

Faculty Profile

Personal Information

- **Name:** Dr. Sivasankar S
- **Designation:** Assistant Professor(SG)
- **Department:** Applied Science and Humanities
- **Email:** sivasankars.rvitm@rvei.edu.in,
- **Phone:** 91-9916025625

Google Scholar: <https://scholar.google.co.in/citations?user=99KQuQkAAAAJ>

ResearchGate: <https://www.researchgate.net/profile/Sivasankar-Shanmugam-2>

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Domain of Expertise

- Fuzzy Networks
- Graph Theory
- Linear Algebra
- Optimization Techniques

Research Focus

- **Primary Area:** Fuzzy Clustering and Fuzzy optimization
- **Allied Areas:**
 - Neutrosophic Networks
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Academic Qualifications

- **Ph.D.:** [Mathematics], [Bharathiar University], [2018]
- **M.Phil.:** [Mathematics-Graph Theory], [Bharathiar University], [2006]
- **M.Sc. :** [Mathematics], [Bharathiar University], [2005]
- **B.Sc.:** [Mathematics], [Bharathiar University], [2003]

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	RV institute of Technology and Management, Bangalore.	Assistant Professor	July 2019 – Till date
2.	PES University, Bangalore.	Assistant Professor	April 2014 – June 2019.
3.	PES Institute of Technology, Bangalore	Assistant Professor	Feb 2012 – March 2014.
4.	The Oxford College of Engineering, Bangalore	Assistant Professor	July 2008 – Jan 2012
5.	Dayananda Sagar College, Bangalore.	Lecturer	June 2006 – June 2008.
6.	Sri Venkateshwara College, Bangalore.	Lecturer	May 2005 – June 2006

Publications & Patents

Journal Publications

1. Chirag R, Nandan S, P. Madhumathy, S Sivasankar, "Design of WDM (Wavelength Division Multiplexing) Systems", Advance Research in Analog and Digital Communications, Vol. 2, pp. 01-07, 2025.
2. Sivasankar S, Deepa D, Madhumathy P, Yogita Sharma, Prince Rana, "Design and modelling of graph theory approach-based routing algorithm", International Journal on Interactive Design and Manufacturing, vol. 18, pp. 6013-6021, 2024.
3. S. Sivasankar and Said Broumi, “ Secure edge domination in Neutrosophic Graphs”, Neutrosophic sets and systems, vol. 56, pp. 70-82, 2024.
4. K. Somasundaram, R. Sathish Kumar, S. Sanjayprabu, R. Karthikamani, S. Sivasankar, "Optimization of Intracranial Hemorrhage Using CT Scan Images and Feature Extraction", Journal of Advanced Zoology, vol. 44(3), pp. 1377-1385, 2023.
5. Sivasankar S, Sanchari Bera, Syed Ibrahim Maaz and Madhumangal Pal, “ Defective vertex and

stable connectivity of a fuzzy graph and their application to identify the chickenpox”, Journal of Intelligent and Fuzzy Systems, vol. 45, no. 2, pp. 2253-2265, 2023.

6. S. Sivasankar, T. Aishwarya, and N. Shreya, “ Bridge domination in Fuzzy Graphs”, Journal of Fuzzy Extension and Applications, vol. 4(3), pp. 148-154, 2023.
7. S. Sivasankar, Madhumathy P., Shashank S, and Tushar Arora, “ Graph Theory Approach for Load Balancing in Wireless Sensor Networks”, Journal of Sensor Research and Technologies, vol. 5(1), pp. 21-25, 2023.
8. S. Sivasankar and Said Broumi, “ Secure domination in Neutrosophic Graphs”, Journal of Neutrosophic and Fuzzy systems, vol. 3(2), pp. 08-18, 2022.
9. S. Sivasankar and Said Broumi, “ Balanced Neutrosophic Graphs”, Neutrosophic sets and systems, vol. 50, pp. 309-319, 2022.
10. MG Karunambigai, M Akram, S Sivasankar, K Palanivel, “Clustering Algorithm for Intuitionistic Fuzzy Graphs”, International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, vol. 25, No.3, pp 367-383, 2017.
11. MG Karunambigai, S Sivasankar , K Palanivel , “Different types of Domination in intuitionistic fuzzy graphs”, Annals of Pure and Applied Mathematics, vol. 14, no.1, pp 87-101, 2017.
12. MG Karunambigai, S Sivasankar , K Palanivel , “Secure domination in fuzzy graphs and intuitionistic fuzzy graphs”, Annals of Fuzzy Mathematics and Informatics, vol.4, no.1, pp 54-67, 2017.
13. MG Karunambigai, S Sivasankar , K Palanivel , “Some Properties of a Regular intuitionistic fuzzy graphs”, International Journal of Mathematics and Computation, vol.26, no. 4, pp. 15 – 24, 2015
14. MG Karunambigai, S Sivasankar , K Palanivel , “Edge Regular Intuitionistic Fuzzy Graphs”, Advances of Fuzzy sets and systems, vol 20, no.1, pp 25 – 46, 2015.
15. MG Karunambigai, S Sivasankar, K Palanivel , “Balanced Bipolar Fuzzy Graph”, Journal of Advanced Research in Pure Mathematics , vol.6, no. 4, pp 58-71, 2014.
16. MG Karunambigai, S Sivasankar, K Palanivel, “Properties of Balanced Intuitionistic Fuzzy Graph”, International Journal of Research in Science, vol. 1, pp 01 – 05, 2014.
17. MG Karunambigai, M Akram, S Sivasankar, K Palanivel, “Balanced Intuitionistic Fuzzy Graph”, Applied Mathematical Sciences Journal (AMS), vol. 7, no.51, pp 2501-2514, 2013.

Conference Papers

1. Srinivasan K and Sivasankar S, " Secure Fuzzy Information Networks with Applications to Social Media Platforms", ICRTACM-2025, REVA University, Bangalore, October 9-10, 2025. <https://doi.org/10.5269/bspm.80064>
2. Sivasankar S, Anusha P Dayananda and Aiman Sabah, " An Application of the fuzzy logic approach to selecting stocks in the Stock Market", NCEC-2024, Dayananda Sagar College of Engineering, Bangalore, January 3-5, 2024.
3. Sivasankar S and Syed Ibrahim Maaz, " An Algorithmic determination for the secure dominance in a fuzzy network and its application in medical diagnosis", IEEE conference, JSS college, Bangalore, December 23-24, 2022. ieeexplore.ieee.org/document/10058680
4. Sivasankar S, Aishwarya T, and Shreya N, "Bridge Domination in Fuzzy Graph" International Conference International Conference on Recent Trends in Applied and Computational Mathematics (ICRTACM-2020), Reva University, Bengaluru, 4th and 5th December, 2020.
5. Naveen Balaji, Sivasankar S, Sujan Kumar, Vignesh, "Cyclic symmetry of Riemann Tensor in Fuzzy Graph Theory", International conference on Mathematical Techniques and Applications, SRM Institute of Science and Technology, Chennai, India, January 30th, 31st & 1st February , 2020. <https://doi.org/10.1063/5.0025295> [Best Paper Award]
6. MG Karunambigai, S Sivasankar , K Palanivel , "Secure edge domination in intuitionistic fuzzy graphs", International Conference on Intuitionistic Fuzzy Sets and Systems, Vellalar College for Women, January 08-10, 2018.
7. MG Karunambigai, S Sivasankar , K Palanivel , "Domination in intuitionistic fuzzy graphs", International conference on Theoretical Computer Science and Discrete Mathematics, Kalasalingam University, December 19-21, 2016.
8. MG Karunambigai, S Sivasankar, K Palanivel , "Dominance in Bipolar Fuzzy Graph", IEEE International conference on Fuzzy systems, Hyderabad, India, July 7-10, 2013. [DOI: 10.1109/FUZZ-IEEE.2013.6622326](https://doi.org/10.1109/FUZZ-IEEE.2013.6622326)

Books/Book Chapters

1. Said Broumi , Sivasankar S, Assia Bakali, Mohamed Talea , "Balanced Neutrosophic Fermatean Graphs with Applications", in a book titled "Analytical Decision Making and Data Envelopment Analysis", to be published by springer Singapore(Oct. 2024) [DOI: 10.1007/978-981-97-6972-8_18](https://doi.org/10.1007/978-981-97-6972-8_18) .
2. Sivasankar S, Said Broumi, "A new algorithm to determine the density of a balanced neutrosophic graph and its application to enhance education quality", has been published in a book titled "Handbook of Research on the Applications of Neutrosophic Sets Theory and Their Extensions in Education", published by IGI Global publisher (DOI: [10.4018/978-1-6684-7836-3.ch001](https://doi.org/10.4018/978-1-6684-7836-3.ch001)).
3. "Calculus-Concept and Applications", Sivasankar S, Chandrakala, Hemalatha and Gousium, Shineeks Publishers, May 2024, ISBN:979-8-89379-753-4
4. "Operations Management ", Solaimuthu C, Sivasankar S, Mahalakshmi P, Saravanan R, HSRA Publications, November 2024, ISBN:978-93-5506-920-7

Patents [Filed / Published / Granted]

1. Smart Device to Teach Mathematics to Blind Students, Patent Number: 6355226, Date of grant: 25/04/2023, Inventor(s): Dr. Sivasankar S, Dr. Vinoth Kumar M, Dr. Chandra Kala, Dr. Hemalatha NC.

2. Mathematical Formula Storage and Quick Retrieval Device, **Patent Number:** 473032-001, **Date of grant:** 24/12/2025, **Inventor(s):** Dr. Sivasankar S, Dr. Somasundaram K, Dr. M. Poonguzhali, Dr. B. Mohana Priyaa, Dr. Solaimuthu C.
3. IoT- Based Solar Powered Streetlight Controlling Device, **Patent Number:** 471999-001, **Date of grant:** 01/01/2026, **Inventor(s):** Dr. Raghavendra Reddy, Dr. Solaimuthu C, Dr. Surbhi Agrawal. Dr. Kinny Garg, Dr. Vikash Kumar , Dr. Sivasankar S

Professional Memberships

- IET
- MIAE

Awards & Recognitions

- Best Paper Award from SRM University, Chennai, [2020]
- Excellent performer from RSST from 3 consecutive years (2022-23, 2023-24, 2024-25)

Student Supervision

- **Ph.D. Candidates:** 1 Pursuing
- **Undergraduate Research Mentees:** 15

Professional Roles

- **Editorial Board:** JAACM Reviewer
- Worked a session chair in many International Conferences.

Teaching

Core Courses:

- Linear Algebra
- Graph Theory
- Numerical Methods
- Calculus and Differential Equations
- Operational Research
- Statistics
- Advanced Mathematics
- Discrete Mathematics
- Applied Mathematics
- Numerical Methods and Queuing Theory

Responsibilities

- Main coordinator Impartus Lecture capture and Hostel committee.

External Connect

- Invited as a resource person for “Soft Component Inauguration” under PM USHA Scheme and delivered an invited talk “MATHEMATICAL FOUNDATIONS FOR COMPUTER SCIENCE AND DATA SCIENCE” at Government College, Kolar Gold Fields, Karnataka on 3rd December 2025.
- Invited as Subject Expert for the second Board of Studies meeting of PG & Research Department of Mathematics held at Marudhar Kesari Jain College for Women (Autonomous), Vaniyambadi on 29th October 2024.
- Invited as Subject Expert for the Board of Studies meeting of PG & Research Department of Mathematics held at Marudhar Kesari Jain College for Women (Autonomous), Vaniyambadi on 07th May 2024.
- Chaired the conference session at the International Conference on Advances in Applied Mathematics (ICAAM-2024), 10th-11th January 2024 at TUMKUR University, Tumakuru, Karnataka.
- Invited as a resource person and delivered an invited talk on “ Mathematics Foundations of Cybernetics in Forensics Science” in the ATAL Sponsored FDP “ BASIC MATHEMATICAL AND STATISTICAL FOUNDATIONS FOR CYBERNETICS, CRIMINAL LAWS AND CYBERSECURITY” at CITY Engineering College, Bangalore on 9th December 2023.
- Delivered a talk on "Features of Lecture capture Videos in UpGrad" for RVIM staff members on 31st July 2023.
- Delivered a guest lecture on “ Mathematics for Machine Learning” for first year students at the Department of Science and Humanities, The Oxford College of Engineering, Bangalore on 16th February 2023.
- Invited as a resource person and delivered an invited talk on “ Mathematics in Machine Learning” in the International conference held on 15th February 2023 at Marudhar Kesari Jain College For Women, Vaniyambadi.
- Chaired the conference session at the International Conference on Applied Mathematics and Statistics (ICAMS-2023), 15th February 2023 at Marudhar Kesari Jain College For Women, Vaniyambadi.
- Chaired the conference session at the International Conference on Mathematical Techniques and Applications (ICMTA-2020), 30th January 2020 at SRM Institute of Science and Technology, Chennai.
- Subject Expert panel member for the recruitment process in the Department of Engineering Mathematics at The Oxford College of Engineering, Bengaluru on 5th August 2019.

- Delivered technical talk on “Linear Algebra and its applications” at Department of Mathematics, The Oxford College of Engineering, Bangalore on 7th September 2018.
- Delivered technical talk on “ Matrix Theory and its Applications” at Department of Mathematics, PES PU College, Bangalore on 20th October 2017.