

Faculty Profile

Brief Profile

Personal Information

- **Name:** Dr G S Mamatha
- **Designation:** Professor & HoD
- **Department:** ISE
- **Email:** mamathags@rvce.edu.in, hodise@rvce.edu.in
- **Phone:** 080-68188247

Faculty Photo

Google Scholar / ResearchGate / LinkedIn:

[G S Mamatha- My publications | Publons](#)

[Mamatha, G. S. - Author details - Scopus Preview](#)

Orchid ID: <https://orcid.org/0000-0003-2679-784X>

Domain of Expertise

Research Focus

- **Primary Area:** Computer Networks, IoT, Cloud technologies, AI
- **Allied Areas:**
 - Ad hoc networks and security, IoT application development
 - Cloud Native development and automation, AI for healthcare

o Academic Qualifications

- **Ph.D.:** CSE, Avinashi Lingam University, Coimbatore, Tamil Nādu, 2014
- **M.Tech:** CSE, VTU, 2005
- **B.E.:** CSE, Kuvempu University, 1999

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	RV College of Engineering	Professor & HoD	Till date
2.			

Publications & Patents

Journal Publications

1. G.S. Mamatha, Dr. S.C. Sharma, “**A Robust approach to Detect and Prevent Network Layer attacks in MANETS**”, *International Journal of Computer Science and Security (IJCSS)*, ISSN (online): 1985-1553, Volume 4, Issue 3, August 2010, Pages:275-284.
2. G.S. Mamatha, Dr. S.C. Sharma, “**A Highly Secured Against attacks in MANETS**”, *International Journal of Computer Theory and Engineering (IJCTE)*, ISSN (online): 1793-8201, Volume 2, Number, October 2010, Pages: 815-819. (Q4)
3. G.S. Mamatha, Dr. S.C. Sharma, “**Analyzing MANET Variations, Challenges, Capacity and Protocol Issues**”, *International Journal of Computer Science and Engineering Survey (IJCSES)*, ISSN (online): 0976-2760, Volume 1, Number 1, August 2010, Pages: 14-21.
4. G.S. Mamatha, Dr. S.C. Sharma, “**A New Combination Approach to Secure MANETS against Attacks**”, *International Journal of Wireless and Mobile Networks (IJWMN)*, ISSN (online): 0976-3834, Volume 2, Number 4, November 2010, Pages: 71-80.
5. G.S. Mamatha, Dr. S.C. Sharma, “**Network layer Attacks and Defense Mechanisms-A Survey**”, *International Journal of Computer Applications (IJCA)*, ISSN: 0975 – 8887, Volume 9, Number 9, November 2010, Pages: 12-17.
6. G.S. Mamatha, Dr. S.C. Sharma, “**TODV: Performance Analysis of a Time on Demand Distance Vector Protocol for MANETS**”, *International Journal of Computer Applications (IJCA)*, ISSN: 0975 – 8887, Volume 28, Number 2, August 2011, Pages: 32-36.

7. G.S. Mamatha, “**A Defensive Mechanism Cross Layer Architecture for MANETS to Identify and Correct Misbehavior in Routing**”, *International Journal of Network Security and Its Applications (IJNSA)*, ISSN: 0974 - 9330, Volume 4, Number 1, January 2012, Pages: 117-126.
8. Venkatesh S, G.S Mamatha, “**An Evaluation of GET to Secure Data Transmission using DH Routing Approach against NLA in MANETS**”, *International Journal of Computer Applications in Engineering Sciences (IJCAES)*, ISSN: 2231-4946, Vol-II, Issue-II, June 2012, Pages: 66-72.
9. G.S. Mamatha, “**Modeling and Analysis of Solution to Node Misbehaviors in MANETS**”, *WSEAS Transactions of Communications, (In Communication)*.
10. G.S. Mamatha, “**An Experimental Approach to Identify and Correct Network Layer Attacks in MANETS**”, *International Journal of Computer Information Systems*, Silicon Valley Publishers, (In Communication).
11. Sandhya B.L,G.S Mamatha “**Analysis of Data Pooling and Optimization of Storage Management in Cloud**”, *International Journal of Engineering Research and Development*, ISSN: 2278-067X, Vo-7, Issue-9, July 2013, Pages:74-77.
12. S. Vinod Kumar, G.S. Mamatha, “**Analysis of Fuzzy Technology based Scheduler in MANETS**”, *International Journal of Computer Trends and Technology (IJCTT)*, Vol-4 Issue-6, June 2013, Pages: 1896-1900.
13. G.S. Mamatha, Ganaraj M., “**Enhanced Hybrid Scheduling Algorithm for small wireless Ad Hoc Networks**”, *International Journal for Scientific Research & Development (IJSRD)*, ISSN: 2321-0613, Vol-II, Issue-IV, June 2014, Pages: 707-709.
14. G.S. Mamatha, Priyanka D.R, “**Functional Layer Object Extender for Motive Dynamic Fulfilment**”, *International Journal for Science Research (IJSRD)*, Volume 03, Issue 04, June – 2015, ISSN (Online): 2321-0613.
15. Dr G S Mamatha and Vasudev K, “**Load reduction in videos using advanced fast algorithm**”, *Journal for Advance Research in Applied Sciences*, Dr G S Mamatha and Vasudev K, “**Load reduction in videos using advanced fast algorithm**”, *Journal for Advance Research in Applied Sciences*, Vol. 4, Issue 1, JAN 2017, Pages: 298-302.
16. Dr G S Mamatha, “**Modelling and Analysis of Solution to Misbehaviors in MANETS**”, *International Journal of Control Theory and Applications*, Vol 9, No.42, 2017, ISSN: 0974-5572, Pages: 177-185.
17. Chethana RM, Dr. G S Mamatha, “**Interference Avoidance Challenges in Densely Deployed OFDMA Hybrid Access Femto Cellular Networks**”, *J Electrical Eng Electron Technology*, Vol: 7 Issue: 1, FEB 2018, doi: 10.4172/2325-9833.1000155, ISSN: 2325-9833

18. Dr. G S Mamatha, Lakshminarayana V K, ” **Automatic Controller Service Package for Tank Water Management**”, International Journal of Innovative Research in Computer Science and Technology, Vol.7, Issue.4, Jul 2019, pp: 108-114. (UGC CARE)
19. Hegde Kiran, Mamatha G S et al,” **A Comparative Study on Performance of Popular Deep Learning models to detect diabetic retinopathy**”, Journal of Innovation in Computer science and Engineering, Vol.9, Issue 2, 2020, pp: 34-38.
20. Debashish M, G S Mamatha,” **A Study of block chain solutions for IoT issues**”, International Journal for Research in Applied Science and Engineering Technology,” Vol. 8, Issue.5, MAY 2020.
21. Sudharshan M, Harith L K, G S Mamatha et al, “**A Study on Web Conferencing system and the deployment**”, International Journal of Advanced Research , Ideas, and Innovations in Technology, Vol. 7, Issue 3, 2021, pp: 2287-2291.
22. Sonal S R, Likitha P. G S Mamatha et al,” **Monitoring Market Volume and Generating alerts using sentimental analysis of financial news articles for risk evaluation**”, Journal of Engineering Technologies and Innovative Research, Vol. 8, Issue. 6, 2021, pp:453-459.
23. Saksham Garg, G S Mamtha et al, “**A Study on the integration of Spring and Kafka**”, International Journal of Engineering and Technology, Vol. 10, Issue.6, 2021, pp: 575-579.
24. Sumathi H, G S Mamatha, Ramaa A, “**Cataloguing of attention deficit hyperactivity disorder (ADHD) among children**”, TechRxiv Rerprint, NOV 2021. (Q3)
25. Preetham T P, G S Mamatha,” **Inception of a containerized multipurpose chatbot**”, International Research Journal of Engineering and Technology, Vol.7, Issue.5, MAY 2020.
26. Ramadas Kamat, Dr. G S Mamatha, “Study on Change Data Capture Techniques for Incremental Loading in Data Warehouse”, International Journal of Advanced Research in Computer and Communication Engineering Vol. 11, Issue 7, July 2022 DOI: 10.17148/IJARCCE.2022.11748.
27. Pranav Mahajan, Dr. G S Mamatha, “A Study on Organic Search Optimization”, International Journal of Scientific Research and Engineering Development— Volume 5 Issue 4, July- Aug 2022, ISSN: 2581-7175, DOI:10.14299/000000.
28. Mahesh S P, Dr. G S Mamatha, “Comparative study of popular Data Quality tools”, International Journal of Advanced Research in Computer and Communication Engineering, Vol. 11, Issue 7, July 2022, DOI: 10.17148/IJARCCE.2022.11769.
29. Roopa N K, Mamatha G S, “An Add-on CNN based Model for the Detection of Tuberculosis using Chest X-ray Images” International Journal of Advanced Computer Science and Applications, Vol. 14, No. 3, 2023. (Q3)(WoS).
30. Roopa, N.K., Mamatha, G.S. “CLBO: chef leader-based optimization enabled deep learning for tuberculosis detection using x-ray images”, International Springer Journal of Signal and Video

processing, SIViP (2023), OCT 2023, DoI: <https://doi.org/10.1007/s11760-023-02732-7> (Q2)(WoS).

31. N M Nishanth, Dr. G S Mamatha, “ Using Py4J for Java-Python Communication”, International Journal of Advanced Research in Computer and Communication Engineering, Vol. 12, Issue 6, June 2023, DOI: 10.17148/IJARCCE.2023.12610, pp: 54-58.
32. Shivanand Sunagar, Dr. G S Mamatha, “ Effective Resource Management Strategies for Financial Stability in Business Activities”, International Journal of Advanced Research in Computer and Communication Engineering, Vol. 12, Issue 6, June 2023, DOI: 10.17148/IJARCCE.2023.12610, pp: 67-70.
33. Dr G S Mamatha, Anusha G, “ Open Radio Access Network (O-RAN): Empowering the Future of Telecommunication”, Turkish Journal of Computer and Mathematics Education, Vol.12 No.7(2021),DOI: 10.17762/turcomat , pp: 3475-3481.
34. Priya D, G S Mamatha et al, “Keratoviz-A multistage keratoconus severity analysis and visualization using deep learning and class activated maps”, International Journal of Electrical and Computer Engineering (IJECE) Vol. 13, No. 1, February 2023, pp. 920~935 ISSN: 2088-8708, DOI: 10.11591/ijece.v13i1.pp920-935. (Q2)
35. Mamatha, G. S., Namya Dimri, and Rasha Sinha. "Post-Quantum Cryptography: Securing Digital Communication in the Quantum Era." *arXiv preprint arXiv:2403.11741* (2024) (WoS).
36. Sandeep G S, Dr. G s Mamatha, “Bit-rate aware effective inter-layer motion prediction using multi-loop encoding structure”, Indonesian Journal of Electrical Engineering and Computer Science, Vol 37, No 1: January 2025, pp. 569~579 (Q3).

Conference Papers

1. G.S. Mamatha, Dr. S.C. Sharma, “**A New Secured Approach for MANETS against Network Layer Attacks**”, In *Proceedings of International Conference on Integrated and Intelligent Computing and citation in IEEE Explore*, August 2010, Pages: 290-295.
2. G.S. Mamatha, ”**A New Security Solution Architecture for MANETS against Network Layer Attacks**” In *Proceedings of Springer Link Lecture Series and in proceedings of Third International Conference on Wireless and Mobile Networks (WiMoNe-3.0)*, JAN 2-4, Bangalore 2012, Pages: 263-271.
3. Ganesh M, G.S. Mamatha, “**Enabling Platform as a service through a consolidated resource manager**”, In *Proceedings of International Conference in Computer Science, Electronics and Communications Engineering-ICCECE 2014*, May 2014, Bangalore, Pages: 14-17.
4. Sandeep G S, Sunil Kumar B S, Mamatha G S, “ **A Survey of Optimization of Rate Distortion Techniques for H.264 Scalable Video Coding**”, In *Proceedings of International Conference on*

Soft Computing, Intelligent Systems and Applications, Springer Advances in Intelligent Systems and Computing Series, DOI: 10.1007/978-981-10-5272-9, 2018.

5. Chaitra D M, Dr. G S Mamatha, “**An enhancement to random forest algorithm for smart home and office environment**”, *In proceedings of International Conference on Multimedia Processing, Communication & Information Technology at JNNCE*, shimoga in JUN 2018.
6. Suraj A R, Shekhar S.J, Mamatha G S, “**A Robust Security model for Cloud Computing Applications**”, 7th IEEE International Conference on Computation of Power, Energy, Information and Communication, ICCPEIC 2018, pp: 18-22
7. B K Srinivas, Dr. G N Srinivasan, Dr. G S Mamatha, “**Harmonious-living in Natural Environment through Sustainable Economic Lifecycle**”, *Jagruti 2019 All India Youth Conference at IISc*, Bangalore, JAN 2019.
8. Uday D V, Dr. G S Mamatha, “ **An Analysis of Health System Log Files using ELK Stack**”, *In Proceedings of 4th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT-2019)*, SVEC, Bengaluru, MAY 17th & 18th 2019.
9. Roopa N K, Dr. G S Mamatha, “Correlating the Machine Learning Models for Automatic Error Detection and Correction in Document Images with Computer-Aided Disease Diagnosis and Identification from Medical Imaging”, *In proceedings of 2nd IEEE International Conference on Innovative Mechanisms for Industry Applications [ICIMIA 2020]*, DSCE Bengaluru, MAR 2020.
10. Sandeep G S, Dr. G S Mamatha, “Recent Survey on Rate Distortion Optimization for HEVC and its scalable extensions-SHVC”, *In proceedings of 2nd IEEE International Conference on Innovative Mechanisms for Industry applications*, DSCE Bengaluru, MAR 2020.
11. Priya D, Dr. G S Mamatha,” **Early Screening Framework to detect Keratoconus Using Artificial Intelligence Techniques: An Extensive Review**”, Springer Lecture Notes on Data Engineering and Communications technologies [LNDECT] as a proceedings of the International Conference on Evolutionary Computing and Mobile Sustainable Networks, 2021, 59, pp:195-202.
12. Rizvi S, Mamatha G S, “**Automated Continuous Integration (ACI) scheme based on Jenkins**”, **Lecture Notes on Data Engineering and Communication Technologies**, 2021, 58, pp: 915-925.
13. A Mariam and G S Mamatha,”**BERT model for classification of fake news using the cloud processing capacity**”, *In Proceedings of IEEE 9th Region 10 Humanitarian Technology Conference (R10-HTC)*, 2021, pp: 1-6.
14. G S Mamatha, Shashank S, “**A Novel Approach for the Enterprise Hospital management Application with Full Stack Development**”, *In proceedings of 7th International Conference on Information and Communication Technology for Competitive Strategies*, In Springer Book series, Global Knowledge Research Foundation, June 22, 2023, ISBN: 978-981-19-9303-9.
15. Vaibhav K Bhonsle, Dr. G S Mamatha, “**Adaptation of Agile Methodology in Medical Industry**”, *In proceedings of 7th International Conference on Information and Communication Technology for Competitive Strategies*, In Springer Book series, Global Knowledge Research Foundation, June 22, 2023, ISBN: 978-981-19-9303-9.

16. Supritha, K.R., Mamatha, G.S. (2024). **Novel Design Templates for OTT Platform Thumbnails to Engage the Viewers**. In: Senjyu, T., So-In, C., Joshi, A. (eds) Smart Trends in Computing and Communications. SmartCom 2024 2024. Lecture Notes in Networks and Systems, vol 947. Springer, Singapore. https://doi.org/10.1007/978-981-97-1326-4_33, pp: 405-414.
17. G.S. Mamatha, Haripriya V. Joshi, and R. Amith, “**Bio-intelligent computing and optimization techniques for developing computerized solutions**”, Advances in Computers, Copyright ©2023 Elsevier Inc, ISSN 0065-2458, <https://doi.org/10.1016/bs.adcom.2023.11.006>, pp: 259-288.
18. G S Mamatha, Relia Maharshi Chetan,” **Optimizing SaaS Metrics with Advanced Data Processing and Machine Learning Techniques**”, In Proceedings of 8th IEEE International Conference of Computational Systems and Information Technology for Sustainable Solutions (CSITSS), Bengaluru Nov 6-8 2024, pp: 1-6.
19. G. S. MAMATHA, A. S. ANEESH and G. CHAITHANYA, "Public Key Security for Quantum Key Distribution," 2024 8th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITSS), Bengaluru, India, 2024, pp. 1-6, doi: 10.1109/CSITSS64042.2024.10817048.
20. Sandeep G. S and G. S. Mamatha, "Bi-Critical Reinforcement Learning Framework for Bit Rate Reduction and Quality Improvisation," 2024 8th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITSS), Bengaluru, India, 2024, pp. 1-6, doi: 10.1109/CSITSS64042.2024.10816841.
21. G.S. Mamatha, Dr. S. C. Sharma, “**An Adaptive Algorithm to Stabilize the network Performance in MANETS**”, In *Proceedings of National Conference on Network Security and Information retrieval (NCNS-2009)*, MCA, RVCE, Bangalore, DEC14th 2009, Pages: 54-59.
22. G.S. Mamatha, “**Agile Methods**”, State level Technical Paper presentation, SJBIT, OCT 2008.

Books/Book Chapters

1. G.S. Mamatha, ”**A New Security Solution Architecture for MANETS against Network Layer Attacks**” In *Proceedings of Springer Link Lecture Series and in proceedings of Third International Conference on Wireless and Mobile Networks (WiMoNe-3.0)*, JAN 2-4, Bangalore 2012, Pages: 263-271.
2. Sandeep G S, Sunil Kumar B S, Mamatha G S, “ **A Survey of Optimization of Rate Distortion Techniques for H.264 Scalable Video Coding**”, In *Proceedings of International Conference on Soft Computing, Intelligent Systems and Applications, Springer Advances in Intelligent Systems and Computing Series*, DOI: 10.1007/978-981-10-5272-9, 2018.
3. Priya D, Dr. G S Mamatha,” **Early Screening Framework to detect Keratoconus Using Artificial Intelligence Techniques: An Extensive Review**”, Springer Lecture Notes on Data Engineering and Communications technologies [LNDECT] as a proceedings of the International Conference on Evolutionary Computing and Mobile Sustainable Networks, 2021, 59, pp:195-202.
4. Rizvi S, Mamatha G S, “**Automated Continuous Integration (ACI) scheme based on Jenkins**”, **Lecture Notes on Data Engineering and Communication Technologies**”, 2021, 58, pp: 915-925.
5. G S Mamatha, Shashank S, “**A Novel Approach for the Enterprise Hospital management Application with Full Stack Development**”, In proceedings of 7th International Conference on

Information and Communication Technology for Competitive Strategies, In Springer Book series, Global Knowledge Research Foundation, June 22, 2023, ISBN: 978-981-19-9303-9.

6. Vaibhav K Bhonsle, Dr. G S Mamatha, “**Adaptation of Agile Methodology in Medical Industry**”, In proceedings of 7th International Conference on Information and Communication Technology for Competitive Strategies, In Springer Book series, Global Knowledge Research Foundation, June 22, 2023, ISBN: 978-981-19-9303-9.
7. Supritha, K.R., Mamatha, G.S. (2024). **Novel Design Templates for OTT Platform Thumbnails to Engage the Viewers**. In: Senjyu, T., So-In, C., Joshi, A. (eds) Smart Trends in Computing and Communications. SmartCom 2024 2024. Lecture Notes in Networks and Systems, vol 947. Springer, Singapore. https://doi.org/10.1007/978-981-97-1326-4_33, pp: 405-414.
8. G.S. Mamatha, Haripriya V. Joshi, and R. Amith, “**Bio-intelligent computing and optimization techniques for developing computerized solutions**”, Advances in Computers, Copyright ©2023 Elsevier Inc, ISSN 0065-2458, <https://doi.org/10.1016/bs.adcom.2023.11.006>, pp: 259-288.

Patents **[Filed / Published]**

PATENTS Published:

1. Title of the invention: **SHABDKOSH DEVICE FOR WOMEN SAFETY IN PUBLIC**- Published on 16/10/2020 with a team of 11 members from other colleges.
2. Title of the invention: **DETECTION OF GAN GENERATED FAKE INFLUENTIAL IMAGES IN SOCIAL MEDIA USING COUNTER GAN** – Filed in Mar 2022, published on 6/10/2023.

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

- **Multiple ongoing research projects are in progress**
- **CSR fund from WiC , USA: 4000 \$ received on 24/06/2024 for consultancy and training**
- **CSR fund from WiC, USA: 3000\$ received on 06/11/2024 for consultancy and training**
- **Generated around 8 lakhs from training from WiC, USA**

Professional Memberships

- **IEEE membership no: 94185740**
- **ISTE membership no: LM48853**

● [Awards & Recognitions

- Role model award for Women in Cloud activities by WiC, USA, ET Edge and Veeam in 2023 and 2024 consecutively.
- Recognised by Microsoft CEO, Satya Nadella for our Women in Cloud initiative in India at Microsoft Inspire Keynote in JUNE 2022.
- First best paper award for the paper- G.S. Mamatha, Dr. S. C. Sharma, “An Adaptive Algorithm to stabilize the network Performance in MANETS”, In Proceedings of National Conference on Network Security and Information retrieval (NCNS-2009), MCA, RVCE, Bangalore, DEC14th 2009, Pages: 54-59.
- Got appreciation from SPRINGER NATURE JOURNALS as High Review satisfaction from authors.

Student Supervision

- Ph.D. Candidates: 05
- M.Tech Students: 55
- Undergraduate Research Mentees: 120

Professional Roles

- **Editorial review board member:** Springer WINE and JONS journals
- **Chair/Committee Member:** CSITSS RVCE, IEEE World conferences, Soft Computing Research Society series conferences Program committee member 7 reviewer
- **Industry Advisor:** CEN technologies Pvt Ltd

Teaching

Core Courses taught:

Computer networks, Unix shell programming, Discrete Mathematical structures, Multimedia Computing, Unix systems Programming, Software Engineering, Web services, Client server programming, Enterprise resource planning, Cryptography and Network Security, CN-I, CN-II, Computer Networks and Security, Digital Logic Design, Cloud Computing, Programming in C, Web Engineering , IoT, Network Management, Advance Computer Networks, Human Computer Interface, Software Engineering and Testing, Software Project Management, Service Oriented Architecture, Cloud Native DevOps

Advanced/Lab Courses:

- Logic Design & CoA VLab, IoT Application development lab, Cloud Native development lab

Professional Roles

Responsibilities

- **Academic:** HOD, BoS, CTTO, TTO, Test-TTO, Placement, Alumni coordinator, Research center coordinator

- **Administrative:** NBA coordinator, Lab incharge,

External Connect

- Member of BoS, BoE, Research Advisory Committee member for 13 VTU research scholars.