

Dr. V. Balaji, B.Tech, M.Tech Ph.D.

Associate Professor | Researcher | Networking Specialist

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Google Scholar: <https://scholar.google.com/citations?user=SnIHeyEAAAAJ&hl=en> | Scopus:

<https://www.scopus.com/authid/detail.uri?authorId=55977341400>

Academic Profile

Highly accomplished academician and researcher with 23 years of teaching experience in premier engineering institutions. Expertise in MANET, routing algorithms, wireless networks, security, AI-based communication systems and IoT. Strong track record of SCI/Scopus publications, patents, and funded research activities. Recognized CISCO Certified Instructor and research supervisor under Anna University.

Key Highlights

- 23 years of experience in Engineering Education (UG & PG).
- 54+ Publications in SCI/Scopus/UGC Journals.
- 8 Patents Filed, 1 UK Patent Granted, 1 Canadian Copyright 3 Indian Utility Patent.
- Guiding 6 Ph.D. Research Scholars (Anna University).
- Certified CISCO Instructor and SPOC for CISCO Networking Academy.
- Editorial Board Member in multiple international journals.
- Strong experience in curriculum design, accreditation (NBA/NAAC), and research development.

Educational Qualifications

1. Ph.D. (Information & Communication), Anna University Chennai, 2014.
Thesis: Performance Analysis of Adhoc Networks using Link Quality in Dynamic Mobile Environment
2. PG Certificate Program (AICTE–QIP)-18 Credits, Title of Program: Cyber Security,
Institution: IIIT Dharwad, Year of Completion: 2025
3. M.Tech – Applied Electronics, Bharath Institute of Higher Education and Research., 2007, CGPA 8.26/10.
4. B.Tech – ECE, Bharatiyar College of Engineering and Technology, Karaikal, Puducherry, 2003

Professional Experience

Name of the Employer	Designation	Responsibility	Period of Working		Total Years of Experience
			From	To	
RMK Engineering College	Professor	Handling Thoery for B.E and B.Tech	04/06/2026		2 Months
Easwari Engineering College, Chennai	Associate Professor	Handling Theory for B.E and B.Tech. Higher Education Incharge for the Department. Additional Responsibility Held: Single Point of Contact and Trainer for the CISCO Academy and its Courses.	09/07/2024	Till Date	1 Year 8 Months

KCG College of Technology, Chennai	Associate Professor	Handling Theory for B.E and M.E. Students, Research Coordinator for the Department, Student Affair Incharge for the Department. Additional Responsibility Held: Admission In Charge Single Point of Contact and Trainer for the CISCO Academy and its Courses.	17/06/2019	31/05/2024	5 Years
Sri Devi Women's Engineering College, Hyderabad	Professor & Head	Handled Theory and Projects for B.Tech. Academic Planning and Research Incharge SPOC for NPTEL NBA Department Coordinator	04/07/2016	30/05/2019	3 Years
Prince Shri Padmavathy Venkateshwara Engineering College, Chennai	Assistant Professor	Handled Theory for B.E / M.E Students. Guided Projects of UG /PG Students SPOC for NPTEL Local Chapter	01/07/2015	14/05/2016	10 Months
SCSVMV University, Kancheepuram	Assistant Professor	Handled Theory, Lab for B.E/ B.Tech / M.Tech Students. Mentoring for B.E/ B.Tech Group Coordinator for Final year Organized Workshop and Short Term Course Guided Projects of UG /PG Students	02/06/2014	29/06/2015	1 Year
SASTRA University, SRC Campus, Kumbakonam	Assistant Professor(II)	Handled Theory, Lab for B.E/ B.Tech / B.Sc. Students. Head of Technical Events Lab Manual In charge Organized Workshop and Short Term Course Guided Projects of UG Students	06/06/2012	30/04/2014	2 Years
PERI Institute of Technology, Chennai	Assistant Professor	Handled Theory, Lab for B.E Students HOD in charge for One year Instrumental in setting up Labs University Exam Cell Coordinator	27/10/2010	30/04/2012	2 Years

Dhanalakshmi College of Engineering, Manimangalam, Chennai	Lecturer	Handled Theory, Lab for B.E Students NBA Coordinator Member of ISO Auditing Team Branch Counsellor for IEEE Students Branch University Exam Cell Coordinator Guided Projects of UG Students	05/07/2007	25/10/2010	3 Years 3 Months
Assan Memorial College of Engineering and Technology, Chengalpattu	Lecturer	Handled Theory, Lab for B.E Students	02/01/2007	28/05/2007	6 Months
Adhiparasakthi College of Engineering, Kalavai	Lecturer	Handled Theory, Lab for B.E Students University Exam Cell Coordinator Guided Projects of UG Students	06/06/2005	06/12/2006	1 Year 6 Months
Karapaga Vinayaga College of Engineering and Technology, Chengalpattu	Lecturer	Handled Theory, Lab for B.E Students	29/05/2004	26/05/2005	1 Year
Perumal Sami Rishi Engineering College, Maduranthagam	Lecturer	Handled Theory, Lab for B.E Students University Exam Cell Coordinator	01/06/2003	30/04/2004	1 Year
Total Experience					22 Years

Subject Handled in past 5 Years

S.No	Title of Course Taught	U.G / P.G	Year	Remarks
1	Signals and System	UG	2024	93%
2	Consumer Electronics	UG	2024	94%
3	Electric Circuits and Electronic Devices	UG	2004	97%
1	Circuit Analysis	U.G	2023 2022	82% 97.5%
2	Networks and Security	UG	2022	93%

3	Communication Networks	UG	2019 2021 2022	83% 87% 87%
4	Digital Communication	UG	2019	79%
5	Computer Networks (AIDS)	UG	2022	96%
6	Electronic Devices and Circuits	UG	2022	80%
7	Adhoc and Wireless Sensor Networks	UG	2020	100%
8	Wireless Networks	UG	2020 2022	100%
9	Cryptography and Network Security	UG	2020	100%
10	Internet of Things	PG	2022	100%
11	Advanced Digital Communication	PG	2021	75%

Publication ,IPR Details and Research:

Publications:[Last 5 Years]

2025:

1. J Eric Clapten, V Balaji (2025), “ A gated temporal attention based intra prediction framework for robust deepfake video detection” Scientific Reports, Springer Nature 15, Article Number 38540. <https://doi.org/10.1038/s41598-025-22333-3> **SCI-E**
2. C. Jayasri, V. Balaji, C. M. Nalayini & S. Pradeep (2025), “Detecting cyber attacks in vehicle networks using improved LSTM based optimization methodology” Scientific Reports, Springer Nature, 15, 19141 (2025). <https://doi.org/10.1038/s41598-025-04643-8> **SCI-E**

2024

1. Balaji, V., Afsal, J., Santhosh, K.K., Andreana, C (2024,) “An Efficient and Secured Data Transmission in Vanet Using LBK Interfaced AI-Optimized Routing Algorithm” 2024 International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence, RAEEUCCI 2024, 2024
2. Karimulla Syed, S. Joshua Kumaresan, P. Muthu Krishnammal, A. Kaleel Rahuman, Balaji V, Beenarani B (2024), “Research on Optimization of Electric Pneumatic Combined Braking Control for Urban Rail Transit” 2023 Second International Conference On Smart Technologies For Smart Nation (Smart Tech Con), IEEE Xplore, <https://doi.org/10.1109/SmartTechCon57526.2023.10391566>
3. C. Fabbina, T. Muthamizhan, Md Mujahid Irfan, G. W. Martin, M. Shadhik, V. Balaji (2024), “Design Of Optimized PID Controller For Switched Reluctance Generator In WECS Applications” 2023 International Conference on Energy, Materials and Communication Engineering (ICEMCE), IEEE Xplore, <https://doi.org/10.1109/ICEMCE57940.2023.10434105>

2023

1. S Bharathiraja, S Selvamuthukumaran, V Balaji (2023), “Energy Efficient Cluster Head Selection and Routing Algorithm using Hybrid Firefly Glow-Worm Swarm Optimization in WSN” KSII Transactions on Internet and Information Systems 17(8), pp. 2140-2156. **SCI-E**
2. V. Balaji, Aishwarya D; Bramhani Ch; Mahima Kumari (2023), “ Smart Crop Production System Using Machine Learning Techniques”, Proceedings of 8th IEEE International Conference on Science, Technology, Engineering and Mathematics, ICONSTEM 2023, <https://doi.org/10.1109/ICONSTEM56934.2023.10142646>

2022

1. Balaji, V., Tina Susan Thomas (2022) , Space Constrained Fast Association Rule Mining with Optimal Support and Confidence Threshold Using Grammatical Evolution: An Effective Nudge in Policymaking” Iranian Journal of Information Processing and Management pp. 43-64, 10.35050/JIPM010.2022.041.

2021

1. Balaji, V., Aparna, P., Abhinaya, V. Anbarasi, D.(2022),” New approach to optimize groundwater usage using multi-criteria decision making techniques” Journal of Physics: Conference Series 2027(1), DOI 10.1088/1742-6596/2027/1/012024
2. Valarmathy, G. ,Sekar, K., Balaji, V. , “ An Automated Framework to Segment and Classify Gliomas Using Efficient Shuffled Complex Evolution Convolutional Neural Network” Journal of Medical Imaging and Health Informatics, Volume 11, Number 11, November 2021, pp. 2765-2770(6), DOI: <https://doi.org/10.1166/jmihi.2021.3868-SCI>

2020

1. Dr.V. Balaji , Dr.T.K.S.Rathish Babu, Dr. V. Anantha Krishna, Dr. A. Anitha Juliette [2020], “A Novel Approach to detect the level of Congestion in a Wireless network” Journal of Computational and Theoretical Nanoscience, Volume 17, Number 4, April 2020, pp. 1688-1691(4), <https://doi.org/10.1166/jctn.2020.8425>
2. V. Balaji G. Valarmathy, K. Sekar (2020), “An Automated Framework to Segment and Classify Gliomas Using Efficient Segmentation and Classification” Vol. 29 No. 10s (2020)Page No: 7539- 7547
3. Tina Susan Thomas., V Balaji (2020),” Computing Starts with Arrangement: Developing a Classification Tool Integrating The Apriori Algorithm In The Association Rule of Data Mining”, Vol. 29 No. 10s (2020)Page No: 7255-7258
4. Balaji, V., Rathish Babu, T.K.S., Krishna, A. (2020), Software engineering techniques for block chain technology”, International Journal of Recent Technology and Engineering 8(2), pp. 3672-3675
5. Balaji, V., Rathishbabu, T.K.S., Anantha Krishna, V., ...Ramasubramanian, M. (2020), “ Mining Specific Content Search using Clustering Algorithm”, Journal of Physics: Conference Series 1228(1) DOI 10.1088/1742-6596/1228/1/012057
6. Balaji, V., Jayanthi, S.N., Bhuvaneswari, N., ...Mathangi, R.P., Thamizharasan, K. (2020), “ Dielectric behavior of NLO active dl-methionine doped copper sulphate (MCS) crystal” Materials Today: Proceedings pp. 2361-2365

IPR Details:**Patent Published:**

S.No	Title of Patent	Patent Number / Reference Number	Published Date
1	A Navigation And Information Assistive Spectacle	201741024458 A/ E-12/476/2017/CHE	14/07/2017
2	Smart Compact Structural Instrument	201741036984 A / E-106/603/2017/CHE	27/10/2017
3	An Apparatus and Method Of Artificial Intellegince Security Wearable System With Internet Of Things	201941031483	2019
4	A Methodology To Predict The Impact Of Cachexia And Its Adverse Effects On Patients Suffering From Chronic Heart Diseases	202211067244 A	2022
5	Deep learning based technique integrated with time series data for accurate prediction of plant Growth and yield	202211069352 A	2022
6	Artificial intelligence-based approach for evaluating and revealing consumer insights through visual analysis of social Media images	.202241076939 A	2022
7	Efficiency enhancement in logistics, project planning, and scheduling Through mathematical methods and operations research	202341087471 A	12/01/2024
8	Iot Enables RSII Based Overboard Detection and Tracking System for Maritime Safety	202541059121A	04/07/2025

Patent Granted:

S.No	Title of Patent	Reference Number	Grant Country	Grant Period
1	AI BASED DEVICE FOR TRAFFIC MANAGEMENT AND NAVIGATION	6347711	UK	20-02-2024 to 19-02-2029
2	IoT Based Organic Waste Composter	455101-001	Indian	Design Patent Approved 12/04/2025

Copyright:

S.No	Title of Patent	Registration Number	Grant Country	Date of Issue
1	A novel 6G Network Architecture system for Enhanced Data Security	1222314	CANADA	10 th Sep 2024

Research Details:**Anna University Supervisor ID: 2740054****Ph.D., Scholars Completed : 2**

S.No	Degree	REG.No	Name	Title of the Thesis	VIVA Date
1	Ph.D.,	18244697286	Valarmathy G	CERTAIN IMPROVEMENTS IN PARAMETER TUNING FOR HEURISTICS DEEP LEARNING NETWORK AND ITS APPLICATION IN BRAIN TUMOR IDENTIFICATION	07.10.2022
2	Ph.D.,	17124591504	Bharathiraja S	INTEGRATED ENERGY EFFICIENCY ENHANCEMENT IN WIRELESS SENSOR NETWORKS USING TRIPLE HYBRID APPROACH	23.04.2025

Ongoing Ph.D., Scholars : 6

S.No	Regno	Name	Degree	Faculty	Reg Year	Reg Ses	Status
1	20254991183	Tina Susan Thomas	Ph.D.,	ICE	2020	JAN	Confirmation
2	21144997446	Eric Clapten J	Ph.D.,	ICE	2021	JUL	Confirmation
3	21154997275	Crispin M V	Ph.D.,	ICE	2021	JUL	Confirmation
4	21244997510	Tamilselvi A	Ph.D.,	ICE	2021	JUL	Confirmation
5	24143991217	Rameshraj P	Ph.D.,	ICE	2024	JAN	Confirmation
6	24239991161	Lakshmi S	Ph.D.,	ICE	2024	JAN	Confirmation

Certification Courses(NPTEL/ CISCO/ COURSERA)

1. Estimation for Wireless Communications MIMO (or) OFDM Cellular and Sensor Networks-12 Week Course
2. Introduction to Wireless and Cellular Communications (AICTE Sponsored Faculty Development Program)-12 Week Course
4. Cloud Computing-12 Week Course-Elite Certification
5. Introduction to Internet of Things-12 Week Course-Silver Medal
6. Introduction to Industrial 4.0 and Internet of Things-12 Weeks Course-Elite Category
7. Wireless Ad Hoc and Sensor Networks-8Weeks-Ellite
8. Introduction to IoT English 1120
9. Introduction and Programming with IOT Board
10. Palo Alto Networks Cybersecurity Specialization
11. Computer Communication

Professional Reference

Dr. V. Duraisamy, Professor and Principal Kavery Engineering College, Salem, Tamilnadu, India. Mobile:9442268510 E_ mail: vduraisamy@yahoo.com	Dr. R. Jayaparvathy, M.E., Ph.D Professor, Electrical and Electronics Engineering SSN College of Engineering Kalavakkam -603110 Presently Expert Evaluator - NBA Accreditation Senior Member, IEEE Ph: +91 44 27469700 Extn 336 Mob: 9994238268
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The above-mentioned statements are true to best of my knowledge



Dr. BALAJI V Ph.D (Anna University)
Place: Chennai-600127,
Date 04-05-2026