



Dr. Krishnapriya S

Deputy Head of the Department,
Electronics & Communications Engineering

Administrative Responsibilities

- Dy. Head of the Department (ECE)
- Dy. Controller of Examinations (End-semester examination)
- Curriculum Coordinator
- Criteria 1 Coordinator
- Stream head-VLSI
- BoS Secretary (VLSI)
- Faculty coordinator of IEEE CAS
- DAB Member
- Member of the Research and Development cell
- President of Internal Complaints Committee

Education Summary

- PhD (2014-2020) in VLSI MEMS – NIT Calicut
- M. Tech (2011-2013) in Microelectronics and VLSI- NIT Calicut
- B. Tech (2007-2011) in Electronics and Communication Engineering- GEC Thrissur

Employment History

- **Associate Professor**
Department of Electronics & Communication Engineering
Christ college of Engineering, Irinjalakkuda, Thrissur

October 2023-ongoing

- **Assistant Professor**

July 2019-October 2023

Department of Electronics & Communication Engineering
Muthoot Institute of Science and Technology, Kochi, Kerala, India

- **Research Scholar**

August 2014- July 2019

Department of Electronics & Communication Engineering
National Institute of Technology, Calicut, Kerala, India

- **Assistant Professor**

June 2013-July 2014

Department of Electronics & Communication Engineering
Jyothi Engineering College, Thrissur, Kerala, India

PUBLICATIONS

PATENT

1. German Patent titled “A System for Partitioning based Place and Route in 3D Integrated Circuits” published on September 2023 (Application number: 202023105124)
2. Indian Patent titled “IoT Enabled Landslide Detection and Alert System using Node Red” published on 2nd September 2025 (Application Number: 202541083295)

BOOK

System Technologies and MEMS by Dr. Abraham C G, Dr. Radeep Krishna R, **Dr. Krishnapriya S**, Dr. Sreedivya K M (Sold by Iterative International Publishers and Delivered by Amazon
https://www.amazon.in/dp/9395632852?ref=myi_title_dp)

JOURNALS

1. **Krishnapriya S**, Rama S Komaragiri, Suja K J. “Via-free Single Metal Level Planar Microcoil Sensors for Detection of Magnetic Microbeads”, *Journal of magnetism and magnetic materials, Elsevier*, Vol.541, p.168469, 2021 (SCI indexed with IF: **2.993**, <https://doi.org/10.1016/j.jmmm.2021.168469>)
2. **Krishnapriya S**, Rama S Komaragiri, Suja K J, “Fabrication, Characterization, and Modelling of a Novel via-less Single Metal Level Magnetic Microcoil Sensor for Biosensing Applications”, *Sensors and Actuators A: Physical, Elsevier*, Vol.290, 190-197, 2019. (SCI indexed with IF: **2.739**)
3. **Krishnapriya.S**, Rama Komaragiri, Suja K J. “Modeling, Microfabrication and Performance Evaluation of Non-spiral Planar Microcoils for Biomedical Wireless Power Transfer Systems”, *IET Micro & Nano letters*, 14(12), pp.1223-1228,2019 (SCI indexed with IF: **0.975**)
4. **Krishnapriya S**, Rama S Komaragiri, Suja K J. “Modeling and simulation of non-spiral coil for magnetic sensing applications”, *Journal of Mechanical Science and Technology, Springer*, 31, no. 11. 5415-5421, 2017. (SCI indexed with IF: **1.221**)
5. **Krishnapriya S**, Rama S Komaragiri, Suja K J. “Design and Analysis of Non-spiral Planar Microcoil Based Electromagnetic Microactuator”, *Arabian Journal of Science and Engineering, Springer*, Vol.3639, 1-7, 2018. (SCI indexed with IF: **1.518**)
6. **Krishnapriya S**, Rama S Komaragiri, Suja K J. “Performance Analysis of Planar Microcoils For Biomedical Wireless Power Transfer Links”, *Sadhana, Springer*, 44:187, 2019 (SCI indexed with IF: **0.769**)
7. Ashley, **Krishnapriya S** et.al. “Smart drive for enhanced driver safety”, *International Journal of Applied Engineering Research* ISSN 0973-4562 Vol.5, No.1, 2020
8. **Krishnapriya S**, Rama Komaragiri, Suja K J. “Electromagnetic Microactuators using Non-spiral Planar Microcoils for Robotic Applications “, *Procedia Computer Science, Elsevier*, 133, 545-552, 2018. (SCOPUS indexed)

BOOK CHAPTERS

1. **Krishnapriya S**, Rama S Komaragiri, Suja K J. "Design and Analysis of Induction-balance Sensor using Non-spiral Planar Microcoils for Biomedical Applications", *Nanotechnology Applications in Health and Environmental Sciences*, Jun 10:405-22, 2021.
2. **Krishnapriya S**, Rama S Komaragiri, Suja K J, "Microfabrication and Electrical Characterization of Non-spiral Planar Microcoils for Biomedical Applications", *Lecture notes in Electrical Engineering*, Springer, 547, pp. 123-129, 2019.

INTERNATIONAL CONFERENCES

1. **Krishnapriya.S**, Binu Manohar, "Performance Analysis of FinFET Based Digital Circuits", International Conference on Materials Science and Mathematics for Advanced Technology (MSMAT-2026), NITTE, India [in press]
2. **Krishnapriya.S** et.al, "FEA and Experimental Studies of MOS Microgas Sensor with Integrated In-plane Microheater," *2025 11th International Conference on Smart Computing and Communications (ICSCC)*, Kochi, India, 2025, pp. 1-5, doi: 10.1109/ICSCC66177.2025.11233492.
3. Manohar, Binu, **S. Krishnapriya**, Dewmol Johny, Emy Sara George, and Josna Mary Jose. "Implementation of IoMT-Assisted Smart Healthcare Monitoring for Clinical Infectious Diseases." In *2024 IEEE Region 10 Symposium (TENSYP)*, pp. 1-5. IEEE, 2024.
4. **Krishnapriya, S.**, Rama Komaragiri, "Micromanufacturing and characterization of Coplanar microcoils of Various geometries" , Second International Conference on Advances in Smart Sensor, Signal Processing and Communication Technology (ICASSCT 2024), University of Goa [in press under AIP Conference Proceedings]
5. **Krishnapriya, S.**, "Simulation Studies of Nonspiral Planar Microcoils of Square Geometry", *IEEE 2024 International Conference on Advances in Modern Age Technologies for Health and Engineering Science*, ISBN: 979-8-3503-7157-4
6. **Krishnapriya, S**, Binu Manohar, Anagha Gopi, Jeslin Anna Jacob, Riya Mary Puthumana, and A. K. Rizwana. "Implementation of IoT based Intelligent and Energy Efficient Cities." In *2022 IEEE 19th India Council International Conference (INDICON)*, pp. 1-5. IEEE, 2022.
7. **Krishnapriya, S.**, Binu Manohar, M. N. Ameena, Ankitha Arun, MS Rabiya Nasnin, and Yedudev K. Nair. "Design and Implementation of Smart Waste Management System." In *International Conference on VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems*, pp. 15-21. Singapore: Springer Nature Singapore, 2022.
8. **S. Krishnapriya**, R. S. Komaragiri and K. J. Suja, "Effect of Geometrical Parameters of Nonspiral microcoils on the Magnetic field Generation for Microactuating Applications," *2021 8th International Conference on Smart Computing and Communications (ICSCC)*, 2021, pp. 106-109, doi: 10.1109/ICSCC51209.2021.9528177
9. A. Gopi, J. A. Jacob, R. M. Puthumana, R. A. K, **Krishnapriya.S** and B. Manohar, "IoT based smart waste management system," *2021 8th International Conference on Smart Computing and Communications (ICSCC)*, 2021, pp. 298-302, doi: 10.1109/ICSCC51209.2021.9528293.
10. **Krishnapriya, S.**, Rama S. Komaragiri, and K. J. Suja, Performance Evaluation Of Via-free Non-spiral Planar Microcoils for Biomedical Wireless Links." In *2020 IEEE International Symposium on Smart Electronic Systems (iSES)*(Formerly iNiS), pp. 208-211. IEEE, 2020.
11. **Krishnapriya S**, Rama S Komaragiri, Suja K J. "Performance Evaluation Of Via-free Non-spiral Planar Microcoils", *2020 IEEE 15th International Conference on Nano/Micro Engineered and Molecular System (NEMS)*, San Diego, CA, USA, 2020, pp. 247-250, doi: 10.1109/NEMS50311.2020.9265635
12. **Krishnapriya, S.**, Rama Komaragiri, and K. J. Suja, "Finite Element Analysis of Planar Microcoil Based Induction-balance Magnetic MEMS Sensor", *COMSOL EUROPE conference 2020*.
13. **Krishnapriya, S.**, Rama Komaragiri, and K. J. Suja. "Performance analysis of non-spiral planar microcoils for biomedical electromagnetic microactuators." *AIP Conference Proceedings*. Vol. 2222. No. 1. AIP Publishing LLC, 2020.
14. **Krishnapriya S**, Rama S Komaragiri, Suja K.J, "Detection of Magnetic Particles Using Induction-Balance Microsensor Based on Non-Spiral Planar Microcoils", *IEEE SENSORS 2018*, Oct 28th-31st 2018, Pullman aero city, New Delhi, India
15. **Krishnapriya S.**, Himanshu Chandrakar, Rama S. Komaragiri, and K. J. Suja. "Electromagnetic Microactuators using Non-spiral Planar Microcoils for Robotic Applications." *RoSMA 2018*, July 19th -21st 2018, **IITDM** Kanchipuram
16. **Krishnapriya S**, Rama S Komaragiri, Suja K.J: "Non-spiral planar Microcoils for Biomedical Applications", *Proceedings of IEEE-NEMS@UCLA, Los Angeles*, pp.780-783, 2017.

17. **Krishnapriya S**, Rama S Komaragiri, Suja K J. "Performance Analysis of Nonspiral Planar Microcoils for Electromagnetic MEMS Actuator", *8th ISSS International conference on smart materials, structures and systems (ISSS 2017)*, July 5th to 7th 2017, **IISc Bangalore**, Bangalore, India [in press]
18. **Krishnapriya S**, Rama S Komaragiri, Suja K.J: "Significance of Non-spiral planar Microcoils over Spiral Coils for Biomedical Applications", *Intl. Conf. on Emerging Electronics (ICEE)*, **IIT Bombay**, 2016.
19. **Krishnapriya, S.**, and Rama Komaragiri, "Analytical studies of vertical double gate NTFET." *In Electronics and Communication Systems (ICECS)*, 2014 International Conference on, pp. 1-3. IEEE, 2014.
20. **Krishnapriya, S.**, and Rama Komaragiri, "Germanium-source germanium-channel silicon-drain vertical TFET for low power applications", *In Emerging Research Areas and 2013 International Conference on Microelectronics, Communications and Renewable Energy (AICERA/ICMiCR)*, pp. 1-5. IEEE, 2013.

Achievements

- Winner of the **best paper award** in Smart systems track of IEEE International Conference on Smart Computing and Communications (ICSCC) 2025 held at MITS Cochin during July 3rd to 5th 2025.
 - Winner of the **best Poster award** in the area of Biological sciences held at RSD 7.0 by **IIT Palaghat** in February 2025.
 - **Topper in the 12 weeks NPTEL-AICTE Course** on Semiconductor devices and circuits with a consolidated score of 77%.
 - Selected for Indian Nanotechnology Users' Programme (INUP) at **CeNSE, IISc Bangalore** for performing microfabrication and characterization of planar magnetic sensor free of cost in 2016.
 - Secured **S grade** for the M.Tech main project done on "Analytical and simulation studies on Tunnel field effect Transistor" in **NIT Calicut** during July 2012 to May 2013.
 - Secured **second prize** in paper presentation contest sponsored by **ISTE** held in Govt. Engineering College, Thrissur in 2012.
 - Secured **first prize** in paper presentation contest held in **Jyothi Engineering College** in on March 2011.
 - Secured **first prize** in paper presentation contest held in **IES Engineering College** on July 2010.
 - Secured **first prize** in paper presentation contest "SYZYGY'10" held in **Vidya Engineering College** on 30th March 2010.
 - Received prizes for various science exhibitions in high school level during 2003-2007.
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LECTURES/TRAININGS DELIVERED/ORGANISED

- Delivered a session on *Recent progress in Semiconductor Devices* for ATAL FDP on "AI-Enabled Semiconductor Design for Energy-Efficient Electronics", "scheduled from 15th to 17th July 2025 at Sahrdaya College of Engineering and Technology, under the AICTE-VAANI scheme.
- Delivered an online session on Low power VLSI design for an FDP conducted by LBS Kasargode on May 8th 2026.
- Served as a session chair for Research Symposium organized by DECCTEROUS -IC Design Club, Department of Electronics and Communication Engineering in association with NIE AICTE IDEALAB held on 17th May 2025 at The National Institute of Engineering Mysore.
- Served as resource person for 5 days' FDP on FDP on Advancing Intelligent Automation: The Convergence of IoT, ML, and Robotics conducted by Vidya Academy of Science and Technology from 2nd to 6th December 2024 coordinated by ISTE, IE(I) and IQAC VAST Chapter
- Served as a session chair for Kerala Technical Congress (KETCON) 2024, organized by APJ Abdul Kalam Technological University, Thiruvananthapuram, and hosted by Ahalia School of Engineering and Technology, Palakkad from Feb 16-18, 2024.

- Served as a session chair for IEEE 9th international conference on smart computing and communication (ICSCC 2023) organized by Muthoot Institute of Technology and Science, Cochin, Kerala during August 17-19, 2023.
- Served as a resource person for the TEQIP-II sponsored 3 days Online FDP on 'Advanced Micro/Nanosensor Technologies' organized by the Department of Electronics and Communication Engineering, Government Engineering College Palakkad, Sreekrishnapuram during July 18 – 20, 2022.
- Served as a guest speaker for a technical talk on "Microfabrication and Characterization of Micromagnetic sensors" organized by the Department of Electronics & Communication Engineering, NIE Mysuru On 9th July 2022 as part of their Nanoelectronics Course.
- Serves as a resource person for a preconference workshop of ICVOICE 2022 on "Design and Analysis of Analog Circuits using Cadence Virtuoso" conducted by Mangalam college of Engineering on 24th June 2022.
- Served as a resource person for the short-term training on Advanced Micro/Nano Sensor Technologies: Modeling, Simulation, and Fabrication organized by NIT Calicut from 5th July till 9th July 2021.
- Served as a resource person for the international FDP on "MEMS based sensors and actuators for biomedical applications" organized by KL university, Guntur on 4th Nov 2020.
- Organised a five days online hands-on workshop on 'Analog & Digital VLSI Design using Cadence Tool Suite' in Department of ECE, MITS, Cochin.
- Served as a resource person for the national FDP on "Emerging Research Trends in VLSI, MEMS and Signal Processing" organized by Department of ECE, Saintgits College of Engineering in association with IETE Kochi on 11th Aug 2020.
- Delivered a webinar on CMOS VLSI Design in Kalasalingam university on 8th June 2020 using Cadence tool suite.
- Coordinated workshop on Analog and Digital VLSI Design using cadence at MITS, Cochin.
- Handled sessions on Cadence analog design flow in a faculty development programme (FDP) on Recent Trends in Semiconductor Devices and MEMS/NEMS (RTSDM'19) in NIT Calicut during June 10th-14th 2019.

Specialized Trainings

- Completed **NPTEL course of 4 weeks** duration titled "A brief introduction of Microsensors" with **ELITE** Certification in May 2025 offered by IISER Bhopal.
- Completed short term training programme on Rapid prototyping using FPGA from IIIT Kottayam during 16th to 21st June 2025.
- Participated in FDP on Next Generation Healthcare: Integrating Sensors, AI & IoT from 18th August to 23rd August 2025 conducted by Rajagiri School of Technology.
- Completed **NPTEL course of 4 weeks** duration titled Patent drafting for beginners with **Elite** Certification in November 2022 offered by IIT Madras.
- Participated in ATAL FDP on Devices and Circuits for Next-Generation Computing Architectures by GB Pant Institute of Engineering & Technology, Ghurdauri from October 25th to 29th 2021.
- Completed **NPTEL course of 12 weeks** duration titled "VLSI Physical Design" with **ELITE** Certification in September 2021.
- Completed **six MOOC courses** in Coursera during lock-down period. (i.e. Nanotechnology and nano sensors-part 1 and 2, Introduction to Machine Learning, Introduction to Artificial Intelligence, Plastic electronics, Wireless communication for all)
- Participated in ATAL FDP on Hands-on approach for the Design and Implementation of Lab-on-Bread Board- A Blended learning by NIE Mysore from July 21st to July 25th 2021.
- Participated in ATAL FDP on Introduction to ML & Data Science organised by IIIT Dharwad from May 17th to May 21st 2021.
- Participated in Recent Advancements in RF & Microwave Circuits and Devices organised by Bennett University, Noida from April 5th to April 9th 2021.
- Participated in KTU sponsored 5 days FDP on "Artificial Intelligence and Machine Learning - Theory and Applications" organized by Dept. of AEI, RSET from 1st to 5th February 2021
- Participated in a workshop on Qualitative Research Methods organised by NIE Mysore from Feb 15th to Feb 17th 2021.

- Participated in 5 days FDP on 'Modeling, Simulation and Fabrication of Future Nano -electronic Devices and Sensors' organised by **NIT Calicut** from 24th to 28th Aug 2020.
 - Completed the national level FDP on 'Research Initiatives in Renewable Energy Systems' organised by Dept. of EEE, MITS from 21-25 July 2020.
 - Participated in FDP on Analog and Digital Integrated Circuits Design using EDA tools in GEC Kannur from 21st to 25th January 2019.
 - Participated in a faculty development programme (FDP) on Analog and Mixed signal circuits for CMOS Intelligent Sensors in **NIT Calicut** during July 2018.
 - Undergone a short-term course on “MOSFETs and Beyond” in **IIT Madras** during July 2017
 - Undergone an online training course on COMSOL Multiphysics in NIT Calicut during 12th to 16th February, 2017.
 - Attended familiarization workshop in “Nano fabrication technologies” in **IIT Bombay** during 27th to 30th Dec, 2016.
 - Attended hands-on training in “Nano fabrication technologies” in Nanotechnology department, **IISc, Bangalore, India** during 3rd to 11th Nov, 2016.
 - Undergone training on **COMSOL Multiphysics** in Bangalore during 25th to 27th July, 2016.
 - Attended a one-day workshop on “Mathematical Modeling on Biology with Matlab Implementation in NIT Calicut on 18th Dec 2015.
 - Attended a one-day workshop on COMSOL Multiphysics in **NIT Calicut** on September 23, 2015.
 - Attended a workshop on “**Early Career Faculty Development Workshop (ECFDP)**” organized by **IEEE EAB, IEEE Kerala GOLD** and **Vidya Academy of Science and Technology**, Thrissur during 4th to 8th November 2014.
 - Attended a FDP on “Electromagnetics in VLSI” sponsored by AICTE in NIT Calicut during 16th to 21st June, 2014.
 - **Volunteered** a one-week workshop on “Ansys MEMS simulation tool” in **NIT Calicut** on July 2012.
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