

Dr. R. MOHAN RAJ, M.E., Ph.D.

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CAREER OBJECTIVE

- To achieve a position which gives me an opportunity to experience and expand my knowledge while contributing creative solutions for the advancement of organization.

EDUCATION QUALIFICATION

- **Ph.D** (I Class) Specialization-VLSI Design- Under the Faculty of Information and Communication Engineering in PSNA College of Engineering and Technology. Dindigul.
- **M.E** (I Class) in VLSI DESIGN (2008-2010) from PSNA College of Engineering and Technology. Dindigul with **7.76 CGPA**.
- **B.E** (I Class) in Electronics and Communication Engineering (2003-2007) from PGP College of Engineering and Technology, Namakkal with **67 %** aggregate.
- **DIPLOMA** (I Class) in Electronics and Communication Engineering (2002-2004)
from RVS Polytechnique College, Dindigul with **72.2%** aggregate.

TEACHING EXPERIENCE

- Assistant Professor in RVS College of Engineering and Technology in the Department of Electronics and Communication Engineering (**14.06.2010 – 28.02.2013**).
- Assistant Professor in PSNA College of Engineering and Technology in the Department of Electronics and Communication Engineering (04.03.2013 – Till Date).

Post Ph.D. Experience: 3 years 6 Months

Total Experience : 14 Years 2 Months

ACADEMIC ADMINISTRATIVE SUPPORT

- NBA, NAAC, FIST – JOURNAL PUBLICATION DETAILS FILE
- VLSI LAB IN-CHARGE
- CLASS TUTOR COORDINATOR

TECHNICAL EXPERTISE

- VLSI Design
- Electronic circuits

ACADEMIC PROJECT

- PG PROJECTS GUIDED - 6
- UG PROJECT GUIDED - 28

PATENTS PUBLISHED

- Smart Notice Board Using IOT (The Patent Publication No: 20211012048)
- Two Dimensional Material Based Resistive RAM For High Density Non-Volatile Memory Application (The Patent Publication No:202341056347)

BOOK CHAPTER PUBLICATION

- Published the book chapter in springer link “Communications in Computer and Information Science book series” (CCIS) entitled “High Frequency Noise Removal Using Exponential Averagers with Reconfigurable Architecture”, Publisher Name Springer, Singapore, volume 1392, Online first-03 August 2021 https://doi.org/10.1007/978-981-16-5048-2_4 (SCOPUS INDEXED)
- Published the book chapter in springer link “Communications in Computer and Information Science book series” (CCIS) entitled “Baseline Wandering Noise Removal Using High Speed IIR Filters with an FPGA Implementation”, Publisher Name Springer, Singapore, volume 1392, Online first-03 August 2021, https://doi.org/10.1007/978-981-16-5048-2_5 (SCOPUS INDEXED)

JOURNALS PUBLICATIONS

1. R. Mohanraj “**Enhanced ECG Anomaly Detection: A Novel Attention Mechanism Based Convolutional Neural Network for Precise Ventricular and Supraventricular Ectopic Beats Classification.**” In the 2024 Sixth IEEE Sponsored International Conference on Electrical, Computer and Communication Technologies (IEEE ICECCT 2024) held at Chhattisgarh Swami Vivekanand Technical University (CSVTU), Bhilai, Chhattisgarh, India during 26 - 28, June 2024. The conference has been organized by the IEEE Student Branch of CSVTU

and Technically Co-Sponsored by IEEE Madhya Pradesh section. (SCOPUS INDEXED)

2. R. Mohanraj, "**Integration of Machine Learning for an Induction Motor Health Monitoring by Image Capture and Classification Method**," 2023 3rd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), IEEE Conference Magazine Greater Noida, India, 2023, pp. 923-926, doi: 10.1109/ICACITE57410.2023.10182717.(SCOPUS INDEXED)
3. R. Mohanraj "**A performance Analysis of DM-DG and TM-DG TFETs Analytical Models for Low Power Applications**", **Turkish Journal of Computer and Mathematics Education (TURCOMAT)** 2021, Volume.12 Issue No.3, pp: 4642-4651(SCOPUS INDEXED)
4. Published a paper titled as "ECG Signal Denoising with Field-Programmable Gate Array Implementation of Fast Digital Finite Impulse Response and Infinite Impulse Response Filters" in "Journal of Medical Imaging Health Informatics" Vol. 10, 81–85, 2020, doi:10.1166/jmihi.2020.2842 (SCI & SCOPUS in 2020 LIST) (WOS)
5. Published a paper titled as "**Certain Performance Investigation of Various Pulse Triggered Flip Flops**" in "**International Journal of Pure and Applied Mathematics**" June 2018. ISSN: 1314-3395 (on-line version) url: <http://www.acadpubl.eu/hub/> (SCOPUS INDEXED-2019 LIST)
6. Published a paper titled as "**Double Compression Based Reversible Data Hiding in Encrypted Image**" in "International Journal of Research in Computer Application and Robotics" November 2016.
7. Published a paper titled as "**Estimation and Detection of Blood Pressure Using Smart Phones without Using Cuff**" in "International Journal of Computer Science and Mobile Computing" March 2014.
8. Published a paper titled as "**Optimization Design of Low Power Flipflop Using Conditional Pulse Enhancement Method**" in Global Journal of Engineering Science and Researches" December 2014.
9. Published a paper titled as "**Memory Optimization in Map Decoding Algorithm Using Trace Forward Technique in Turbo Decoder by Using of VLSI Implementation**" in International Journal of Engineering Science & Research Technology" February 2014.

PUBLICATION IN CONFERENCE PROCEEDINGS

- Presented a paper entitled "Integration of Machine Learning for an Induction Motor Health Monitoring by Image Capture and Classification Method," 2023 3rd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), Greater Noida, India, 2023, pp. 923-926, doi: 10.1109/ICACITE57410.2023.10182717.
- Presented a paper entitled "Baseline Wandering Noise Removal Using High Speed IIR Filters with an FPGA Implementation", in second International Conference on Microelectronic Devices, Circuits and Systems (ICMDCS 2021), Organized by the Department of Micro & Nanoelectronics, School of Electronics Engineering (SENSE), VIT University, Vellore during 11th -13th Feb 2021.
- Presented a paper entitled "High Frequency Noise Removal Using Exponential Averagers with Reconfigurable Architecture", in second International Conference on Microelectronic Devices, Circuits and Systems (ICMDCS 2021), Organized

by the Department of Micro & Nanoelectronics, School of Electronics Engineering (SENSE), VIT University, Vellore during 11th -13th Feb 2021.

- Presented a paper entitled “Enhanced Power Reduction Technique in Multi-bit Flip Flop for Low Power VLSI” in “5th National Level Conference on Ubiquitous Technologies in Electronics” (NCUTE 2K18) held at Theni Kammavar Sangam College of Technology on 16th march 2018.
- Presented a paper entitled “Low Power Analysis of LFSR Using Various Clock Gating Strategies” in “National Level Conference on Advanced Signal Processing, Communication & Networking” (ASPCN'17) held at PSNA College of Engineering and Technology on 24th march 2017.
- Presented a paper entitled “Double Compression Based Reversible Data Hiding in Encrypted Image” in “3th National Level Conference on Ubiquitous Technologies in Electronics” (NCUTE 16) held at Theni Kammavar Sangam College of Technology on 19th march 2016.
- Presented a paper entitled “Cuffless Differential Blood Pressure Estimation Using Smart Phone” in “International Conference on Recent Innovations in Engineering” held at Sri Subramanya College of Engineering and Technology on 13th & 14th march 2014.
- Presented a paper entitled “Memory Management in Map Decoding Algorithm Using Trace Forward Radix 2 X 2 Technique in Turbo Decoder by Using of VLSI Technology” in “International Conference Intelligence Computing” (ICONIC-2012) held at Anand Institute of Higher Technology on 03th & 04th may 2012.

NATIONAL CONFERENCE ORGANIZED:

- Coordinator in Virtual Conference on Smart Computing and Communication in PSNA College of Engineering & Technology on 12th March 2021.
- Co-Coordinator Second National Level Conference on Smart Computing and Advanced Communication in PSNA College of Engineering & Technology on 6th March 2020.

ONLINE CERTIFICATION COURSES

- Completed NPTEL Online Certification Course in “Stress Management”.
- Completed NPTEL Online Certification Course in “Introduction to Internet of Things”.
- Completed Coursera Online Course in “AI for Everyone” Authorized by DeepLearning.ai.
- Completed MATLAB Online Certification Course in “MATLAB Onramp” Organized by MathWorks Training Services.
- Completed Coursera Online Course in “Cloud Computing Basics (Cloud 101)” Authorized by Learn Quest.
- Completed MATLAB Online Certification Course in “Deep Learning Onramp” Organized by MathWorks Training Services.
- Completed Coursera Online Course in “Introduction to the Internet of Things and Embedded Systems” Authorized by the University of California.
- Completed Coursera Online Course in “Introduction to Programming with

- MATLAB” Authorized by Vanderbilt University.
- Completed MATLAB Online Certification Course in “Machine Learning Onramp” Organized by MathWorks Training Services.
 - Attended online course on “Teachers on Digital classroom” organized by Computational Intelligence Research Foundation, Chennai on 13.04.2020 & 14.04.2020.

FACULTY DEVELOPMENT PROGRAMS

- Attended Five days AICTE-ATAL Sponsored Online Faculty Development Program on “**Perspectives of Blockchain Integrated with IoT: Challenges and Opportunities**” organized by the AICTE Training and Learning (ATAL) Academy of Sri Krishna College of Technology, from 5th July to 9th July 2021.
- Attended Two Weeks AICTE-QIP Sponsored Online Faculty Program on “**Computer Vision and Image Processing: Research Issues, Innovation and Application**” organized by the Department of Electronics and Communication Engineering of PSNA College of Engineering and Technology, from 30th December 2020 to 13 January 2021.
- Attended Five days AICTE-ATAL Sponsored Online Faculty Program on “**Biomedical Instrumentation & IoT**” organized by the AICTE Training and Learning (ATAL) Academy of Sri Krishna College of Technology, from 21th September to 25th September 2020.
- Attended Five days AICTE-ATAL sponsored Online Faculty Program on “**Internet of Things (IoT)**” organized by the AICTE Training and Learning (ATAL) Academy of Ramrao Adik Institute of Technology, from 24th August to 28th August 2020.
- Attended five day online spoken FDP on “**Advanced Laboratory**”, in Association with Industries from 20/07/2020 to 25.07/2020 organized by the Department of Electronics and Communication Engineering of PSNA College of Engineering and Technology.
- Attended Four days online Faculty Development Program on “**Research Funding Projects & IPR**”, jointly organized by IQAC, R & D Cell & Dept. of Electronics & Telecommunication under the banner of IETE and Institution's Innovation Council (IIC) of K. C. College of Engineering and Management Studies and Research, Thane(E) from 7th - 10th May, 2020.
- Attended Seven days Faculty Development Program on “**Let’s Play Machine Learning with Tensor Flow 2.x**”, jointly organized by the Department of Electronics and Communication Engineering & FACLT, Kalasalingam Academy of Research and Education, Krishnankoil from 25th June to 1st July 2020.
- Attended Three Days Faculty Development Programme on “**Performance Measurement and Testing in Big Data Architecture and Cloud Infrastructure**”, organized by Department of Computer Science and Engineering of Sathyabama Institute of Science and Technology, from June 18, 2020 to June 20, 2020 through online pedagogy.
- Attended Five days AICTE-ATAL sponsored Online Faculty Development Program on “**Recent Trends In IoT**”, organized by the Department of Computer

Engineering of Ramrao Adik Institute of Technology Nerul, Navi Mumbai, Maharashtra from 24th August to 28th August 2020.

- Attended Seven Days AICTE Recognized Faculty Development Programme on “**Latest Wireless and Computing Technologies**”, organized by NITTTR, Chandigarh during 14/04/2020 to 18/04/2020.

SHORT TERM TRAINING PROGRAMS

- Attended One Week Short Term Training Programme (Online) on “Massive MIMO and Millimeter Wave MIMO Technologies for 5G Networks”, organized by the Department of Electronics and Communication Engineering of Erode Sengunthar Engineering College (Autonomous) Perundurai, Erode from 07.09.2020 to 12.09.2020 (Phase-II).
- Attended Five days Short Term Training Programme on “Recent Trends & Challenges in Smart Grid Technology”, organized by the Department of Electrical and Electronics Engineering of Sri Ramakrishna Engineering College from 17 August to 21 August 2020.
- Attended Three days National level Short Term Training Programme on “E-Content Development in the Changing Education Scenario”, in association with Rotary Club of Kopargaon Central of Sanjivani College of Pharmaceutical Education & Research from 15 May to 17 May 2020.
- Attended 5 days AICTE Recognized Online Short-Term course on “Image and Embedded Processing”, organized by NITTTR, Chandigarh during May 11-15, 2020
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WORKSHOPS AND SEMINARS ATTENDED

- Participated in One Day Online National-Level Workshop on “Image Classification using MATLAB”, conducted by Department of CSE, SCSE, JAIN Deemed to be University, Bangalore, held on 24th May 2020.
- Attended CSIR Sponsored Two Days National Level Workshop on “Artificial Intelligence in Neurosciences: A Clinician’s Perspective”, held at SSM Institute of Engineering and Technology, Dindigul on 17th & 18th December 2019.
- Attended Two Days National Level Workshop on “VLSI Architecture for Medical Signal Processing Application”, held at PSNA College of Engineering and Technology, Dindigul on 7th & 8th September 2017.
- Attended One Day Workshop on “Android Application Development”, held at PSNA College of Engineering and Technology, Dindigul on 2nd August 2017.
- Attended Two Days Workshop on “Recent Research Trends in VLSI Technology”, held at PSNA College of Engineering and Technology, Dindigul on 17th & 18th March 2016.
- Attended Two Days Workshop on “Advances in VLSI, Embedded and Neuroscience in Medical Systems”, held at PSNA College of Engineering and Technology, Dindigul on 12th & 13th April 2016.
- Attended International One Day Workshop on “Writing and Publishing Research Paper in High Impact Factor Journals”, held at PSNA College of Engineering and

Technology, Dindigul on 12th & 13th December 2016.

- Attended Two Days Workshop on “RF Design and Measurements”, held at PSNA College of Engineering and Technology, Dindigul on 28th & 29th August 2009.
- Attended Two Days Workshop on “Embedded System and VLSI Technology”, held at PSNA College of Engineering and Technology, Dindigul on 13th & 14th February 2009.
- Attended online seminar on “Corona Disease Prediction using Traditional Machine Learning”, organized by KPR Institute of Engineering and Technology, Coimbatore on 27th April 2020.
- Attended Three Days Technical Workshop on “Application Design using Internet of Things (IOT) & Cloud Services”, organized by Department of ECE, Mepco Schlenk Engineering College, Sivakasi during April 25-27, 2019.
- Attended CSIR Sponsored National Level Seminar on “Artificial Neural Networks for Solving Medical Diagnosis Problems”, Organized by Department of ECE, NSN College of Engineering and Technology on 06.02.2019.
- Attended IE Sponsored two days National Seminar on “Network security”, Organized by Kalasalingam university, 02nd and 3rd Feb 2018.
- One day Workshop on “Android Application Development”, organized by Department of ECE, PSNACET, Dindigul on 02.08.2017.
- One day National Seminar on “Satellite Launch projects”, organized by Department of ECE, PSNACET, Dindigul on 09th September 2016.

PERSONAL INFORMATION

Name	: Dr.R. MohanRaj
Father’s	: N. Regunathan
Date of birth	: 03.04.1985
Phone No	: 8667670193
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DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge.



Dr.R. MOHANRAJ