

Book Publications

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Antony Pradeesh, D., Arun Prasad, M. A., Karthikeyan, S., Senthilkumar, M., & Priya Sumitha, V. S.	Deep learning architectures for IoT systems	Royal Book Publications	2025	ISBN: 9789348505651, November
2	Priya Sumitha, V. S., Periasamy, M., Rajeswari, J., & Sridharan, S.	Digital image processing	Prime International Publication	2024	ISBN: 978-93-6010-680-5
3	Priya Sumitha, V. S., Geetha, A., & Keerthika, V.	Adapting the traditional guide model to visually impaired	Iterative International Publishers	2024	In Futuristic trends in computing technologies and data sciences (Vol. 3, Book 6, pp. 30-37), ISBN: 978-93-6252-441-6
4	Priya Sumitha, V. S.	Natural language processing	Prime International Publication	2023	ISBN: 978-93-6010-931-8
5	Arun Prasad, M., & Antony Pradeesh, D.	Basic electronics lab	Inam Pathippagam	2021	ISBN: 978-93-92293-16-0, December
6	Karthikeyan, S., & Antony Pradeesh, D.	Semiconductor devices lab	Inam Pathippagam	2021	ISBN: 978-93-92293-24-5, December
7	Arun Prasad, M., & Karthikeyan, S.	Digital electronics lab	Inam Pathippagam	2021	ISBN: 978-93-92293-30-6, December
8	Arun Prasad, M., & Karthikeyan, S.	Electronic circuits, radio, TV and instrumentation lab	Inam Pathippagam	2021	ISBN: 978-93-92293-31-3, December
9	Senthil Kumar, M., & Karthikeyan, S.	Microprocessor and microcontroller lab	Inam Pathippagam	2021	ISBN: 978-93-92293-37-5, December
10	Antony Pradeesh, D., & Senthil Kumar, M.	Industrial and Power electronics lab	Inam Pathippagam	2021	ISBN: 978-93-92293-38-2, December

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
11	Arun Prasad, M., & Senthil Kumar, M.	Electronic communication lab	Inam Pathippagam	2021	ISBN: 978-93-92293-39-9, December
12	Arun Prasad, M., Karthikeyan, S., Senthilkumar, M., & Gladstone Duraisami, R.	Digital principles and application	Inam Pathippagam	2018	ISBN: 978-0-359-38303-0, November

Journal Publications

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Arun Prasad, M., & Subiramaniyam, N. P.	Multispectral image feature extraction based on normalized object indexing model with deep learning techniques	Indian Journal of Natural Sciences	2024	-
2	Arun Prasad, M., & Subiramaniyam, N. P.	Multilevel thresholding for multi-spectral image using convolutional fuzzy clustering algorithm and gradient multilayer kernelized perceptron	International Journal of Intelligent Systems and Applications in Engineering	2023	Vol. 11, Pages 580-592
3	Arun Prasad, M., & Subiramaniyam, N. P.	Image segmentation through weighted quantum particle swarm optimization threshold to improve the efficiency of image	Stochastic Modeling and Applications	2022	-
4	Arun Prasad, M., & Subiramaniyam, N. P.	A hybrid approach of Adam optimization with CNN to remove noise on images	-	2022	Indexed in IEEE Xplore (conference-related work)
5	Arun Prasad, M.	Water monitoring system using embedded technology	International Journal of Creative Research Thoughts	2018	-

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
6	Arun Prasad, M., & Saravanakumar, O. M.	Security and power saving system using embedded technology	International Journal of Research in Electronics	2015	Vol. 2, Pages 14-17

Conference Publications

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Arun Prasad, M.	Efficiency enhancement of photovoltaic cells using hybrid perovskite-silicon tandem structure with surface passivation	National Conference on Innovations in Sustainable Materials	2025	-
2	Arun Prasad, M.	Analyzing and classifying colored sound signals with supervised learning	International Conference on Innovations in Intelligent Computing and Biological Sciences	2025	-
3	Arun Prasad, M.	Pioneering real-time forest fire detection: A comprehensive examination of advanced machine learning techniques in IoT-integrated systems for enhanced environmental adaptability	Proceedings of the First International Conference on Intelligent Computing and Sustainable Development (ICICSD 2023), Springer Nature	2023	-
4	Arun Prasad, M., & Mohan Kumar, S.	Coal mining BME680 rover	International Conference on Applied Physics and Electronics for Future Technology	2023	-
5	Arun Prasad, M., & Subiramaniyam, N. P.	A hybrid approach of Adam optimization with CNN to remove noise on images	2022 International Mobile and Embedded Technology Conference (MECON)	2022	Pages 527-530, IEEE indexed
6	Arun Prasad, M., Adish, M., & Dharun Dharshan, P.	Intelligence obstacle avoiding BOT	International Conference on Emerging Trends in Science and Technology	2022	-

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7	Arun Prasad, M.	High security and power saving techniques using embedded technology	International Virtual Conference on Global Restructuring: Trends and New Practices	2022	-
8	Arun Prasad, M., & Subiramaniyam, N. P.	An effective image denoising algorithm using deep convolutional neural networks	International Virtual Conference on Innovations in Science and Technology	2021	-
9	Arun Prasad, M., & Subiramaniyam, N. P.	Efficient removal of impulse noise in digital images	International Conference on Computing and Intelligent Systems	2021	-
10	Arun Prasad, M., & Senthilkumar, M.	Visual repository for hands-on learning	NAAC Sponsored National Seminar on Defining, Designing and Developing Learning Outcomes-Based Curriculum Framework in Arts and Science Colleges	2021	-
11	Arun Prasad, M.	PIR based security and power management system	International Conference on Computing and Intelligent Systems	2021	-
12	Arun Prasad, M., & Nandakumar, N.	Development of signal communication system with the aid of virtual instrumentation	National Conference on Innovations in Electronics and Material Science	2020	-

Funded Research & Academic Development Programmes

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Arun Prasad, M. (Coordinator), & Antony Pradeesh, D. (Coordinator)	DST sponsored a technology-based entrepreneurship development programme on "Internet of Things"	DST Sponsored Programme	2023	Funded project, ₹1,60,000

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
2	Arun Prasad, M. (Coordinator)	TNSCST sponsored a national level workshop on "Automation using PLC and SCADA"	TNSCST Sponsored Programme	2017	Funded project, ₹15,000

Patents

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Arun Prasad, M., et al.	A method and system for ECG-based cardiac disease detection using machine learning	-	2025	Patent Application No. 202541014052; Patent filed
2	Arun Prasad, M., et al.	An Internet of Things and machine learning-based COPD patients' health monitoring system	-	2023	Patent Application No. 202341047939; Filed on July 17, 2023; Engineering and Technology
3	Arun Prasad, M., et al.	IoT-enabled automated machine learning system for early detection of heart diseases	-	2023	Patent Application No. 202341047938; Filed on July 17, 2023; Engineering and Technology
4	Arun Prasad, M., et al.	An Internet of Things (IoT) based indoor air quality monitoring and control system	-	2022	Indian Patent Application No. 202241006541 A; Filed on February 11, 2022
5	Arun Prasad, M., et al.	An IoT-based algae growth monitoring system	-	2022	Patent Application No. 202141061644 A; Filed on January 28, 2022

Journal Publications

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Karthikeyan, S.	Voice broadcasting-based coal mine monitoring and controlling system with Zigbee and GSM technology	International Journal of Innovative Research in Science, Engineering and Technology	2016	Vol. 5(2), February

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
2	Karthikeyan, S.	IR light muscle and nerve pain reliever with stimulator	International Journal of Science Technology and Engineering	2017	Vol. 3(10), April
3	Karthikeyan, S.	Collecting smear for Papanicolaou test to detect early stage cervical cancer with the aid of electronic penis	International Journal of Scientific Research and Development	2017	Vol. 5(4), June
4	Karthikeyan, S.	Embedded sensor implementation in industrial products and industrial facilities	International Journal of Creative Research Thoughts	2018	Vol. 6(1), February
5	Karthikeyan, S.	Multipurpose prosthetic bore well rescue robot system	Journal for Advanced Research in Applied Sciences	2018	Vol. 5(3), March
6	Karthikeyan, S.	Security in embedded systems with differential dimensional view	International Journal for Science and Advance Research in Technology	2018	Vol. 4(4), April
7	Karthikeyan, S.	Arduino based water flow control system with IoT	Journal of Emerging Technologies and Innovative Research	2018	Vol. 5(11), November
8	Karthikeyan, S.	Arduino based drinking water bill calculator using GSM technology	International Journal for Scientific Research and Reviews	2018	Vol. 7(4)
9	Karthikeyan, S.	Development of medical robots in different applications: A review	Mukt Shabd Journal	2019	Vol. 7(4), May
10	Karthikeyan, S.	Evolution of amorphous-Si, CIGS, CdTe solar thin films with a comparative market analysis and reliability measures	International Journal for Scientific Research and Reviews	2019	Vol. 8(2)
11	Karthikeyan, S.	Facile synthesis of barium strontium titanate: Effects of processing parameters on optical and electrical properties	Materials Today: Proceedings	2021	May
12	Karthikeyan, S.	Structural, thermal and optoelectrical properties of pure and gadolinium doped barium strontium titanate for DSSC applications	Materials Today: Proceedings	2021	May

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
13	Karthikeyan, S.	An eco-friendly synthesis of barium strontium titanate nanoparticles: Investigation on tin doping on structural and optical properties	AIP Conference Proceedings	2022	January
14	Karthikeyan, S.	Routing techniques in secure group communication: Implementation and analysis	Recent Trends and Data Analytics (IEEE)	2024	April
15	Karthikeyan, S.	Cross-modal gated transformer for EEG-GSR seizure detection and stress stratification	IEEE Journal	2025	December
16	Karthikeyan, S.	Edge-ready early warning of heart failure using ECG-RR coupling and a synchrony index	IEEE Journal	2025	December

Conference Publications

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1	Karthikeyan, S.	Voice broadcaster-based coal mine monitoring and controlling system using Zigbee and GSM	National Conference on Recent Trends in Communication Engineering (NCRTCE-2K14), SNS College of Engineering, Coimbatore	2014	September 12
2	Karthikeyan, S.	Design of portable probe for ultrasound scan machine to aid identification of block in human penis	National Conference on Innovations in Electronics and Material Science (NCIEMS 2020), Nehru Arts and Science College, Coimbatore	2020	February 28
3	Karthikeyan, S.	Structural, thermal and optoelectrical behavior of pure and gadolinium doped barium strontium titanate for DSSC applications	International e-Conference on Advancements in Materials Science and Technology (iCAM 2020), Sathyabama Institute of Science and Technology, Chennai	2020	November 23-25
4	Karthikeyan, S.	Solar energy conversion properties of tin doped barium strontium titanate	6th International Conference on Nanoscience and Nanotechnology (ICONN-2021), SRM Institute of Science and Technology	2021	February 1-3

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5	Karthikeyan, S.	An eco-friendly synthesis of barium strontium titanate nanoparticles: Investigation on tin doping on structural and optical properties	International Conference on Advances in Materials, Computing and Communication Technologies (ICAMCCT 2021), Annai Vailankanni College of Engineering	2021	April 10
6	Karthikeyan, S.	From knowing skills to doing skills	NAAC Sponsored National Conference on Defining, Designing and Developing Learning Outcomes-Based Curriculum Framework, KG College of Arts and Science, Coimbatore	2021	November 18-19
7	Karthikeyan, S.	Design and development of smart poultry farming	International Virtual Conference on Global Restructuring: Trends and New Practices, Nilgiri College of Arts and Science	2022	January 4-5
8	Karthikeyan, S.	Dexterous controlled video player	International Conference on Emerging Trends in Science and Technology (ETST 2022), Hindusthan College of Arts and Science, Coimbatore	2022	May 5
9	Karthikeyan, S.	Advanced pedagogies of the upcoming era: An evidence-based selection	International Conference on Designing New Pedagogies in Higher Education, PSGR Krishnammal College for Women, Coimbatore	2023	January 27-28
10	Karthikeyan, S.	Fire fighting robot with SMS and call alert	International Conference on Applied Physics and Electronics for Future Technology, Sri Ramakrishna College of Arts and Science, Coimbatore	2023	March 11
11	Karthikeyan, S.	Structural, morphological and optical properties of tin doped barium strontium titanate for solar cell applications	National Conference on Futuristic Materials in Science and Technology (NCFMST-2023), Bannari Amman Institute of Technology, Erode	2023	October 5-6

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12	Karthikeyan, S.	Secure group communication implementation and analysis of various routing techniques	International Conference on Artificial Intelligence, Communication, IoT, Data Engineering and Security (IACIDS 2023), Christ University, Pune Lavasa	2023	November 23-24
13	Karthikeyan, S.	Structural, morphological and optical properties of MG doping SnO ₂ films for gas sensor application	International Conference on Smart NextGen Nanomaterials for Sustainable Development of Energy and Environment (ICSSE'24), Dr. NGP College of Arts and Science, Coimbatore	2024	October 15-16
14	Karthikeyan, S.	Green synthesis and characterization of magnetic iron oxide nanoparticles using Moringa oleifera extract for enhanced dye-sensitized solar cell performance	National Conference on Innovations in Sustainable Materials (NCISM-2025), Bannari Amman Institute of Technology, Erode	2025	February 7

Journal Publications

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1	Senthilkumar, M., Shanmugasundaram, K., Rajamanickam, A. T., & Nandakumar, N.	The design and development of surgical nurse assistance robotic systems by using AI with MSN network	Indian Journal of Natural Sciences	2024	Vol 15(87), ISSN: 0976-0997, December
2	Senthilkumar, M., Shanmugasundaram, K., & Nandakumar, N.	Development of surgical robots in different applications - A review	Indian Journal of Natural Sciences	2022	Vol 13(74), ISSN: 0976-0997, October
3	Nandakumar, N., Senthilkumar, M., & Kamaleshwary, G.	Design and development of voice controlled automatic wheel chairs	International Journal of Research Publication and Reviews	2021	Vol 3(10), ISSN: 2582-7421, August

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4	Arun Prasad, M., Nandakumar, N., & Senthilkumar, M.	A study about various image denoising algorithms	Alochana Chakra Journal	2020	ISSN: 2231-3990, May
5	Nandakumar, N., Senthilkumar, M., & Gladstone Duraisami, R.	Development of remote sensing in different stages – A review	MuktShabd Journal	2020	ISSN: 2347-3150, May
6	Senthilkumar, M.	Unobtrusive sensing and wearable device for soldiers using WNS	IJSTE – International Journal of Science Technology & Engineering	2017	Vol 3(10), ISSN: 2349-784X, April
7	Senthilkumar, M.	Breathing capability detector	International Journal of Electronics Communication and Computer Technology (IJECCCT)	2016	ISSN: 2249-7838, December

Conference Publications

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1	Senthilkumar, M., & Tharun Raj, S.	IoT-enabled real-time pH monitoring system for water and environmental applications	KG College of Arts and Science (ANRF & CTRD Sponsored Symposium)	2025	ISBN: 978-93-343-8777-3, September 18
2	Senthilkumar, M.	Integration of embedded systems with IoT: Advancements, challenges, and future perspectives	Hindustan College of Arts and Science (ETST 2025)	2025	ISBN: 978-93-48086-69-3, February 22
3	Senthilkumar, M.	Innovation and challenges for a sustainable future	Selvamm Arts and Science College (ICMSGE 2025)	2025	ISBN: 978-93-95143-80-6, February 14
4	Senthilkumar, M.	The global impact of nanotechnology on industry	Bannari Amman Institute of Technology (NCISM 2025)	2025	ISBN: 978-93-342-2480-1, February 7

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
5	Senthilkumar, M.	Revolutionizing healthcare: Embedded systems in biomedical applications	Hindustan College of Arts and Science (ETST 2024)	2024	ISBN: 978-81-969837-0-3, March 7
6	Senthilkumar, M., & Arun Prasad, M.	Visual repository for hands-on learning	KG College of Arts and Science (IQAC)	2021	ISBN: 978-93-5578-229-8, November 19
7	Senthilkumar, M., Nandakumar, N., & Karthikeyan, S.	Design of portable probe for ultrasound scan machine to aid in identifying blocks in the human penis	Nehru Arts and Science College (NCIEMS 2020)	2020	DBT Sponsored, February 28

Publications

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Antony Pradeesh, D., & Subiramaniyam, N. P.	IoT-enabled smart health monitoring system with deep learning models for anomaly detection and predictive health risk analytics integrated with LoRa technology	International Journal of Engineering Trends and Technology	2025	Vol 73(1), pp. 14-46, DOI: 10.14445/22315381/IJETT-V73I1P102
2	Antony Pradeesh, D.	An IoT-integrated multimodal deep learning framework for real-time early detection of neurological and cardiovascular disorders	ICCDS 2025	2025	DOI: 10.1109/ICCDS64403.2025.11209529, July

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
3	Antony Pradeesh, D., & Subiramaniyam, N. P.	Integrating advanced convolutional neural networks and IoT in health monitoring	Journal of Theoretical and Applied Information Technology	2024	Vol 102(6)
4	Antony Pradeesh, D., & Subiramaniyam, N. P.	Enhanced real-time analysis and anomaly detection in smart health monitoring systems	IEEE (ICCDS 2024)	2024	pp. 1-6

Patents

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
1	Pradeesh, A., et al.	A method and system for ECG-based cardiac disease detection using machine learning	-	2025	Patent Application No. 202541014052
2	Pradeesh, A., et al.	IoT-enabled automated machine learning system for early detection of heart diseases	-	2023	Patent Application No. 202341047938
3	Pradeesh, A., et al.	Internet of Things and machine learning based COPD patients' health monitoring system	-	2023	Patent Application No. 202341047939
4	Pradeesh, A., et al.	Detection and indication of spotting and bleeding in autistic women using wearable device	-	2023	Patent Application No. 202341041355
5	Pradeesh, A., et al.	Enhancing elderly care with machine learning-based fall detection systems	-	2023	Patent Application No. 202341022421

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6	Pradeesh, A., et al.	IoT based indoor air quality monitoring and control system	-	2022	Patent Application No. 202241006541
7	Pradeesh, A., et al.	IoT based algae growth monitoring system	-	2021	Patent Application No. 202141061644
8	Pradeesh, A., et al.	Automatic hand sanitizer dispenser with contactless temperature measurement	-	2020	Patent Application No. 202041054792

Journal Publications

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1	Priya Sumitha, V. S., & Arul Rajan, K.	Dynamic opportunistic networking for crowd sourced waste management and pollution control	Journal of Environmental Protection and Ecology	2024	Vol 25(4), pp. 1041-1050, March
2	Priya Sumitha, V. S., & Srinivasan, P.	Performance analysis and early detection of lung cancer with spiking neural networks	IEEE Journal	2024	October
3	Priya Sumitha, V. S., Sidharthan, V., & Vidhya, P.	Enhancing earthquake early warning systems using SVM and Random Forest	IEEE Journal	2025	October

Conference Publications

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1	Priya Sumitha, V. S., & Kaviyadharshini, S.	Chromobot	Sri Ramakrishna College of Arts and Science (ICFAT-2023)	2023	ISBN: 978-93-91347-54-3, March 11

S.No.	Author(s)	Title / Topic	Publisher / Organizer / Journal	Year	Additional Details
2	Priya Sumitha, V. S., & Geetha, A.	Improved intrusion detection model using decision support system	KG College of Arts and Science (ICMARGI-2023)	2023	ISBN: 978-93-5813-236-6, April 12
3	Priya Sumitha, V. S., & Geetha, A.	Deep learning based CNN model for invisible watermarking	Central University of Punjab (ICNGDT-2024)	2024	ISBN: 978-93-1397-26-4, January 3
4	Priya Sumitha, V. S., & Geetha, A.	Wavelet transform and deep learning for brain tumour MRI detection	Bannari Amman Institute of Technology (NCRTAS-2024)	2024	ISBN: 978-93-813-2036-5, January 24
5	Priya Sumitha, V. S.	Image fusion using CDF (9/7) wavelet transform	Bannari Amman Institute of Technology (NCISM-2025)	2025	ISBN: 978-93-342-2480-1, February 7
6	Priya Sumitha, V. S.	Multi-temporal medical image fusion for bile duct cancer detection	Hindustan College of Arts and Science (ETST-2025)	2025	ISBN: 978-93-48086-69-3, February 21