



Dr. K. SUKANYA

B.Tech., M.Tech., Ph.D

Associate Professor,

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

MISTE

Electronics and Communication Engineering

Areas of Interest

1. Embedded Systems
2. VLSI Design
3. Signal Processing

EDUCATIONAL & PROFESSIONAL

Academic Qualifications

- Ph.D in Electronics & Communication Engineering, JNTUH (2021)
- M.Tech. in Embedded Systems (ECE), Ramappa Engineering College (JNTUH) (2009-2011)
- B.Tech. in ECE, Jayamukhi Institute of Technological Sciences (JNTUH) (2002-2006)
- Qualified in CBSE-UGC NET for Assistant Professor in December 2014
- Qualified GATE 2013
- Completed SWAYAM NPTEL DOMAIN CERTIFICATION in VLSI DESIGN
- Completed SWAYAM NPTEL DOMAIN CERTIFICATION in DATA SCIENCE
- Certificate of Appreciation as NPTEL DISCIPLINE STAR in CSE
- Certificate of Appreciation as NPTEL MOTIVATED LEARNER
- Certificate of Appreciation as NPTEL DISCIPLINE STAR in EE
- Topper and Elite+Gold in NPTEL Swayam in Learning Analytics Tools
- Topper in NPTEL Swayam in Digital Circuits
- Topper in NPTEL Swayam in Introduction to Embedded System Design using MSP430
- Topper in NPTEL Swayam in Microprocessor and Interfacing
- Elite+Silver in NPTEL Swayam in Introduction to Internet of Things
- Elite+Silver in NPTEL Swayam in Data Science for Engineers
- Elite+Silver in NPTEL Swayam in Machine Learning

- Elite+Silver in NPTEL Swayam in Python for Data Science
- Elite+Silver in NPTEL Swayam in System Design through Verilog
- Elite in NPTEL Swayam in Analog Circuits
- Elite in NPTEL Swayam in Data Analytics with Python
- Elite in NPTEL Swayam in Deep Learning
- Successfully Completed NPTEL Swayam in Natural Language Processing

Professional Experience

- Associate Professor, TKR College of Engineering and Technology, Hyderabad (July 2014 to Till date)
- Sr. Assistant Professor, Ramappa Engineering College, Warangal (November 2008 to June 2014)
- Assistant Professor, Jayamukhi Institute of Technological Sciences, Warangal (June 2006 to November 2008)

Publications

- Dr. Sukanya K, Handwritten Digit Recognition using convolutional Neural Networks with voice. 1st International Conference on Advances in Computational Intelligence (ICACI-2023), PP 93-100, MVSR Engineering College, 15th – 16th December, 2023.
- Dr. Sukanya K, A Smart and Secure Single ATM Card for Multiple Bank Accounts, Industrial Engineering Journal, PP 2000-2009, UGC CARE Group-1, Volume: 52, Issue 4, April: 2023. ISSN: 0970-2555
- Dr. Sukanya K, Air Pollution Monitoring and Controlling Using IOT for Wireless Sensor Networks, PP 1093-1104, Mukht Shabd Journal, Volume XII, Issue IV, APRIL/2023. ISSN NO : 2347-3150
- Dr. Sukanya K, A Novel Intelligent-Based Intrusion Detection System Approach Using Deep Multilayer Classification in Mathematical Problems in Engineering (SCI), Volume-2022, 1-10, May 2022. <https://doi.org/10.1155/2022/8030510>
- Dr. Sukanya K, Implementing intelligent Traffic control system for congestion control and ambulance clearance, PP 852-859, The International Journal of Analytical and Experimental Modal Analysis, Volume XIV, Issue VI, June/ 2022. ISSN NO: 0886-9367
- Dr. Sukanya K, Smart Helmet to track and safety mining worker using Raspberry PI, PP 1338-1346, Journal of Interdisciplinary Cycle Research, Volume XIV, Issue V, May/2022. ISSN NO: 0022-1945
- Sukanya. K, Dr. G. Laxminarayana, Mesochronous Operation Interface to Multicore Processor, Springer Nature Singapore Pte Ltd., Innovations in Electronics and

Communication Engineering, Lecture Notes in Networks and Systems 65, PP 307-317, 2019. https://doi.org/10.1007/978-981-13-3765-9_32

- Sukanya. K, Dr. G. Laxminarayana, Co-Format Instruction Alignment in Pipeline Mesochronous Operation, Journal of Advanced Research in Dynamical & Control Systems, Vol. 10, 07-Special Issue, 2018, PP. (178-187).
- Sukanya. K, Dr. G. Laxminarayana, Optimal Register Alignment of Data Processing in Mesochronous Scheme, 8th IEEE International Conference on Computational Intelligence and Communication Networks (CICN), 978-1-5090-1144-5/16, IEEE DOI 10.1109 /CICN.2016.122, PP 594-600.
- Sukanya. K, Dr. G. Laxminarayana, Low Resource Fast Operation Using Register Scheduling In Mesochronous Design, IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), e-ISSN: 2278-2834, p-ISSN: 2278-8735. Volume 11, Issue 4, Ver. I (Jul.-Aug .2016), PP 17-24.
- Sukanya. K, Dr. G. Laxminarayana, A Review - Synchronization Approaches to Digital Systems, International Journal of Engineering Research and Applications, ISSN: 2248-9622, Volume 6, Issue 3, (Part - 1) March 2016, Page No. 01-10.
- Sukanya. K, Dr. G. Laxminarayana, A Mesochronous Pipeline Scheme Implemented for an 8x8-bit Multiplier, International Conference on Recent Advances in Communication, VLSI & Embedded Systems.
- K Sukanya, Dr. D Nageshwar Rao, K Gayathri, Implementation of Encoding Scheme for Power Reduction in Network on Chip Links, 2016/10, International Journal of Research in Advanced Engineering Technologies (IJRAET), Volume 5, Issue 4, PP 277-284.

Events Participated/Organized

- Participated in One Week International Online FDP on “Emerging Trends in Electronic Circuit Design, Signal Processing, and Communications,” from 1st July to 6th July-2024 organized by the Dept. of ECE, KLEF Deemed to be University, Off Campus Bowrampet.
- Participated in a FDP on *Introduction to Internet of Things*, NPTEL SWAYAM 2024.
- Participated in a FDP on *Data Science for Engineers*, NPTEL SWAYAM 2024.
- Participated in One Week National Level PDP on “Deep Learning for Computer Vision and its Applications” from 6th to 11th Feb 2024 organized by the department of CSE - AIML & IoT.
- premises in association with Rachakonda Police.
- Participated in a FDP on *Deep Learning*, NPTEL SWAYAM 2023.

- Organized an awareness program on “HEALTH AND FITNESS” as NSS Programme Officer in association with Onus Robotic Hospital in college Auditorium on 23-08-2023.
- Participated in a FDP on *Natural Language Processing*, NPTEL SWAYAM 2023.
- Organized a an awareness rally in the college premises as NSS Programme Officer on account of International Day Against Drug Abuse and Illicit Trafficking on 26-06-2023.
- Organized a “Drug Awareness Program” as NSS Programme Officer in the college on 15-04-2023.
- Participated in a FDP on *Learning Analytics Tools*, NPTEL SWAYAM 2022.
- Participated in a FDP on *Introduction to Machine Learning*, NPTEL SWAYAM 2022.
- Participated in a FDP on *Data Analytics with Python*, NPTEL SWAYAM 2022.
- Participated in a FDP on *Python for Data Science*, NPTEL SWAYAM 2022.
- Participated in AICTE Training And Learning (ATAL) Academy Online FDP on *Sensors Technology*, Mizoram University, 15-02-2021 to 19-02-2021.
- Participated in AICTE Training And Learning (ATAL) Academy Online FDP on *Wearable Devices*, G. Narayanamma Institute of Technology & science, 01-02-2021 to 05-02-2021.
- Participated in a FDP on *Virtual Hands-on Training Program on Python for Data Analysis*, School of C & IT, Reva University, 17-06-2020 to 19-06-2020.
- Participated in a FDP on *Advanced Data Processing using ML, ANN & DL*, Dept. of CSE, TKR College of Engineering and Technology, 13-07-2020 to 17-07-2020.
- Participated in a FDP on *Materials: Recent Trends & Engineering Applications*, Gokaraju Rangaraju Institute of Engineering and Technology, 02-07-2020 to 07-07-2020.
- Participated in a FDP on *Future Advancements and Applications of Internet of Things*, Sandip Institute of Engineering & Management, 12-06-2020 to 14-06-2020.
- Participated in a FDP on *Sustainable development with Green Technology: Precovid, Covid and Postcovid times*, Anurag University, 11-06-2020 to 13-06-2020.
- Participated in a FDP on *Effective Technical Report Writing Using LaTeX*, Dept. of ECE, Mahatma Gandhi Institute of Technology, 08-06-2020 to 09-06-2020
- Participated in a FDP on *Neural Networks and Deep Learning Using Python*, School of C & IT, Reva University, 01-06-2020 to 05-06-2020.
- Participated in a FDP on *VLSI IC Design Flow*, Dept. of ECE, Anurag University, 28-05-2020 to 30-05-2020.

- Participated in a FDP on *Pedagogical Training*, Dept. of ME, TKR College of Engineering and Technology, 09-12-2019 to 13-12-2019.
- Participated in a FDP on *Design of Experiments using Taguchi Approach*, Dept. of ME, TKR College of Engineering and Technology, 12-11-2018 to 17-11-2018.
- Participated in 7th International Conference on Innovations in Electronics and Communications Engineering (ICIECE-2018), Guru Nanak Institutions, 27-07-2018 to 28-07-2018.
- Participated in MeitY, Govt. of India, Sponsored FDP on *Optimization Techniques in Antenna Design*, E & ICT Academy, National Institute of Technology, Warangal in Association with Dept. of ECE, National Institute of Technology, Warangal, 25-06-2018 to 30-06-2018.
- Participated in AICTE Sponsored FDP on *Simulation of Wireless Sensor Networks Using NS2*, Dept. of ECE, SreeNidhi Institute of Science & Technology, 20-11-2017 to 2-12-2017.
- Participated in MeitY, Govt. of India, Sponsored FDP on *Outcome Based Education*, E & ICT Academy, National Institute of Technology, Warangal at TKR College of Engineering and Technology, 13-11-2017 to 18-12-2017.
- Participated in a Workshop on *PCB Design and Fabrication*, Dept. of ECE, TKR College of Engineering and Technology and Matchwell Technology Solutions, 25-10-2017 to 26-10-2017
- Participated in *Introduction to Python*, Dept. of ECE, TKR College of Engineering and Technology and Python Express, 14-10-2017.
- Participated in a Workshop on *Home Automation with IoT using Raspberry Pi*, Dept. of ECE, TKR College of Engineering and Technology and Matchwell Technology Solutions, 18-08-2017 to 19-08-2017.
- Participated in a Workshop on *Research Trends in VLSI & Embedded Systems*, under TEQIP – II, Dept. of ECE, JNTUH college of Engineering, Kukatpally, Hyderabad, 05-11-2016.
- Participated in a University Workshop on *Digital India*, NSS Unit, JNTUH, 20-09-2016.
- Participated in 5th *Training & Orientation Programme for NSS Programme Officers* Sponsored by the Ministry of Youth Affairs & Sports, Government of India, Organized by Empanelled Training Institute, NSS, Osmania University, Hyderabad, 04-08-2016 to 10-08-2016.
- Participated in a Workshop on *Embedded Systems and Robotics*, Dept. of ECE, TKR College of Engineering and Technology and recognized by SCIENCE PARK in association with Microsoft Robotics Developer-UG India, 21-07-2016 to 23-07-2016.

- Participated in the *World AIDS Day – 2015* conducted by TSACS in coordination with Dept. of Collegiate Education, Tech. Education, NSS Unit at Lalitha Kala Thoranam, Nampally, Hyderabad, 01-12-2015.
- Participated as NSS Programme Officer, NSS Unit, TKR College of Engineering and Technology in the Unveiling of Country's Longest National Flag Programme on the occasion of Gandhi Jayanthi at Necklace Road, Hyderabad, 02-10-2015.
- Participated in Training Programme on *Data Networking, Routing & Switching*, Zonta Academy and Dept. of ECE, TKR College of Engineering and Technology, 14-09-2015 to 16-09-2015.
- Participated in a Awareness Workshop on *Outcome based Education and Accreditation*, National Board of Accreditation and JNTUH college of Engineering, Kukatpally, Hyderabad under TEQIP – II, 14-09-2015.
- Participated in a Workshop on *Signal Processing, Communications and Computer Vision System Design using MATLAB and Simulink-2015 (SPCCVS)*, Directorate of Innovative Technologies, JNTUH college of Engineering, Kukatpally, Hyderabad, 11-09-2015.
- Participated in a Workshop on *ARM based Embedded Processing*, Dept. of ECE, TKR College of Engineering and Technology, 06-08-2015 to 08-08-2015.
- Participated in a FDP on *Research awareness in Advanced VLSI Design*, Dept. of ECE, TKR College of Engineering and Technology, 18-09-2014 to 20-09-2014.
- Participated in a Workshop on *Embedded And VLSI Design*, Dept. of ECE, TKR College of Engineering and Technology, 11-08-2014 to 12-08-2014.
- Participated in a Professor Summit on *Embedded System Design using Atmel XMEGA-A3BU XPLD and ARM based SAM D20 XPLD*, Atmel India University Program in coordination with University Industry Interaction Cell at JNTU, Hyderabad, 05-08-2014 to 06-08-2014.
- Participated in a SDP on *Modern Trends in Scientific and Technical Education*, Dept. of ECE, TKR College of Engineering and Technology, 30-06-2014 to 06-07-2014.
- Participated in a Course Work on *Research Methodology*, Research and Development Cell, JNTUH Campus, 16-12-2013 to 21-12-2013.
- Participated in the National Level Workshop on *An Imminent into Realistic Aspects of Embedded Design*, Dept. of ECE, Ramappa Engineering College, Warangal, 29-11-2010 to 02-12-2010.
- Participated in a Summer School on *Wireless Sensor Networks: Open Issues and Research Directions*, Dept. of CSE, National Institute of Technology Karnataka, Surathkal, 22-06-2009 to 03-07-2009.

- Participated in a FDP on *Teaching Ethics: Redefining Values in Contemporary System of Education*, Dept. of H&AS, Ramappa Engineering College, Warangal, 28-02-2009 to 01-03-2009.
- Participated in a Refresher Course on *Signal Processing*, Dept. of ECE, National Institute of Technology, Warangal, 20-05-2008 to 07-06-2008.

Teaching

- Embedded System Design, Digital Signal Processors and Architectures, VLSI Design, Probability Theory and Stochastic Processes, Microprocessors for Embedded System Design, Signals and Systems, Pulse and Digital Circuits, Digital Signal Processing, Microprocessors and Microcontrollers, Switching Theory and Logic Design, Analog Communications, Digital Communications, Electronic Circuits, Digital Logic Design.

Administrative Positions Held

- Member, Grievance Committee, TKRCET
- Member, Women Welfare Committee, TKRCET
- Member, Anti-ragging Committee, TKRCET
- NSS Programme Officer, NSS Unit, TKRCET
- Department BoS Coordinator, TKRCET
- Department NAAC Coordinator, TKRCET
- Department Graduation Day Coordinator, TKRCET
- Department IQAC Coordinator, TKRCET
- Department Syllabus Coordinator, TKRCET
- Department AICTE Model Curriculum Coordinator, TKRCET
- Department Project Coordinator, TKRCET
- Department Coordinator for Astutebs, TKRCET
- Department Coordinator for open e-campus, TKRCET
- Member, Department Fest, ECTA, TKRCET
- Department Internal & External Examinations Incharge, TKRCET, 2015-2017
- Department Library Incharge, TKRCET

Contact:

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