

## **FACULTY PROFILE**



**Name : Mr. K. A. Karthigeyan, M.E, (Ph.D.)**

Designation: Assistant Professor (SG)

Department of ECE,

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Experience: **Industry Experience 1 year**  
**Teaching Experience 3 years**  
**Research Experience 6 years**

Research area: VLSI, Cryptography, Terahertz Applications

### **Recent Publications: ( last 5 years)**

1. **Karthigeyan K. A.**, Radha, S. & Manikandan, E., “Numerical analysis of substrate thickness and its etching effect on broadband/narrowband terahertz metamaterial”, *Opt Quant Electron, Springer*, Vol.No.53 (675), pp.1-13, 2021.
2. **Karthigeyan K. A.**, Radha, S. & Manikandan, E., “Single event transient mitigation techniques for a cross-coupled LC oscillator, including a single-event transient hardened CMOS LC-VCO circuit”, *IET Circuits Devices Syst, Wiley*, pp.1-11, 2021.
3. **Karthigeyan K. A.** & Radha, S., “Single event transient study on PMOS-NMOS cross-coupled LC-VCO using PLL”, *International Journal of Electronics, Taylor & Francis*, Vol.No.108 (3), pp.378-394, 2021.
4. **Karthigeyan K. A.** & Radha, S., “Single event transient hardened delay cell for a differential ring VCO”, *Microelectronics Reliability, Elsevier*, Vol.No.111 (113721), 2020.
5. **Karthigeyan K. A.** & Premanand, V. C., “Study and analysis of DR-VCO for rad-hardness in type II third order CPLL”, *Microelectronics Reliability, Elsevier*, Vol.No.82, pp.190-196, 2018.

6. **Karthigeyan K. A.**, Manikandan, E. & Radha, S., "Performance analysis of Terahertz planar antenna on Low-K polymer substrates", *Journal of Optoelectronics and Advanced Materials* Vol.No.22 (5-6), pp. 244-250, 2020.
7. Manikandan, E., & **Karthigeyan K. A.**, "Studies on Microdrilling of NbN Superconductor using Pulsed Laser Ablation", *JLMN-Journal of Laser Micro/Nanoengineering*, Vol.No.14 (3), pp. 214-219, 2019.

### **Paper Published in International/ National Conferences:**

1. **Karthigeyan K. A.**, E. Manikandan, E. Papanasam, S. Radha and B. S. Sreeja, "Multiband Fano Resonance in Symmetry Broken Planar Terahertz Metamaterial," *IEEE Devices for Integrated Circuit (DevIC)*, pp.1-3, 2021.
2. **Karthigeyan K. A.**, & S. Radha, "Current Reuse Oscillator Design for 5G Mobile Application using 90nm CMOS," *IEEE International Conference on Communication and Signal Processing (ICCSP)*, pp.0734-0737, 2020.
3. **Karthigeyan K. A.**, & E. Manikandan, "High Speed GaN Laser Diode Driver Switching with 2ns Pulse Width," *DAE-BRNS National Laser Symposium (NLS-28)*, 2020.
4. **Karthigeyan K. A.**, & E. Manikandan, "Class-AB Frequency multiplication using parallel coupled LC quadrature phase oscillator," *IEEE Region 10 Conference (TENCON)*, pp. 2160-2163, 2019.
5. **Karthigeyan K. A.**, & P. V. Chandramani, "Study of VCO Delay Cell Topologies in a 3-stage DR-VCO for Radiation Hardening," *IEEE 18th European Conference on Radiation and Its Effects on Components and Systems (RADECS)*, pp.1-4, 2018.
6. S. M. Perumal, **Karthigeyan K. A.** & P. V. Chandramani, "Implementation and verification of MASH 1-1-1 for fractional-N frequency synthesizer in Zynq-7000 series SoC platform," *IEEE Devices for Integrated Circuit (DevIC)*, pp. 825-829, 2017.

### **Achievements:**

1. Secured **University 2<sup>nd</sup>** rank in M.E. – VLSI Design
2. Qualified in **National Eligibility Test (NET)** in Electronic Science conducted by UGC in Dec 2012.
3. Qualified in **GATE–ECE** conducted in 2019 by IIT-M.
4. Awarded **Junior Research Fellowship (JRF)** for pursuing Ph.D. programme by SSN College of Engineering, Chennai.
5. Reviewer – International Journal of Electronics – Taylor & Francis.
6. Honorary invited author of London Journals Press.