Faculty Profile

G. KEERTHIGA, M.Tech., (Ph.D)
AP-SG/ECE/SEC

HIGHLIGHTS:

- Number of Journal Publications: 10
- H-Index: 02
- Patents Published: 04
- Project Funding Received: Nil

PROFESSIONAL LINKS:

- Scopus ID: 57731137200
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=57731137200
- Google Scholar ID: C4AAAAJ&hl
- Anna University Faculty ID: 269360
- AICTE Faculty ID: 1-475006802
- LinkedIn: https://www.linkedin.com/in/keerthiga-g-7b8032296/

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 16 years 6 months

AREA OF SPECIALIZATION:

- DIGITAL SYSTEMS

- DIGITAL COMMUNICATION

- COMMUNICATION THEORY

Ph.Ds AWARDED WITH DETAILS:

S:No	Name of Scholar	Title of Thesis	
			NA

PATENTS PUBLISHED/GRANTED:

1) Published Indian Patent:

Proposal Title: SYSTEM AND DEVICE FOR FALL DETECTION AND PREVENTION

Application No.202341014652 A, Publication Date : 17/03/2023

2) Published Indian Patent:

Proposal Title: IOT AND MACHINE LEARNING BASED WIRELESS SENSOR NETWORK

Application No.202341061395 A, Publication Date : 06/10/2023

3) Design Patent:
Proposal Title: SMART FITNESS TRACKER DEVICE Application No.**406688-001**
Design Accepted and Published, Journal No is 17/2024 and Journal Date is 26/04/2024

4) Published UK Patent:
Proposal Title: HEART ATTACK PRE-DIAGNOSIS TOOL
Design number:6375587 Publication Date: 10/07/2024

5) Design Patent:
Proposal Title: MULTI-SENSOR FIRECRACKER EXPLOSION ANALYZING AND WARNING DEVICE
Design number:439652-001 Publication Date : 06/12/2024

COURSES CERTIFIED:
NPTEL COURSE ON "INTRODUCTION TO INTERNET OF THINGS" Dec 2022
AICTE QIP PG Certificate Programme in Internet of Things-July 2024 to Dec 2024

ACHIEVEMENTS AND AWARDS:
- Best Teacher Award from Saveetha Engineering College for producing 100% results in Electric Circuits & Electron Devices, Analog and Digital Communication, Testing of VLSI, CAD for VLSI.
- Best Paper Award for the paper entitled AA-RP COMMUNICATION METHOD FOR UNDERWATER MOBILE SENSOR NETWORK in Inter National Conference organized by Saveetha Engineering College in March 2018.
- Certified internal ISO Auditor (2011)

RESOURCE PERSON

1. Guest Speaker-Workshop on HDL Programming in IoT Innovation on 17th October,2023 at Sairam Institute of Technology, Chennai.
2. Jury Member-Technical Hackathon,19th & 20th of September,2024 at Nadar Saraswathi College of Engineering and Technology, Theni

WEBINARS/SEMINARS/WORKSHOPS/GUEST LECTURES ORGANISED

1. Organized "Alumni Talk" on 'Sustainable Engineering and Green Technologieses' on March 1,2025 with Mr.Rajesh Rajendran, Assistant General Manager,Hyundai Motor India Ltd.Chennai.

2. Organized "Voice of Alumni " on 'Grit and Growth Mindset:The key to long term Success' on March 1,2025 with Mr.Gopinath Janarthanan, Solution Architect,Data at CMS PSP Tech2i,Westfield,Indiana ,US.

3. Organized a Webinar on Next-Gen Innovations: Unfolding the World of Flexible Electronics on OCT 25,2024 with Dr.Cross T. Asha Wise, Assistant Professor, SRMIST, Kattankulathur.

4. Organized a Seminar on Structure-Property relationship of Nanomaterials for Electronic and Biomedical Applications on OCT 25,2024 with Dr.Pradeep Thiyagarajan, Associate Professor, VIT University, Vellore.

5. Organized "Voice Over by Alumni" on 'Career Compass: Guiding insights from Alumni experiences' on August 31, 2024 with Mr.Sami Venkata Kodandasesha Sai Hemanthkumar, Software Engineer, HCL Technology.

6. Organized a Workshop on 'Embedded Programming: Essential Hardware and Software Tools, on August 31, 2024 with Mr.G. Kannan,Application & Sales Engineer at Qmax test equipments,Chennai.

7. Organized "Voice Over by Alumni" on 'Engineering the future: Intelligent systems revolutionize medicine manufacturing' on April 26, 2024 with Ms. R.Aishwarya, AstraZeneca, Ramanujan IT Park, Chennai.

8. Organized a Webinar on 'AI Dominance in Industries: Transformative Impact on Processes, Automation, and Decision-Making' on March 28, 2024 with Dr. MOHANA SUNDARI L, Assistant Professor SG1, VIT University, Vellore.

9. Organized a Webinar on 'Exploring the transformative Influence of Deep learning in Industrial Applications, on March 28, 2024 with Dr. T.Senthil Kumar, Assistant Professor SG1, VIT University , Vellore.

10. Organized "Voice Over by Alumni" on 'Electronics Engineering to Product manager' on March 02, 2024 with Mr. T.Raghul,Program Manager,LMES Academy Pvt.Ltd., Chennai.

11. Organized a Webinar on 'Analog Circuits and VLSI Signal Processing' on June 1, 2023 with Dr. K. Mariammal, Associate Professor, MIT Campus, Anna University, Chennai.

12. Organized "Voice Over by Alumni" on 'Unlocking your potential -Health and Career' on March 02, 2024 with Mr..Raghul Sampathkumar, Program Manager, Nash Tech Lab, Chennai.

13. Organized a Webinar on 'Digital Marketing Strategies for Real-Time Applications' on March 15, 2023 with Ms. Keerti Samata, Deputy Divisional Manager, Gmmco CAT, CK Birla Group, Chennai.

14. Organized "Voice Over by Alumni" on 'How to Successfully Turn Dreams into Reality' on March 7, 2023 with Ms. Jayasree Rajendran, Director, Bloom Byond Wellness.

15. Organized "Voice Over by Alumni" on 'Discover Your Inner Strength' on April 3, 2023 with Ms. Ramya Sekar, Costume Designer & Founder, Swaras Design, Chennai.

16. Organized a Workshop on 'How to Be Happy All Through Your Life? Hidden Secret Unlocked!' on November 14, 2022 with Mr. R.S. Mani, Founder, ADCOM.

17. Organized a Seminar on 'Digital Integrated Circuits' on September 16, 2022 with Dr. P.

Mangayarkarasi, Professor, ECE, Takshashila University, Tindivanam.

18. Organized a Guest Lecture on 'Computer Vision Using OpenCV' on January 11, 2018 with Dr. V. Sathiesh Kumar, Assistant Professor, ECE, MIT, Chromepet.

19. Organized a Guest Lecture on 'Future Business Trends' on February 13, 2018 with Mr. R.S. Mani, Director, ADCOM.

Participated in

1. Participated in the 5-Days FDP on " Various Facets of technlology in health care" conducted by Department of Medical electronics and biomedical Engg., Saveetha Engineering college,sponsored by IEEE from 24.02.2025 to 28.02.2025

2. ATAL Faculty Development Program on "Advanced Research Trends for New Semiconductor Chip Designing" at Saveetha Engineering College – 20/01/2025 to 25/01/2025.

3. ATAL Faculty Development Program on "Empowering Healthcare with AI: Advances, Applications, and Future Directions" at Rajalakshmi Institute of Technology – 27/01/2025 to 01/02/2025.

4. ATAL Faculty Development Program on "From Code to Conductor: Enhancing Semiconductor Devices through Machine Learning" at Thiagarajar College of Engineering – 18/12/2023 to 23/12/2023.

5. Participated in the 6-Days FDP on "Recent Trends in Modern Smart Intelligent Systems" conducted by Dr. MGR Educational and Research Institute – 8.05.2023 to 13.05.2023.

6. Participated in the 5-Days FDP on "Road Map for Paradigm Shift in Higher Education" conducted by STLC, Department of ECE, Saveetha Engineering College – 14.02.2023 to 18.02.2023.

7. Participated in the 6-Days FDP on "Recent Trends in Electronics, Signal Processing and Networks" conducted by the Department of ECE, Madras Institute of Technology, Anna University, Chennai – 6.02.2023 to 11.02.2023.

8. Participated in the 5-Days FDP on "Societal Advances in Wireless Systems and Emerging Technologies" conducted by the Department of ECE, Saveetha Engineering College – 23.01.2023 to 28.01.2023.

9. Participated in the 5-Days Online International FDP on "Current Trends in Information Technology" conducted by MEASI Institute of Information Technology – 26.09.2022 to 30.09.2022.

10. Participated in the seminar on "Insights to Metaverse, NFT, and Web-based AR/VR Apps"

by Mr. R. Vijayarajan, Project Manager, Hogarth Worldwide, Chennai, organized by Innovation Club and Institute Innovation Council of Saveetha Engineering College, Thandalam, Chennai – 24/09/2022.

11. Faculty Development Program on Student Psychology conducted by the Coimbatore Psychology Foundation at Saveetha Engineering College – SEP 2019.

12. Faculty Development Program on Communication Theory in Sri Muthu Kumaran Institute of Technology – DEC 2018.

13. Faculty Development Program on Pedagogy for Online and Blended Teaching-Learning Process conducted by IIT Bombay at Saveetha Engineering College – OCT 2017. 14. Faculty Development Program on Foundation Program in ICT for Education conducted by IIT Bombay at Saveetha Engineering College – SEP 2017.

15. Faculty Development Program on Insights into Research conducted by SRM University – JUNE 2017.

16. Faculty Development Program on VLSI Design in S.A Engineering College – DEC 2016.
17. Faculty Development Program on Discrete Time Systems & Signal Processing at Easwari Engineering College – DEC 2014.

18. Faculty Development Program on Electromagnetic Fields at Saveetha Engineering College – DEC 2013.

19. Faculty Development Program on Signals and Systems at Dhanalakshmi College of Engineering – JUNE 2013.

20. Faculty Development Program on NS-2 and PSPICE Simulation Tools at Saveetha School of Engineering – NOV 2010.

PROFESSIONAL MEMBERSHIPS

● **IETE Associate Member, Life Member No. AM-503481**

OTHER DETAILS (If any):

JOURNAL PUBLICATIONS

1. K.Anitha, G.Keerthiga, A.HemaMalini, "Plant Health Monitoring System through Image Processing and defects overcoming through Embedded System", IJRTE, Vol-8, May 2019.

2. G Keerthiga, M.Devendra Reddy, P.Venkat Kumar, S.Gireesh, "Real Time monitoring of Transformer for Industry using IoT ", 2023 International Conference on Artificial Intelligence and Knowledge Discovery in Concurrent Engineering (ICECONF).

Year: 2023 | Conference Paper | Publisher: IEEE

3. G Keerthiga, Rishika S, Sindhu P, "Energy-Efficient Electroencephalogram Signal Classification with Artificial Neural Networks and Fast Fourier Transform'', International Conference on Automation, Computing and Renewable Systems (ICACRS-2023).

    Year: 2023 | Conference Paper | Publisher: IEEE

4. Sreenivasan, P., Ganesan, K., Fawad, I., Sureshkumar, S., Dhandapani, K. , "Leveraging machine learning for sustainable integration of renewable energy generation",Indonesian Journal of Electrical Engineering and Computer Science, 2024, 36(3), pp. 1347–1355

5. Jayachitra, S., Balasubramani, M., Kaleem, A.M., ... Keerthiga, G., Mythili, R., "An efficient ranking based binary salp swarm optimization for feature selection in high dimensional datasets",Measurement: Sensors., 2024, 35, 101291

6. Keerthiga, G., Kumar, S.P., "Evaluating FPGA-based denoising techniques for improved signal quality in electrocardiograms",Analog Integrated Circuits and Signal Processing, 2024, 120(1), pp. 93–107

7. Deepa, B., Annie, T.A., Keerthiga, G., ... Subha, P., Prabavathi, R., "Utilizing Convolutional Neural Networks and Ridge Regression for Alzheimer's Disease Detection "Lecture Notes in Networks and Systems, 2024, 1007 LNNS, pp. 345–353

8. Prakalya, S.B., Samuthira Pandi, V., Sujatha, S., ... Karunkuzhali, D., Keerthiga, G., "A Novel Fuzzy-based Spectrum Allocation (FBSA) Technique for Enhanced Quality of Service (QoS) in 6G Heterogeneous Networks", International Journal of Advanced Computer Science and Applications, 2024, 15(6), pp. 888–896

9. Keerthiga, G., Kantharuban, T.S., Kavibala, T., Arunkumar, K., " Innovative Framework for Precise Peripheral Arterial Disease Diagnostics Through Multi-Modal Digital Signal Processing on Xilinx FPGA Platform",3rd IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics, ICDCECE 2024, 2024
Year: 2024 | Conference Paper | Publisher: IEEE

10. Keerthiga Ganesan,Mohana Sundari Loganathan,Akash Vetriselvan,Ajay Sasikumar, "Crack detection in train track using CNN" Proceedings of the Second International Conference on Innovations in Electronics and Communication Systems (ICIECS2022) AIP Conference Proceedings, 2025, 3159(1), 020029

CONFERENCES ATTENDED:

1. Presented a Paper on Enhancing Brain Tumor Classification: A Deep Learning Approach with Convolutional Neural Networks at the International Conference on SMTVIP, 2024 organized by Kalasalingam Academy of Research and Education, Dec 2024.

2. Presented a Paper on A Robust Heart Disease Prediction System Using Hybrid Deep Neural Networks at the International Conference on SMTVIP, 2024 organized by Kalasalingam Academy of Research and Education, Dec 2024.

3. Presented a Paper on Predictive Analysis of Arterial Root Enlargement in Transposition of the Great Arteries Using LSTM Networks at the International Conference on ICCS, 2024

organized by Lovely Professional University, Oct 2024.

4. Presented a Paper on Anemia Estimation for Patients Using a Machine Learning Model at the International Conference ICCI- 2023.

5. Presented a Paper on Advancements in Low Power Digital Circuitry: A Comparative Survey at the National Conference Computing and Electronics Engineering (NCCEE- 23).

6. Presented a Paper on Simulation of Accuracy Based Logarithmic Multiplier at the National Conference organized by Sri Sai Ram Institute of Technology, March 2018.

7. Presented a Paper on Improved Energy Efficiency in Underwater Sensor Network Using AA-RP at the National Conference organized by Sri Sai Ram Institute of Technology, March 2018.

8. Presented a Paper on BDMA Technology by Using Radio Frequency Jammer at the National Conference organized by Saveetha Engineering College, March 2014.

9. Presented a Paper on FPGA Based OFDM Transmitter Using BPSK Modulation at the National Conference organized by Saveetha Engineering College, March 2010.

10. Presented a Paper on FPGA Based All Digital OFDM Transmission System at the National Conference organized by SSM College of Engineering, March 2010.