Dr. ROHITA PRAVIN PATIL

Assistant Professor, Department of E & TC

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OVERVIEW:

Qualifications: Ph.D.(E&TC), M.Tech (E & Tc), BE (Electronics)
Experience: Teaching -19 years, Industry – 1 Year
Date of Joining STES: 13/07/2010
Skills and Proficiencies: VLSI and Embedded Systems

SIGNIFICANT ACHIEVEMENTS:

- Received Research Grant of Rs. 3,55,000 from the SPPU.
- Ph.D. Research guide of SPPU.

AREA OF EXPERTISE /RESEARCH INTERESTS:

- VLSI, Image and Video Processing

NUMBER OF STUDENTS GUIDED:

- PG – 15 , UG – 20+ Groups

RESEARCH PULICATIONS:

Publication Summary:

Scopus/ SCI-10
International Journal: 15
Conference : 20
h-index   : 07
i10 index   : 06
https://scholar.google.co.in/citations?hl=en&user=Osc5eXoAAAAJ

FUNDED RESEARCH PROJECT:

1. Car Security and Automation using Speaker and Speech Recognition, sanctioned amount 2, 25,000/ during 2013-15.
2. FPGA Implementation of AMBA AHB Bus for interfacing of IP cores of image and video, sanctioned amount 1, 30,000/ during 2014-16.

RESEARCH WORK:

Phd Research Work:

Efficient Super-Resolution Algorithm for Low-Resolution Video

Research Duration: February 2017 to October 2021

Organization: MIT, Pune

Environment: MATLAB, Python

My Role:

- Problem Definition formation, Objectives formation, Literature survey of previous work.
- MATLAB Code development for various search optimization algorithms.
- Python code development for video super super-resolution model.
- Evaluation of performance parameters and comparison with existing techniques.
- Thesis writing and publications.

NOTABLE GUIDED PROJECTS:

PG projects:
- FPGA Implementation of Object Tracking in Video (AY 2015-16).
- A 2.4 GHZ Fully Integrated LC VCO Design Using 130 NM CMOS Technology (AY 2016-17)

UG Projects:
- Gesture Recognition Engine using Golden Section Search Algorithm for Touch Tables (AY 2015-16 batch UG).

RESOURCE PERSON TO INDUSTRY/ACADEMIA:

- Reviewer for the International Springer Conference on "Emerging Trends in Microelectronics, Communication and Intelligent Systems (ETMCIS 2024) scheduled on June 13 - 15, 2024 at MIT Academy of Engineering, Alandi (D), Pune.
- Reviewer for the National Conference on "Pervasive Computing (NCPC - 2024) scheduled on April 05, 2024 organized by Sinhgad College of Engineering, Pune.
- Program Chair of the National Conference on "Pervasive Computing (NCPC - 2024) scheduled on April 05, 2024 organized by Sinhgad College of Engineering, Pune.
- Reviewer in Virtual National Level Student Conference, IEEE TECHNICOKNOCKDOWN - 2023 (TKD-23) virtually organized by the Department of E&TC Engg, Sinhgad Institute of Technology, Lonavala Technically Sponsored by IEEE Bombay Section and IETE Pune Local Center Supported by IEEE SITSB & IETEISF on May 04, 2023.

SUBJECTS TAUGHT:

- VLSI Design and Technology
- Digital Circuit
- Microcontroller Applications
- Computer Network
- Electronic Product Design
- Information Theory and Coding
- Power Electronics
- Wireless Sensor Network
- Remote Sensing
- System on Chip
- ASIC Design

- ASIC Modelling
- Digital CMOS Design
- Embedded System Design

FDP/STTP/SDP/WORKSHOPS ORGANIZED AS A COORDINATOR:

- Coordinator of One week Short Term Training Program on, "AI Integration of Energy Efficient Architectures in VLSI Design", Sinhgad College of Engineering, Pune, held during 5th – 9th August 2024.
- Coordinator of Two-week STTP titled "DSP Implementation on FPGA Platform", Smt. Kashibai Navale College of Engineering, Pune, 20th -30th June 2012.
- Co-coordinator of STTP on, "Future Communication System" from 03rd-07th January 2011, Smt. Kashibai Navale College of Engineering, Pune.

CONFERENCES ATTENDED:

- Attended 2023, International Conference at D.Y. Patil School of Engineering Charholi (Bk), Via Lohegaon, Pune, Maharashtra, Indiaon "International Conference on Recent Trends in Science, Engineering, Technology & Mathematics (MICRT- STEM 2023)" held from 24-25th February 2023.
- Attended 2018, "Information and Communication Technology for Intelligent Systems", Springer, Ahmedabad, 30 December 2018.
- Attended 2019, IEEE 5th "International Conference On Computing, Communication, Control And Automation (ICCUBEA)", Pune, India.

FDP/STTP/SDP ATTENDED:

- TEQIP/AICTE/ISTE/IETE sponsored FDP -10 +
- Spoken Tutorial IIT Bombay sponsored FDP -03
- Others - 10

RESPONSIBILITIES HANDLED AT STES/SCOE/DEPT:

Institute Level (SCOE)
- Worked as Taluka Coordinator in admission process.

Department Level (E&TC)
- Lab In charge for Digital Electronics I &II Laboratory, Teacher Guardian, Class Teacher
- Ph.D. Coordinator
- Honour Committee Coordinator
- NAAC Criterion III Coordinator
- Publication Committee member
- Ph.D. committee member
- Higher education committee member
- SPPU Examination Sr. Supervisor
- Organizing committee member for various Staff Development Programs & National, International Conferences
- Academic Load adjustment and monitoring Committee Coordinator
- Project Guide for BE & ME students

DECLARATION:

I hereby declare that all the above information furnished by me are true to the best of my knowledge.

Date: 09 /12 / 2024   Signature