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Education

Sl. No.	Degree	Year	Institute	Specialization
1	Ph.D. (Pursuing)	2026	IISc, Bangalore	Optical Communication
2	M.Tech	2011	SDM College of Engineering and Technology, Dharwad	Digital Electronics
3	BE	2006	Kalpataru Institute of Technology, Tiptur	Electronics and Communication Engineering

Professional Experience

Sl. No.	Date (from-to)	Designation	Organization
1	August 2013	Assistant Professor	Siddaganga Institute of Technology
2	March 2007 to December 2008	Software Engineer	Canarys Automations Limited

Positions held

1. Test Co-ordinator for 2 years
2. Team Leader in e-Yantra Robotics Teachers Competition
3. Departmental Placement Coordinator from 2012 to 2019

Affiliations of Professional organizations

1. IEEE Member
2. IEEE PHOTONICS SOCIETY Member
3. IEEE PHOTONICS SOCIETY EXECOM Member

Awards and Honors

1. BEST PAPER AWARD, IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics - ICIITCEE 2026, BNMIT, Bangalore
2. BEST PAPER AWARD, Paradigm Shifts in Communication, Embedded Systems, Machine Learning, and Signal Processing (PCEMS-2024), VNIT, Nagpur
3. 1st Rank in M.Tech, VTU, Belagavi

Courses Taught

1. Analog Electronic Circuits (CES-1)
2. Information Theory and coding (TCEE624)
3. Digital Electronic Circuits (CES-2)
4. Electronics Measurements & Instrumentation - [TC31]
5. Error Control Coding
6. Image Processing
7. VLSI Design
8. Digital Electronic Circuits Design and Verilog (3TE04)
9. Linear, Mixed Signals and RF IC's
10. Logic Design (3CCI03)
11. Switching Logic & Finite Automata Theory (TEPE27)
12. Advanced Digital Communication (1LDC3)
13. Introduction to Electronics and Communication Engineering (ESCO7)

Research Areas

- Optical Communication and optical sesnors

Publications

Journals

1. Naveenkumar M., Esamudra Sharanappa, S. Design and demonstration of a FBG based passive encoding technique at ONUs for branch monitoring in PONs. J Opt (2026). https://doi.org/10.1007/s12596-026-03081-7
2. Naveenkumar M and S. E. Sharanappa, "Intensity-Based Optical Interrogation Using Fused Fiber Demux as an Edge Filter by Reference FBG Method," in IEEE Sensors Letters, vol. 10, no. 1, pp. 1-4, Jan. 2026, Art no. 3500604, https://doi.org/10.1109/LSENS.2025.364443
3. Naveenkumar M, S. Esamudra Sharanappa and V. Satya Chidambara Swamy Vaddadi, "Fused Fiber Coupler Demux as an Edge Filter for Optical Sensing: A Low-Cost Solution," in IEEE Sensors Journal, vol. 25, no. 1, pp. 523-530, 1 Jan.1, 2025, https://doi.org/10.1109/JSEN.2024.3493139
4. Shivaleela, E.S., Naveenkumar M. Coherent receivers for fiber optic communications. ISSS J Micro Smart Syst 11, 207–216 (2022). https://doi.org/10.1007/s41683-022-00093-w
5. Suma D K and Naveenkumar M, “Evaluation of the Descriptive Type Answers using Neural Network Based OCR and Self-Organizing Map”, INTERNATIONAL JOURNAL OF RESEARCH IN ELECTRONICS AND COMPUTER ENGINEERING (IJRECE), Volume 7, Year 2019, Pages 3173-3178.
6. Purushotham S and Naveenkumar M, “Design and Verification of Wishbone Compliant Serial Peripheral Interface”, International Journal of Engineering Research & Technology , Volume 6, Year 2018, Pages 1-4.
7. Lavanya K and Naveenkumar M, “Transfer of medical images in DICOM standards using WADO and WADA services”, International Journal of Creative Research Thoughts, Volume 6, Year 2018, Pages 211-214.
8. Rajesh K M and Naveenkumar M, “An Adaptive-Profile Modified Active Shape Model for Automatic Landmark Annotation using OpenCV”, International Journal of Engineering Research in Electronic and Communication Engineering (IJERECE), ISSN 2394-6849, Volume 3, Issue 5, pp 18 to 21,May 2016.
9. Pavithra G and Naveenkumar M, “BER Performance Analysis of Bit Flipping Algorithms used for Decoding LDPC Codes”, International Journal of Engineering Research & Technology, ISSN 2278-0181, Volume-4, Issue 05, May-2015.
10. Naveenkumar M and Sunil S. Mathad, “Implementation of Reconfigurable Redundant Radix-4 Arithmetic Co-processor” International Journal of Programmable Device Circuits and Systems, ISSN 0974 -973X, Volume 3, No. 8, pp 428 to 435, July 2011.
11. Naveenkumar M, Suchithra N.P., Jayashree C. Nidagundi and Sunil S. Mathad, “Low Power and High Speed Clock Triggered Comparator Using 0.18µm Technology”, International Journal of Programmable Device Circuits and Systems, ISSN 0974 -973X, Volume 3, No. 8, pp 436 to 440 , July 2011.

Conference Proceedings

1. Naveenkumar M. and S. E. S., "Tunable Mm-Wave Generation by SOA based Four Wave Mixing," 2026 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), Bangalore, India, 2026, pp. 1-5, https://doi.org/10.1109/IITCEE67948.2026.11394584
2. A. Jani, A. PK, Naveenkumar M. and S. E. S, "A Study on the Effect of Polarization Scrambling on the Signals Transmitted Over Single Mode Fiber," 2025 IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER), Mangalore, India, 2025, pp. 520-523, https://doi.org/10.1109/DISCOVER66922.2025.11259027
3. Naveenkumar M. and Shivaleela, E. S., "Generation of Optical PAM-4 Signal using Retroreflectors for PON Monitoring", International Conference on Recent Advances in Photonics and Quantum Technologies (OPTIQ-2025), Year 2025
4. Deepak, S., Naveenkumar M., Gupta, N., Shivaleela, E.S. (2025). Data Transmission over x-Pol and y-Pol 1550 nm Carrier for Short Reach Optical Fiber Communications. In: Gupta, D., Kamble, V., Satpute, V., Kothari, A. (eds) Paradigm Shifts in Communication, Embedded Systems, Machine Learning, and Signal Processing. PCEMS 2024. Communications in Computer and Information Science, vol 2491. Springer, Cham. https://doi.org/10.1007/978-3-031-90577-3_30
5. Naveenkumar M and Shivaleela E.S., "Optical PAM signal generation at ONU for branch monitoring in PONs", 16th International Conference on Fiber Optics and Photonics (PHOTONICS-2024), Year 2024, Pages 1-2.
6. Naveenkumar M., S. E. Sharanappa and V. Satya Chidambara Swamy Vaddadi, "Design and Demonstration of a Fiber Fault Monitoring Scheme for Co-located ONUs in PONs," 2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), Bangalore, India, 2024, pp. 1-6, https://doi.org/10.1109/CONECCT62155.2024.10677175 .
7. Naveenkumar M, N. M and S. E. S, "Optical Demux as an Edge Filter for FBG Strain Sensing Applications," 2023 IEEE Workshop on Recent Advances in Photonics (WRAP), Prayagraj, India, 2023, pp. 1-3, https://doi.org/10.1109/WRAP59682.2023.10713024 .
8. Naveenkumar M, V. S. C. S. Vaddadi and E. S. Shivaleela, "Experimental Demonstration of Optical PAM-4 Generation for Short-Reach Optical Communications," 2022 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Bangalore, India, 2022, pp. 547-551, https://doi.org/10.1109/MAPCON56011.2022.10046730 .
9. Naveenkumar M ,V. S. Ch. Swamy Vaddadi; E. S. Shivaleela, "Optical PAM-4 Generation Using Fiber Bragg Gratings", XLV OSI SYMPOSIUM on Conference on Optics, Photonics & Quantum Optics 2022, Year 2022, Pages 534-535.
10. Naveenkumar M; Shivaleela E.S., "Design and Simulation of a Low-Cost BPSK Balanced Receiver", Frontiers in Optics & Photonics 2021, Year 2021, Pages 11-12.
11. D C KruthikChand; Naveenkumar M, "4 Bit Flash ADC Configuration utilizing TMCC and NOR ROM Encoder using 180nm CMOS Technology", International Conference on "Signal, Image Processing, Communication and Automation, Year 2017.

12. C VinodKumar; Naveenkumar M, “FPGA Execution of USB Transceiver Macrocell Interface with USB 2.0 particulars”, International Conference on “Signal, Image Processing, Communication and Automation, Volume 1, Year 2017, Pages 300-306.
13. K. M. Rajesh and Naveenkumar M, "A robust method for face recognition and face emotion detection system using support vector machines," 2016 International Conference on Electrical, Electronics, Communication, Computer and Optimization Techniques (ICEECCOT), Mysuru, India, 2016, pp. 1-5, doi: https://doi.org/10.1109/ICEECCOT.2016.7955175 .
14. Rajesh K M and Naveenkumar M, “An Adaptive-Profile Modified Active Shape Model for Automatic Landmark Annotation using OpenCV”, International Conference on Signal Processing, Communication and Computational Research -2016, Dept. of ECE, Vidya Vikas Institute of Engineering and Technology, Mysuru on 18th-19th May2016.
15. Abrar Ahamed and Naveenkumar M, “Design and Implementation of AES-128 on FPGA and preliminary Side Channel Analysis”, International Conference on Current Innovations in Engineering and Technology (ICCIET), Year 2015.
16. R.S. Sandhya and Naveenkumar M, “Unified Model for Real World Recognition System using HOG features” ,International Conference on Networks, Information and Communications 2014 (ICNIC 2014),Dept. of ECE, SVCE, Bengaluru,10-12 July 2014, PP 246-252.
17. Devaraj R and Naveenkumar M, “Image Encryption and Compression using Different Scalable Techniques”, National Conference on Emerging Trends in Communication and Biomedical Engineering (NCECB-2014), Dept. of Telecommunication Engg & Medical Electronics Engg., SSIT,Tumkur, 9-10 May 2014.
18. Nagarjun A Meti and Naveenkumar M, “Modified Digital Image Watermark Embedding Technique using combine DWT-DCT” , National Conference on Advanced Research in Electronics & Communication Engineering 2014 (NCAREC-2014), Dept. of ECE, R.L. Jalappa Institute of Technology, Doddaballapur, 22-23 April 2014.
19. Suchithra N.P., Naveenkumar M and Jayashree C. Nidagundi, “Low Power Asynchronous Binary-Search ADC Using Clock Gating Technique”, International Conference ICFOCS 2011, JN Tata Convention Center, IISc, Bangalore, 7 -9 August 2011.
20. Suchithra N.P., Naveenkumar M and Jayashree C. Nidagundi, “Design and Verification of Low Power and High Speed Comparator using VLSI Technology”, Conference on Evolutionary Trends in Information Technology 20th to 22nd May 2011.
21. Suchithra N.P., Naveenkumar M and Jayashree C. Nidagundi, “Design and Simulation of Low Power and High Speed Comparator using VLSI Technology”, National Conference NCSCV’11, Dept. of E&CE, Anna University of Technology, Coimbatore, 6-7 May 2011, pp 372 to 376.
22. Naveenkumar M and Sunil S. Mathad, “Implementation of Multiplication using Redundant Radix-4 Number System on FPGA”, National Conference N4C-11,Dept. of E& CE, R.V. College of Engineering, Bangalore, 29-30 April 2011, pp 11 to 14.