification of Tungsten Inert Gas Welding Defects: A Transfer Learning Approach. Front." Mech. Eng 8 (2022): 824038.
- L.N. Shi, Y.G. Wang, Z.H. Ren, A. Jain, S.S. Jiang, F.G. Chen, Significant improvement in electrical characteristics and energy storage performance of NBT-based ceramics, Ceram. Int., (2022).
- N. Gupta, A. Kumar, A. Jain, Hot carrier reliability assessment of vacuum gate dielectric trench MOSFET (TG-VacuFET), The European Physical Journal Plus, 137 (2022) 517.
- J.X. Hu, A. Jain, S.S. Jiang, F.G. Chen, Y.G. Wang, Optimizing the photostrictive performance of BiFeO₃-based multiferroic ceramics, Ceram. Int., 48 (2022) 20516-20525.
- A. Jain, A. Kumar, N. Gupta, Significant Improvement in Magnetic and Magnetoelectric Characteristics of (0.95 – x)Ba_{0.9}Ca_{0.1}TiO₃-0.05Na_{0.5}Bi_{0.5}TiO₃-xCoFe₂O₄ Ceramics, IEEE Transactions on Magnetics, 58 (2022) 1-14.
- M. Patel, J. Padiya, M. Singh, Fake News Detection Using Machine Learning and Natural Language Processing, in: M. Lahby, A.-S.K. Pathan, Y. Maleh, W.M.S. Yafooz (Eds.) Combating Fake News with Computational Intelligence Techniques, Springer International Publishing, Cham, 2022, pp. 127-148.

Placement details:

Students of 2018-22 batch have been placed in renowned companies, such as Deloitte, IBM, Cognizant, ZF India, Netcracker, HDFC Bank, Persistent, Mindstix, Miniorange, Frazzo, etc.

Students corner

“There was a silver lining to the dark Covid 19 clouds too. As we shifted to online learning, I found myself having more time on hand and used it to do new courses like artificial intelligence and machine learning,” says the intrepid youngster. Calling her tryst with AI and ML “a blessing in disguise”, Mugdha plans to pursue a Masters in Artificial Intelligence and machine learning (ML) and sees herself doing research and innovations in the same field in the future. The COVID-19 pandemic and its impacts have significantly affected our education. Although nothing could replace the real college experience, the seamless transition to online tools for teaching and the adoption of virtual labs and software tools for lab sessions has made learning very engaging despite it being remote. That said, students are extremely happy to be back on campus now. Any thought of having to go back to online classes due to rising COVID cases and closures is a real disappointment since many have come from distant places.

Mugdha Thanawala, Student, E&TC

Few Tidbits by our students

- In 1989, British scientist Tim Berners-Lee invented the World Wide Web and published the first website ever.
- Motorola released the world’s first mobile phone, the DynaTAC 8000x, in 1983. This portable phone cost \$3,995 upon release and offered 30 minutes of talk time. Charging the device required 10 hours, and it could only store 30 phone numbers in memory.
- Everyone knows Wikipedia is powered by thousands of human contributors. On the other hand, most people don’t realize hundreds of bots contribute to the effort, too. ClueBot NG catches vandalism on Wikipedia pages almost in real time. A variety of other bots contribute standardized data to the online encyclopedia.