

# **Faculty Profile**



**Dr. K. A. Karthigeyan, M.E., Ph.D**  
Associate Professor

## **HIGHLIGHTS:**

- Number of Journal Publications: 10
- H-Index: 5
- Project Funding Received: --
- Patents Published: 01
- Patents Granted:--

## **PROFESSIONAL LINKS:**

- Scopus ID: 59751871100
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=59751871100>
- Google Scholar ID: <https://scholar.google.com/citations?user=USwj-B8AAAAJ&hl=en>
- Anna University Faculty ID: 321064
- AICTE Faculty ID: 1-11018521884
- Anna University Supervisor ID: --
- LinkedIn:--

## **PROFESSIONAL BACKGROUND:**

- Teaching Experience till date: 6 Years
- Industrial Experience: 01 Year

## **INTERNATIONAL EXPOSURE:**

Presented a paper in 18th European IEEE Conference on Radiation and Its Effects on Components and Systems (RADECS) on "Study of VCO Delay Cell Topologies in a 3-stage DR-VCO for Radiation Hardening" held in Sweden, 2018.

**AREA OF SPECIALIZATION:**

- VLSI Design, Analog RF circuits
- Cryptography

**Ph.Ds AWARDED WITH DETAILS: --****Ph.Ds GUIDING: --****SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY: --****PATENTS PUBLISHED/GRANTED:**

- Published a patent titled “A microwave sensor and a system for detection of microplastics in liquids” Application No. 202441082589 on 01-11-2024.

**COURSES CERTIFIED:**

- Completed NPTEL certified course on “Digital Image Processing”
- Completed NPTEL certified course on “Semiconductor Device Modeling and Simulation”
- Completed NPTEL certified course on “Introduction to Internet of Things”
- Completed NIELIT certified course on “IoT using Arduino and ESP8266”

**ACHIEVEMENTS AND AWARDS:**

- University 2<sup>nd</sup> rank in M.E.-VLSI Design
- Qualified in NET(Electronic Science)
- Qualified in GATE(ECE)

**SPECIAL SESSIONS DELIVERED:**

- Delivered a session on “Low power design techniques in VLSI and basics of mixed signal design” in ATAL FDP at Vel Tech Multitech Engineering College on 13 Dec 2023.
- Delivered a guest lecture on “Radiation Hardened Devices” in 3 days FDP conducted on Nano Scale Device Modeling and Applications of VLSI circuits from 21st to 23rd June 2023 at VIT-Chennai Campus.

**CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:****Conferences**

- K. A. Karthigeyan, E. Manikandan, E. Papanasam, S. Radha and B. S. Sreeja, "Multiband Fano Resonance in Symmetry Broken Planar Terahertz Metamaterial," 2021 Devices for Integrated Circuit (DevIC), 2021, pp. 1-3.

- K. A. Karthigeyan and S. Radha, "Current Reuse Oscillator Design for 5G Mobile Application using 90nm CMOS," 2020 International Conference on Communication and Signal Processing (ICCSP), Chennai, India, pp. 734-737, Sep 2020.
- K. A. Karthigeyan and Manikandan E, " High Speed GaN Laser Diode Driver Switching with 2ns Pulse Width," Department of Atomic Energy -BRNS National Laser Symposium (NLS-28), Chennai, India, pp. 131, Jan 2020.
- K. A. Karthigeyan and Manikandan E, " Class-AB Frequency multiplication using parallel coupled LC quadrature phase oscillator," TENCON 2019 - IEEE Region 10 Conference, Kerala, India, pp. 2160-2163, Oct 2019.
- Manikandan.E, K.A.Karthigeyan, Sreeja B S, Radha S, "MicrostructuringNbN superconductor using Pulsed Laser", LPM2019 - The 20th International Symposium on Laser Precision Micro fabrication, May 21 to May 24, Hiroshima, Japan 2019.
- K. A. Karthigeyan and Premanand Venkatesh Chandramani, "Study of VCO Delay Cell Topologies in a 3-stage DR-VCO for Radiation Hardening," 2018 Radiation Effects on Components and Systems (RADECS-2018), Sweden.
- S. M. Perumal, K. A. Karthigeyan and P. V. Chandramani, "Implementation and verification of MASH 1-1-1 for fractional-N frequency synthesizer in Zynq-7000 series SoC platform," 2017 Devices for Integrated Circuit (DevIC), Kalyani, pp. 825-829.
- Gayatri N, Karthigeyan K A and Premanand V. Chandramani "Phase Noise Reduction technique for Fractional-N frequency synthesizer" National Conference on Research Challenges in VLSI Design and Embedded Systems for Wireless Communication at SSN College of Engineering, May 2016.

#### **FDPs Attended**

- Participated in 6 days ATAL FDP on "Advanced Computing (Supercomputing, AI, Quantum Computing)" organised by Manipal Institute of Technology from 05 to 10 Jan 2025.
- Participated in 6 days ATAL FDP on "Building Services in Smart City Through IoT-Edge-Fog-Cloud Federation" organised by NIT Warangal from 09 to 14 Dec 2024.
- Participated in 5 days workshop on "Internet of Things (IoT) - from Sensor Design to Data Analysis" organised by ECE Dept, Vel Tech University from 02 to 06 Jan 2024.
- Participated in 5 days FDP on " VLSI SoC design with RISC-V"organised by Maven silicon Pvt. Ltd., Bangalore from 04 to 08 Dec 2023.

#### **PROFESSIONAL MEMBERSHIPS:**

- ISTE(Life member)
- ILA(Life Member)

#### **Reviewer in Journals:**

- IEEE Transactions on Nuclear Science
- IET Circuits Devices Systems – Wiley
- Microelectronics Journal – Elsevier
- Analog Integrated Circuits and Signal Processing – Springer
- International Journal of Electronics – Taylor & Francis
- Journal of Circuits, Systems, and Computers – World Scientific