Dr. SANDHYARANI ANIL SHIRSAT
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OVERVIEW:

Qualifications: Ph.D. (E&TC), ME (Electronics), BE (Electronics)
Experience: Teaching -24 years
Date of Joining STES: 15/12/2000
Skills and Proficiencies: MATLAB, C

SIGNIFICANT ACHIEVEMENTS:

- Best Paper Award in National Conference on Pervasive Computing (NCPC 2020), 19-20 Feb 2020 at SCOE Pune

AREA OF EXPERTISE /RESEARCH INTERESTS:

- Wireless Communication

NUMBER OF STUDENTS GUIDED:

- PG – 13 , UG – 30+ Groups

RESEARCH PULICATIONS:

Publication Summary:

Scopus/ SCI-   04
International Journal: 29
Conference: 24
h-index   :   04
i10-index   :   01

https://scholar.google.co.in/citations?user=dWBFSFsAAAAJ&hl=en

RESEARCH WORK:

PhD Research Work:

- The main objective of the research work is to achieve high data rate and spectral efficiency for Mobile WiMAX IEEE 802.16m. In this work, adaptive pilot density technique based on baseband modulation scheme chosen by transmitter is employed to reduce pilot overhead.

- Through this work, the following objectives have been achieved:
    1. OFDM Scheme with variable pilot density
    2. High data rate
    3. High spectral efficiency
- Research work is useful to increase data rate of Mobile WiMAX IEEE 802.16m for stationary and quasi stationary channel conditions. An Adaptive pilot density technique utilizes optimum number of pilots for channel estimation purpose leaving more data subcarriers. System selects less number of pilots for lower level modulation scheme compared to higher level modulation scheme.

NOTABLE GUIDED PROJECTS:

PG Projects:
- Performance Evaluation of TFT-OFDM for Wireless Communication.
- Interference Reduction Technique for Bluetooth in Heterogeneous Environment.
- Design of Microstrip Patch Array Antenna for WLAN Applications.

UG Projects:
- Milk Quality Analyser
- ZigBee Based Wireless Controlled Robot to detect Hazardous Gases
- Driver Drowsiness Detection

RESOURCE PERSON TO INDUSTRY/ACADEMIA:

- Reviewer for Wireless Personal Communication (WPC)
- Reviewer for the IEEE Bombay Section Signature Conference 2022 (IBSSC 2022)
- Reviewer for IEEE 2024 International Conference on Artificial Intelligence and Quantum Computation - Based Sensor Application (ICAIQSA)
- Reviewer for 7th International Conference on Emerging Smart Computing and Informatics
- Resource Person for SPPU Faculty Orientation Workshop B.E. (E&TC/Electronics) Revised Syllabus 2019 for Electronic Product Development Subject.
- Delivered an expert session on "Challenges, Opportunities and Applications of 5G" in ISTE Approved one-week online STTP on "Future Trends in 5G and 6G: Challenges, Architectures and Applications" by K J College of Engineering and Management Research, Pune, Maharashtra from 16th to 20th August, 2023.
- Worked as Technical Chair for National Conference on Pervasive Computing organized by Sinhgad College of Engineering, Pune during 5th April 2024.
- Reviewer for Journal of Integrated Science and Technology(JIST)
- Chairperson for various Conferences
- Reviewed many articles from Wireless Communication domain for various international conferences and journal
- Reviewer for international Conference, Springer CCIS on Role of AI in Bio-Medical Translations Research for Health Care Industry (AIBTR-23) organized by G H Raisoni College of Engineering Nagpur
- Reviewer for National Conference on Pervasive Computing organized by Sinhgad College of Engineering, Pune during 5th April 2024.

SUBJECTS TAUGHT:

- Electronic Product Design
- Electronic Product Development
- Analog Communication
- Digital Communication
- Analog Integrated Circuits
- Principles of Communication Systems
- Wireless Sensor Networks
- Wireless Networks
- Microcontrollers
- Electronic Devices and Circuits

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

- Coordinator of one week online International Level Student Workshop on Data Science using Python organized by Sinhgad College of Engineering, Pune in association with BrainOvision Solutions India Private Limited, Hyderabad from 19 February 2024 to 23 February 2024.
- Co-coordinator of one-week FDP titled Embedded Image Processing at Sinhgad College of Engineering, Pune, from 06 -10 May 2012 Venue: SCOE, Pune.

CONFERENCES ATTENDED:

- National Conference on Pervasive Computing (NCPC 2020), 19-20 Feb 2020 at SCOE Pune

FDP/STTP/SDP ATTENDED:

- TEQIP/AICTE/ISTE/IETE sponsored FDP -07
- Spoken Tutorial IIT Bombay sponsored FDP -01
- Others -14

RESPONSIBILITIES HANDLED AT STES/SCOE/DEPT:

Society Level
- Worked as a Karveer Taluka Coordinator for Mission 2023 and 2024

Institute Level (SCOE)
- Working as a Student Training Program Coordinator of the Institute since February 2022
- Worked as Main Coordinator1 for Direct Second Year Engineering Admission 2023-24
- Worked as Senior Supervisor for SPPU Exam

Department Level (E&TC)
- Lab In-charge for Power Electronics Laboratory, Teacher Guardian, Class Teacher
- Organizing committee member for various Staff Development Programs & National, International Conferences
- Technical Chair for National Conference on Pervasive Computing (NCPC 2024), at SCOE Pune.
- Departmental NAAC Criteria 5 Coordinator

- Departmental Student Record Committee Incharge
- Departmental Parent Meet Coordinator
- Departmental Mini Project Coordinator
- Departmental Library Coordinator
- Project Guide for BE & ME students
- Departmental Techtonic Event Coordinator
- Departmental Result Analysis Committee Incharge

DECLARATION:

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

Date: /   / 2024   Signature