

Research Director: Dr. Shruti Vashist



Brief Profile:

Dr. Shruti Vashist has more than 23 years of experience in Teaching and Research (U.G., P.G.) She has many publications in National ,International journals and in conferences and authored 3 books of repute and one book chapter in .She has also organized and participated in many conferences, FDPs, Seminars and Workshops. She has supervised good number of M. Tech dissertations and Ph. D scholars as well. Her Area of interests includes Wireless and Mobile communication, Analog Electronics and Microstrip Antennas.

Vision: To be a leading Centre of Excellence in Electronics and Communication Engineering and Mechanical Engineering, fostering innovation, addressing industry needs, and contributing to societal development. Our vision is to provide state-of-the-art education, research, and entrepreneurship while nurturing ethical individuals for the service of society.

Mission:

- Cultivate globally competent engineers who creatively address future societal challenges.
- Operate and maintain advanced smart manufacturing facilities, conducting research in cutting-edge technologies.
- Nurture talents committed to serving society ethically and sustainably, upholding the highest professional standards.
- Uphold the highest quality standards, ensuring the satisfaction of all stakeholders.
- Work towards continuous improvement in collaboration with the industry, building capacity for the application of cutting-edge technologies in the development of new Electronics and Communication (E & C) products and services.

Thrust areas:

- Internet of Things and sensor network
- 5G communication and beyond
- Biomedical and Healthcare Applications
- Digital Signal and Image Processing
- Low-Power Design Techniques
- System-on-chip (SoC) and Embedded Systems
- Advanced Robotics and Automation
- Additive Manufacturing and Robotic 3D Printing
- Sustainable and Green Manufacturing
- Mechatronics in Precision Mechanical Engineering

Ongoing Projects

Title of Project	PERFORMANCE ANALYSIS OF SOLAR STILL USING NANOFLUIDS
Name of the Principal Investigator (PI) and Co PI	Dr. Ajit and Mr. Nazish

Expected Outcome of the Research Proposal:

The aim of this research is to get better the efficiency of the solar still system and to investigate the system's performance in relation to other conditions and operational parameters. The goal's corollary is to improve solar still's performance using low-cost parts. For the improvement of solar still efficiency, our research will satisfied this consequence by using mono nanofluids and hybrid nanofluids

Title of Project	Hybrid Indirect Type Forced Convection Solar Dryer integrated with Photovoltaic Cells
Name of the Principal Investigator (PI) and Co PI	Dr. Prashant Bhardwaj and Mr. Mandeep Bhadana

Expected Outcomes of the Research Proposal:

Develop a hybrid solar dryer that combines indirect heating, forced convection, and semi-transparent photovoltaic cells.

- Enhance drying efficiency by regulating temperature, airflow, and moisture removal.
- Evaluate the energy generation capacity and transparency of the integrated photovoltaic cells.

Forthcoming Events/Activities

- International Conference on Advancing Sustainability through Communication, Robotics & Automation (ASCRA 2024).
- Workshop in collaboration with ICT academy on "Automation using digital image processing"
- Workshop in collaboration with ICT academy on "VLSI Design and Verification".
- Students technical activities, project building competitions under IETE Students forum.
- Pantech workshops, seminars, skill development training etc.
- Upgradation of existing milling machine from manual feed to auto feed.
- Metal Matrix Composites fabrication by using auto feed milling and their mechanical characterization.

Expected Outcomes:

- Research Paper Publication

- Interdisciplinary Projects
- Skill Enhancement
- Exposure to latest technologies.
- Multidisciplinary projects.
- Startups