

Name	Dr.R Kotteeswaran
Qualification	M.E., Ph.D.
Designation	Associate Professor
Experience	22 Years 6 Months
Area of Specialization	Optimization Algorithms, Machine Learning, Deep Learning,
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Subjects Handled	Foundations of Machine Learning System Identification Digital Instrumentation Advanced Control Theory Biomedical Instrumentation Data Mining
Certification Courses	1) AICTE QIP PG Certification programme on Artificial Intelligence and Data Science, IIIT, Kottayam 2) Advanced Certification in Data Science and AI, IIT Madras 3) NPTEL Domain Scholar in Data Science
NPTEL Certifications	1) Deep Learning - IIT Ropar 2) Learning Analytics Tools 3) Probability for Computer Science 4) Python for Data Science 5) Introduction To Machine Learning 6) Data Analytics with Python 7) Control engineering
Research Activity	Anna University, Chennai Supervisor No : 2830053 (Since 2016) M.Tech(Embedded Systems) – Supervisor for 9 Projects B.E (EIE) – Supervisor for around 40 batches B.Tech (AI & DS) – Supervisor for 5 Batches
Scopus ID	https://www.scopus.com/authid/detail.uri?authorId=57220161463
WOS researcher ID	https://www.webofscience.com/wos/author/record/G-5015-2011

Publications

- 1 **Kotteeswaran Rangasamy**, S. Karthiyayini, D. Pulugu, N. Amre, R. Thiagarajan and R. Krishnamoorthy, "Enhancing Classification Performance in Breast Tissue Diagnosis Using TPE-Based Hyperparameter Optimization," *2025 11th International Conference on Communication and Signal Processing (ICCSP)*, Melmaruvathur, India, 2025, pp. 1190-1195, doi: 10.1109/ICCSP64183.2025.11088705. **(Scopus Indexed)**
- 2 B. Karthikeyan, V. B. Vijayan, **Kotteeswaran R**, M. K. Vidhyalakshmi, R. Krishnamoorthy and R. Thiagarajan, "ELNN: A Novel Approach to Identify Periodontal Disease From Panoramic Radiographs in Earlier Stages Using Enhanced Logical Neural Networks," *2024 International Conference on Smart Technologies for Sustainable Development Goals (ICSTSDG)*, Chennai - 600077, Tamil Nadu, India, 2024, pp. 1-6, doi: 10.1109/ICSTSDG61998.2024.11026473. **(Scopus Indexed)**
- 3 R. K. Shaik, V. B. Vijayan, **Kotteeswaran R**, A. L. Mangrulkar, R. Krishnamoorthy and R. Thiagarajan, "A Smart and Intelligent Robotic Design to Rescue Human from Disaster Conditions Using Artificial Intelligence Assistance," *2024 International Conference on Smart Technologies for Sustainable Development Goals (ICSTSDG)*, Chennai - 600077, Tamil Nadu, India, 2024, pp. 1-6, doi: 10.1109/ICSTSDG61998.2024.11026184. **(Scopus Indexed)**
- 4 Anandhakrishnan, S., Srinivasan, R., **Kotteeswaran, R.** (2025). Machine Learning for Classification of Diabetic Foot Ulcer using Thermograms. In: Ghosh, A., Sapkal, V., Kamachi Mudali, U. (eds) Recent Advances in Energy Transitions Towards Sustainable Development. CHEMCON 2023. Springer Proceedings in Materials, vol 67. Springer, Singapore. https://doi.org/10.1007/978-981-96-3841-3_18. **(Scopus Indexed)**
- 5 Vinston, R.R., **Kotteeswaran, R.**, Fouzia Sulthana, K., Subha Priyadharshini, A., Robinsonshini, J.M., "Leveraging AI to Promote Sustainable Energy Distribution", *Achieving Sustainability in Multi Industry Settings with AI*, 2025, pp. 37–62 **(Scopus Indexed)**
- 6 Maniraj, S.P., Rose, J.D., Arunachalam, **Kotteeswaran Rangasamy**, Vishal Ratansing Patil & Selvakumarasamy Kathirvelu, "Polar Region Climate Dynamics: Deep Learning and Remote Sensing Integration for Monitoring Arctic and Antarctic Changes". *Remote Sensing Earth System Science* (2024). DOI: 10.1007/s41976-024-00147-7 **(Scopus Indexed)**
- 7 Shaik, R.K., Priya, S.S., Saranya, N, **Kotteeswaran R.**, S. Ramya & R. Thiagarajan, "Cutting-Edge Climate Analysis: Combining MLP-GRU and Remote Sensing Technologies". *Remote Sensing Earth System Science* (2024). DOI: 10.1007/s41976-024-00128-w. **(Scopus Indexed)**

- 8 S.Vadivukkarasi, S. Sharma, Kotteeswaran R, I. Das, R.Krishnamoorthy and R.Thiagarajan, "Experimental Evaluation of Artificial Intelligence Enabled Hate Speech Recognition over Social Network Platform using Enhanced Learning Approach," *2024 4th International Conference on Soft Computing for Security Applications (ICSCSA)*, Salem, India, 2024, pp. 417-423, doi: 10.1109/ICSCSA64454.2024.00073. **(Scopus Indexed)**
- 9 J. Madhavan, Mohammed Salim, Udayakumar Durairaj, **R. Kotteeswaran**, "Wheat seed classification using neural network pattern recognizer", *Materials Today: Proceedings*, Volume 81, Part 2, 2023, Pages 341-345, 10.1016/j.matpr.2021.03.226. **(Scopus Indexed)**
- 10 J.J. Nivetha, **R.Kotteeswaran**, "Study and Analysis of Various Control Algorithms for Coupled Tank System", 10th International Conference on "Contemporary Engineering and Technology – 2022" (ICCET – 2022) May 21st – 22nd, 2022, Organized by Organization of Science and Innovative Engineering & Technology (OSIET). Chennai, India.
- 11 **Kotteeswaran Rangasamy**, Rangam Vijay Ramraj Rangam, Sivagurunathan G, "Performance Assessment of Conventional and Cuckoo Search Algorithm based Centralized PID Controller for Multivariable Non-square System with RHP Zeros", 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation (ICMICA 2020), Department of Electrical Engineering, NIT, Kurukshetra, IEEE Explore **(Scopus Indexed)**
- 12 **Kotteeswaran Rangasamy**, Sivagurunathan G, Rangam Vijay Ramraj, "Performance Assessment of MOFA Based Decentralized PI Controller of Fluidized Bed Coal Gasifier", 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation (ICMICA 2020), Department of Electrical Engineering, NIT, Kurukshetra, IEEE Explore **(Scopus Indexed)**
- 13 G Sivagurunathan, **R Kotteeswaran**, M Suresh, A Kirthini Godweena, "Design of centralized controller for multivariable process using MOPSO algorithm", *Indian Journal of Science and Technology*, Volume: 14, Issue: 26, 2021, Pages: 2223-2237, DOI: 10.17485/IJST/v14i26.539 **(Scopus Indexed)**
- 14 S.Varun Kumar, P.V.Yokeshraj, and **R.Kotteeswaran**, "Optimized Inertial Navigation System with Kalman Filter based altitude determination for aircraft in GPS Deprived Regions", 3rd International Conference on Computing Methodologies and Communication (ICCMC), IEEE Explore, pp. 673-678, 2019. **(Scopus Indexed)**
- 15 Sivagurunathan. G, **Kotteeswaran R** and Suresh M, "Bat Algorithm based Centralized PI Controller for a Nonsquare Multivariable System with RHP Zeros", *International Conference on Instrumentation and Control Engineering (ICECON - 2019)*, NIT Trichy
- 16 P. Subha Hency Jose, G. Jims John Wessleyd, **R. Kotteeswaran**, "Efficacy of Classical Tuning Method for Nonlinear Multi Variable Processes - A Case Study with Fluidized Bed Coal Gasifier,

ARPN Journal of Engineering and Applied Sciences, Vol. 14, No. 12, pp. 2170-2184, 2019.
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- 17 J Ramyashree, MR Roja, G Sivagurunathan, **R Kotteeswaran**, “Firefly Algorithm Based Multivariable PID Controller Design for MIMO Process”, International Journal of Engineering & Technology, 7(2.31) pp. 41-44, 2018. **(Scopus Indexed)**
- 18 Reshmi R, Gnanasoundharam J, **Kotteeswaran R**, “Design of Self-Tuning Regulator for Non-Linear Unstable System”, International Journal of Pure and Applied Mathematics, Vol 118, No. 20, pp. 61-66, 2018, ISSN 1311-8080, EISSN 1314-3395
- 19 A. Sophia Mary, **R. Kotteeswaran** and C.Pandeeswaran, “Design of Wireless Sensor Network Protocol Using CONTIKI OS”, International Journal of Pure and Applied Mathematics, Vol. 118 No. 18, pp. 4671-4678, 2018, ISSN 1311-8080, EISSN 1314-3395
- 20 J.J.C.Philominna, **R.Kotteeswaran**, ‘Performance Analysis of Heavy Duty Gas Turbine using Cuckoo Search and Firefly Algorithm based PI Controller’, International Journal of Pure and Applied Mathematics, Vol. 117, No. 16, pp.241-249, 2017, ISSN 1311-8080, EISSN 1314-3395.
- 21 SV Subhasree, **R Kotteswaran**, ‘Modelling and Control of Polymer Electrolyte Membrane Fuel Cell’ Indian Journal of Science and Technology, Vol. 9, Issue 13, pp. 1-7, 2016.
- 22 **Kotteeswaran R** & Sivakumar L, ‘Coal Gasifier Control – A Heuristic Algorithm Based Optimization Approach’, Second International Conference on Intelligent Computing and Applications (ICICA 2015), Organised by KCG College of Technology, 5th and 6th February 2016.
- 23 **Kotteeswaran, R** & Sivakumar, L, ‘Lévy guided Firefly Algorithm based tuning of decentralised PI Controller of Nonlinear Multivariable system - Coal Gasifier’, IFAC Proceedings Volumes IFAC Papersonline, 2014, 3(PART 1), pp. 127–134. **(Scopus Indexed)**
- 24 **R. Kotteeswaran. L. Sivakumar**, “Soft Computing based Partial Retuning of Decentralised PI Controller of Nonlinear Multivariable Process”, Advances in Intelligent Systems and Computing, 2014, 248 VOLUME I, pp. 117–124. **(Scopus Indexed)**
- 25 **Kotteeswaran R**, Sivakumar L, ‘Performance Evaluation of Optimal PI Controller for ALSTOM Gasifier during Coal Quality variations’, Journal of Process Control, Elsevier publishing, vol. 24, no. 1, pp. 27-36, 2014, ISSN : 09591524, DOI: 10.1016/j.jprocont.2013.10.006. **(Scopus Indexed)**
- 26 **Kotteeswaran R**, Sivakumar L, ‘Optimal Tuning of Decentralized PI Controller of Nonlinear Multivariable Process using Archival based Multi-Objective Particle Swarm Optimization’, Modelling and Simulation in Engineering, vol. 2014, Article ID 504706, 16 pages, 2014, ISSN: 16875591, E-ISSN:16875605, DOI: 10.1155/2014/504706. **(Scopus Indexed)**
- 27 **Kotteeswaran. R**, Sivakumar. L, “Normalized Normal Constraint Algorithm based Multi Objective Optimal Tuning of Decentralized PI Controller of Nonlinear Multivariable Process-

- Coal Gasifier”, Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, 2013, 8297 LNCS(PART 1), pp. 333–344. **(Scopus Indexed)**
- 28 Kotteeswaran, R., Sivakumar, L., “A novel bat algorithm based re-tuning of PI controller of coal gasifier for optimum response”, Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, 2013, 8284 LNAI, pp. 506–517. **(Scopus Indexed)**
- 29 **Kotteeswaran, R** & Sivakumar, L 2013, ‘Optimal Partial-retuning of decentralised PI controller of coal gasifier using Bat Algorithm’, Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, 2013, 8297 LNCS(PART 1), pp. 750–761. **(Scopus Indexed)**
- 30 **Kotteeswaran, R** & Sivakumar, L 2013, ‘Partial-retuning of decentralised PI Controller of nonlinear multivariable process using Firefly algorithm’, 2013 International Conference on Human Computer Interactions ICHCI 2013, 2013, 6887816 **(Scopus Indexed)**
- 31 **Kotteeswaran, R** & Sivakumar, L 2012, ‘Lower Order Transfer Function Identification of Nonlinear MIMO System-ALSTOM Gasifier’, International Journal of Engineering Research and Applications (IJERA), vol. 2, no. 4, pp.1220-1226. ISSN : 2248-9622
- 32 **R.Kotteeswaran**, L.Sivakumar, ‘Linear Identification of Nonlinear MIMO system-Alstom Gasifier’, First international conference on Modern Trends in Instrumentation and Control(ICIC2011), PSG College of Technology, 2-3 Sep 2011.
- 33 K.P.Sanalkumar, S.Anu H.Nair, **R.Kotteeswaran**, “An Artificial Neural Network Based Expert System for Diagnosing Angina”, National Conference Of Instrumentation For Biomedical Engineering, organized by Bharath Institute of Higher Education & Research, Chennai-73 on 15th Mar 2005.
- 34 **R. Kotteeswaran**, “Design of Fuzzy Neuro Controller”, UGC Refresher course on Mechatronics”, organised by Department of Production Technology, MIT Campus, Anna University, Chennai on 10-12-2004.
- 35 **R. Kotteeswaran**, “Biotelemetry”, AICTE sponsored staff development programme”, organised by Department of Instrumentation and Biomedical Engineering, Bharath Institute of Higher Education and Research”, Chennai from 24-11-2003 to 06-12-2003.
- 36 A.Senthilkumar, **R.Kotteeswaran**, “Smart Sensor Technology”, IEEE Sponsored National Conference on Intelligent Systems, Automation & Signal Processing (NCIASP’03), organized by R.M.D. Engineering College, Chennai on 1st Mar 2003.

Research Statistics

Score	Google Scholar	Scopus	Web of Science
Publications	31	22	7
Citations	152	98	22
h-index	8	6	2

Patents Published

- 1) **Dr.Kotteeswaran R**, Ashwin B, Karthicj raja B, Srivathsan M K, “AI Powered Digitization of Tamil Handwritten Documents Using Fine-Tuned Transformer-Based OCR” Indian Patent – 202541043108, Filed date : 04-05-2025, Published Date : 30-05-2025.
- 2) K.Pranathi, Dr. Ajay Jaiswal, Ashok Ram. P, Manju Bagga, **Dr.R.Kotteeswaran**, Dr.R.Thiagarajan, kanchan kamlesh Ingale, V.Balaji Vijayan, V.Anithalakshmi, “Malicious Attack Detection in Real Time IOT Devices will assess their Vulnerabilities using Deep Learning Algorithms”, Indian Patent – 202541027595, Filed date : 25-03-2025, Published Date : 11-04-2025.
- 3) Dr. P. Radhakrishnan, Dr.R.Thiagarajan, S.Saravarna kumar, V.Manimekalai, Dr.l Jeya Daisy, Shivakumar.E, **Dr. R.Kotteeswaran**, Anithalakshmi “Detecting Abnormal Patterns In Data, For Crop Productivity Using Deep Learning Approaches”, Indian Patent – 202541009386, Filed Date: 05-02-2025, Published Date: 14-02-2025
- 4) Niharika, N. Nagendra, S. Nanda Kishor, Ashok Ram. P, Rajesh kumar, Dr.S.M.Shamsheer Daula, Pappula Madhavi, **Kotteswaran Rangasamy**, S.Kranthi, “IOT Devices To Detect Irregularities In Monitoring Traffic Patterns Using A Deep Learning Based IDs”, Indian Patent : 202441105058, Filed Date : 31-12-2024, Published Date : 17-01-2025
- 5) Dr. Reddi Khasim Shaik, Dr. N. Gobalakrishna, **Kotteeswaran R**, Anju Bagga, Mrs. Vijaylaxmi Mudnu, Mr.Ranganath Honnalli, Ravichandra Honnalli, Pandikumar S, “Securing and Providing Safety in Industrial Environment and Integrating App-Embedded Robots Using IO”, Indian Patent – 202441058587, Filed date: 02-08-2024, Published Date: 09-08-2024.
- 6) Gayatri Joshi, **Kotteeswaran R**, Midhunadharshini G, M.Jhansi Rani, S.Aishwarya, Priyadharshini, Divyedharshini G, S.Krishnapriya, Dr.Madhurikkha S, Athappan V, “Prediction and Pattern Identifcaion of Crime Data using Data Mining Techniques”, Indian Patent-202441030435, Filed Date: 16-04-2024, Published Date: 26-04-2024
- 7) **Kotteeswaran R**, Ansar Isak Sheik, Dhirajkumar Gupta, Manthena Swapna Kumari, Yogita Nikhare, Sathish kumar S, Smitha Kurian, V.Balaji Vijayan, Athappan V, “Alert System for Maintenance of Personal Hygiene using Deep Learning Techniques”, Indian Patent – 202441030432, Filed Date : 16-04-2024 , Published Date : 26-04-2024.

- 8) **R.Kotteeswaran**, Athappan V, T.Subburaj, S.Sasikala, A Muthukumaravel, SheShang Degadwala, Vishal Ratansing Patil, G. Sundar, P. Patchaiammal, “Firm Ware Vulnerability Spoofing Attacks Persistent Control Detection using Machine Learning Supervi”, Indian Patent – 202341058149, Filed Date : 30-08-2023, Published Date : 26-01-2024.
- 9) Dr. B Yamini, N. Praveena, **Dr. R. Kotteeswaran**, Dr Abdul Rahman H Ali, Dr. N. Gobalakrishnan, Dr. R. Thiagarajan, V. Athappan, Dr. R. Ramkumar, B. Anjaneer Kumar, “Cryptographic Hash Encryption Secure Algorithm of Confidential Data by User Validating Scheme for the Medical Healthcare”, Indian Patent – 202241054975, Filed Date: 26-09-2022, Published Date : 07-10-2022.

Contribution at International Level

1. International Scientific Committee member of International Conference on Mechatronics, Control and Automation Engineering (ICMCAE2019) which will be held on December 27-29, 2019 in Guangzhou, China. <http://www.icmcae.org/com.html>
2. International Scientific Committee member of International Conference on Energy, Power, Environment and Computer Application (ICEPECA2019) to be held in Wuhan, China during January 20-21, 2019. <http://www.icepeca2019.org/com.html>
3. International Technical program Committee member of 2nd International Conference on Communication, Network and Artificial Intelligence (CNAI2019) to be held in Guangzhou, China on December 27-29, 2019. <http://www.cnai-conf.org/com.html>
4. International Scientific Committee member of 4th International Conference on Computational Modeling, Simulation and Applied Mathematics (CMSAM2019), Guangzhou, China on December 27-29, 2019. <http://www.4th-cmsam.com/com.html>
5. Review committee member of 3rd International Conference On Computing Methodologies and Communication (ICCMC 2019), March 27-29, 2019 | Surya Engineering College, India
6. International Scientific committee member of “2019 International Conference on Energy, Power, Environment and Computer Application (ICEPECA2019)” held at Wuhan, China during January 20-21, 2019. <http://www.icepeca2019.org/com.html>
7. Review committee member of 26th Mediterranean Conference on Control and Automation, June 19-22, 2018, Zadar, Croatia
8. Technical Committee member of EEPE2018 2018 International Conference on Energy, Environment and Power Engineering (EEPE2018), held on May 27-28, 2018 in Sanya, China. <http://www.eepe2018.org/com.html>

Reviewer of the following Internal Journals

Sl. No	Journal Name	Publisher
1.	International Journal of Electrical Power and Energy Systems	Elsevier
2.	Engineering Applications of Artificial Intelligence	Elsevier
3.	ISA Transactions	Elsevier
4.	Control Engineering Practice	Elsevier
5.	Microprocessors and Microsystems	Elsevier
6.	Proceedings of IMechE : Journal of Systems and Control Engineering	SAGE
7.	Proceedings of IMechE : Journal of Materials : Design and Applications	SAGE
8.	Proceedings of IMechE : Part B Journal of Engineering Manufacture	SAGE
9.	Journal of Medical Systems	Springer
10.	International Journal of Automation and Computing	Springer
11.	Applied Nanoscience	Springe
12.	Soft Computing	Springer
13.	Wireless Networks	Springer
14.	Journal of Super computing	Springer
15.	Journal of Ambient Intelligence and Humanized Computing	Springer
16.	International Journal of System Assurance Engineering and Management	Springer
17.	Personal and Ubiquitous Computing	Springer
18.	Journal of Intelligent Systems	De Gruyter
19.	Mediterranean Conference on Control & Automation	IEEE Explore