



SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE

SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under Section 3 of the UGC Act, 1956) | Re-accredited by NAAC with 'A++' grade | Awarded Category - I by UGC



Celebrating 50 Years of Excellence

Electronics and Telecommunication Engineering Department

March 2025 (AY2024-25)

Newsletter

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.

Student Participation:



Chelsi Biloniya from the Batch 2024-25 successfully completed the C Programming Internship at Codtech IT Solutions from August 25th, 2024, to September 25th, 2024.



Eshaan Sowale presented a research paper titled “Forecasting Coastal Changes: A Case Study on Florida's Shorelines” in ICCCNT 2024

Guest Lectures:

The Department of Electronics and Communication Engineering has organized a series of illuminating industry guest lectures, strategically designed to elevate the educational experience of our students.



Mr. Raghunandan Sahu, Software Engineering Manager, SIEMENS Industry Software (INDIA), Pvt. Ltd. have delivered an intensive seminar on 'Resume Building'.



Dr. Kaliprasad Mahapatro and Dr. Parag Narkhede, KPIT, Pune captivated the audience with an enlightening Guest Lecture on Importance of Model-Based Systems Engineering in Industry & Modelling Mathematical Equations in Simulink.



Mr. D. Shridhar, Chief Technology Officer, Smart Logic Technologies, Pune presented an expert-talk on FPGA'

Industrial Visits:

Industrial Visit to RAPTECH Engineering Pvt. (17 Oct 2024) - 2021-25 Batch



Industrial Visit to Esbee Electrotech (17 Oct 2024) - 2021-25 Batch



Industrial Visit to Esbee Electrotech (17 Oct 2024) - 2021-25 Batch



Student Development Program (January 2025):

The E&TC Department organized an SDP for Second- and Third-Year students in early January 2025. The Second-Year program, "Foundations of Technology," covered Data Structures with Python, Simulink, Telecommunications, Semiconductor Technology, and Service Learning. The Third-Year program, "Empowering Futures," focused on Computer Networks, C++, Semiconductor Technology, and Placement Preparation. Industry experts conducted engaging sessions, providing practical insights and career guidance. Students gained valuable technical knowledge and interview skills, equipping them for future opportunities.



Tinkering in E&TC Department

In our Electronics and Telecommunication Engineering Department, we have an exciting place called the Tinker Lab. It's like a playground for trying out new ideas and cool things. Here, you can use the latest tools and gadgets to turn your creative thoughts into real stuff. It's a place where you can learn by doing and make your own projects. With helpful teachers around, you can have fun while learning and making cool things in the world of electronics and communication.



IEEE Activities

Visit of Distinguished Scientists to Our Institute

The IEEE Symbiosis Institute of Technology Student Branch (STB13901) proudly organized the visit of **Dr Ajay Kumar Poddar (Chief Scientist, Synergy Microwave Corporation, USA, and Global Chair, IEEE APS)** and **Dr Vishal Kumar (CTO, Ocean2Sand)** to our institute. During their visit, the esteemed guests explored the **SCAAI Research Centre, BEST, and the Solar Lab Center**, where they appreciated the state-of-the-art facilities and ongoing research initiatives. Their insightful discussions and encouragement were highly motivating for our faculty and students. A significant highlight of the visit was **Dr. Ajay Kumar Poddar's generous offer of an IEEE Membership (along with the APS Society) fee waiver for new student members**, fostering greater engagement in professional and research communities.



IEEE Engineering Education Student and Young Professionals Congress 2024

The IEEE Engineering Education Student and Young Professionals Congress 2024 commenced on **22 August 2024** at **Symbiosis Institute of Technology, Pune**, with great enthusiasm. The event began with a **Lamp Lighting Ceremony** and a **Saraswati Prayer**, symbolizing wisdom and knowledge. Distinguished dignitaries, including **Mr. Shashikant Patil, Dr. Ketan Kotecha, Mr. Murari Ramuka, and Mr. M. Sai Prashanth**, graced the occasion. IEEE President **Mr. Thomas M. Coughlin** delivered an inspiring plenary talk, followed by the **140th IEEE Anniversary Celebration**. The event brought together experts from engineering, education, and technology, ensuring a successful and insightful congress.



Research publications:

- G.S. Ramnath, R. Harikrishnan, S.M. Muyeen, K. Kotecha, Household electricity consumption prediction using database combinations, ensemble and hybrid modeling techniques, *Scientific Reports*, 14 (2024) 22891.
- T.S. Delwar, M. Singh, S. Mukhopadhyay, A. Kumar, D. Parashar, Y. Lee, M.H. Rahman, M.A. Sejan, J.Y. Ryu, AI- and Deep Learning-Powered Driver Drowsiness Detection Method Using Facial Analysis, *Applied Sciences*, 2025.
- C.E. Ngene, P. Thakur, G. Singh, Controlled Signal Technique in VL-NOMA Communication Under Interference-Controlled Environment With Intelligent Reflecting Surfaces, *Engineering Reports*, 7 (2025) e13087.
- A.A. John, P. Thakur, G. Singh, Potential, concepts, and key advances for a ubiquitous adaptive indigenous microengineering and nanoengineering in 6G network, *International Journal of Communication Systems*, 38 (2025) e5410.
- C.E. Ngene, P. Thakur, G. Singh, Analysis of interference effect in VL-NOMA network considering signal power parameters performance, *IET Communications*, 18 (2024) 1062-1070.
- R. Kumar, A. Kumar, A. Jain, A.K. Goyal, Nanograting-assisted flexible Triboelectric Nanogenerator for active human motion detection, *Nano Energy*, 131 (2024) 110318.
- K. Shejul, R. Harikrishnan, Energy consumption optimization of chiller plants with the genetic algorithm based GWO and JAYA algorithm in the dynamic pricing demand response, *Results in Engineering*, 22 (2024) 102193.
- S. Kumar, A.S. Dixit, C.K. Choubey, Design of antipodal vivaldi antenna with patch and corrugations for 5G applications, *MethodsX*, 12 (2024) 102727.
- S. Kumar Singhal, S. Kumar, S. Kumar Patel, K.A. Rao, G. Saxena, An efficient method of modulo adder design for Digital Signal Processing applications, *MethodsX*, 14 (2025) 103216.
- S. Kumar, A.S. Dixit, Enhanced Antipodal Vivaldi Antenna with SSRR metamaterial for improved 5G performance in the 38 GHz band, *Results in Engineering*, 24 (2024) 103133.
- P. Soni, A. Jain, K. Kumar, L.K. Soni, A. Kumar, N. Gupta, A.K. Goyal, R. Saroha, Implementation and comprehensive investigation of gate engineered Si_{0.1}Ge_{0.9}/GaAs charged plasma based JLTFET for improved analog/ RF performance, *Results in Engineering*, 25 (2025) 104069.
- P. Warriar, P. Shah, R. Sekhar, A Comparative performance evaluation of a complex-order PI controller for DC–DC converters, *Results in Control and Optimization*, 15 (2024) 100414.
- R. Sekhar, S. Pandya, P. Shah, H. Ghayvat, D. Sharma, M. Renz, D. Shah, A. Jagdale, D. Hukmani, S. Saxena, N. Kumar, Noise robust classification of carbide tool wear in machining mild steel using texture extraction based transfer learning approach for predictive maintenance, *Results in Control and Optimization*, 17 (2024) 100491.
- V. Agrawal, J. Jagtap, M.V.V.P. Kantipudi, Exploration of advancements in handwritten document recognition techniques, *Intelligent Systems with Applications*, 22 (2024) 200358.
- Shawkat, A. Dheyaa, A. Abd, L. Reddy, H. Sekhar, R. Shah, P. Bachute, M. Fadhil, J. muwafaq, H. "Neutrosophic Sets in Big Data Analytics: A Novel Approach for Feature Selection and Classification," *International Journal of Neutrosophic Science*, vol. , no. , pp. 428-438, 2025.

Faculty Participation:

Loughborough University invited Dr. Mrinal Bachute, a faculty member from our Electronics and Telecommunications department, to give a session on 'Applications of AI in the Automotive Industry.' Dr. Bachute explored AI-driven Model-Based Development (MBD) for vehicle design, autonomous systems, predictive maintenance, intelligent powertrain optimization, safety upgrades, and the integration of research with industrial implementations.



Placement details:

We are pleased to share the latest placement statistics from our department, reflecting the achievements of our students in securing promising career opportunities. Our students have already been placed in various reputed companies, such as Futures First, MIQ Digital, Nutanix, Varroc, Intuitive Cloud, HP enterprises, Star Health Insurance, Deloitte Audit, Exide Industries, MiniOrange etc. Here are a few noteworthy placement highlights.

- Shivansh Chutani secured an internship and placement in Futures First for Rs. 1338000/- annual package.
- Ruchira Purohit secured Rs. 13,00,000/- annual package with MIQ Digital.
- Abhishek Kumar Singh could get a package of Rs. 11,90,000/- from Nutanix
- Shruti Taliyanand and Aniket Mehta have secured a package of Rs. 11,50,000/- from the Automotive Company, Verroc
- Netal Agrawal, Akshya Iyer, Anoosha Kanungo and Ayush Churi have secured a package of 9 LPA from Intuitive Cloud.
- Michael Ningombam and Steve Francis have secured a placement with Exide Industries for 6 LPA.
- Rajnandini Dafe secured a placement for 6 LPA with Gladowl.