

Name : Dr. M. Gnanasekar

Staff ID : RCAS01343

Designation : Assistant Professor

Department : Mathematics

Experience : 9.5 Years

Qualification : M.Sc., M.Phil., MJMC., Ph.D.

Specialization: Graph Theory, Applied Mathematics, Computational Mathematics, AI-based Mathematical Modeling

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ACADEMICS

Degree	Branch	Institution / University	Year of Completion
Ph.D.	Graph Theory	Bharathiar University	2025
M.Phil.	Graph Theory	Kalasalingam University.	2016
M.J.M.C	Journalism and Mass Communication	Bharathiar University	2016
M.Sc.	Mathematics	Bharathiar University	2015
B.Sc.	Mathematics	Bharathiar University	2013

RESEARCH AND PUBLICATIONS

GRANTS

Title	Agency	Amount	Year	Status
Grant-in-aid Conducting Seminar	CSIR	15,000	2017	Completed
Student Project Scheme	TNSCST	15,000	2022	Completed
Grant-in-aid Conducting Lecture Series	ICPR	30,000	2023	Completed

PATENT

Patent Title	Patent Type	Patent Number	Filed Date	Granted Date
IoT-based Pedal Powered Air Filtration	Design Patent	439393-001	03-12-2024	07-02-2025
IoT and ML-based Smart Health Monitoring System	Design Patent	417912-001	24-05-2024	12-07-2024

Journal Publications

1. Gnanasekar, M. (2017). The Sharpe bound Steiner number in some classes of graphs. *International Journal of Advanced Research in Engineering and Technology*.
2. Gnanasekar, M. (2019). Recycled drainage water for agricultural purpose by using graph theory. *International Journal of Research and Analytical Reviews*.
3. Gnanasekar, M. (2020, July). Application of LPP in industry with reference to ARG Traders Private Limited. *Purakala*.
4. Gnanasekar, M. (2020, October). Using critical path method for making process layout of a T-shirt within earlier finish time. *Infokara Research*.
5. Gnanasekar, M. (2021, January). Steiner number in some new classes of graphs. *Proceedings of Conference, Coimbatore Institute of Technology*.
6. Gnanasekar, M. (2021, July). Essence of graph theoretical concepts in machine learning. *Jijnasa*.
7. Gnanasekar, M. (2021, December). Spiritual aspect study on Vedic Mathematics. *Anvesak*.
8. Gnanasekar, M. (2023, January). Role of graph theory in electrical engineering. *Shodha Prabha*.
9. Gnanasekar, M. (2023, July). Transforming educational research: Harnessing the potential of AI-driven writing assistance—A review. *Industrial Engineering Journal*.
10. Gnanasekar, M. (2024, April). Exploring dominating sets in graph theory: Algorithms and applications in Python. *Journal of Mathematical Research with Applications*.
11. Gnanasekar, M., & Sivasankar, S. (2024). The geodetic number in comb product of graphs. *Journal of Nonlinear Analysis and Optimization*, 15(1), 01–04.
12. Sivasankar, S., Gnanasekar, M., & Babysuganya, K. (2024). Some distance-based topological indices of cluster of two complete graphs. *Indian Journal of Natural Sciences*, 15, 86045–86051.
13. Sivasankar, S., Gnanasekar, M., & Babysuganya, K. (2025). Some distance-based topological indices of cluster of complete bipartite graph and complete graphs. *Fuzzy Systems and Soft Computing*, 20, 168–177.
14. Sivasankar, S., Gnanasekar, M., & Babysuganya, K. (2025). Some distance-based topological indices of corona product of two complete graphs. *Humanities and Social Science Studies*, 14, 140–147.

Proceedings

1. **Gnanasekar, M.** (2020). *The Sharpe bound Steiner number in some classes of graphs*. Paper presented at the **International Conference on Graph Labeling and Applications (ICGLA-2020)**, Goa University, Taleigao Plateau, Goa, India.
2. **Gnanasekar, M.** (2021). *Geodetic number in product graphs*. Paper presented at the **National Conference on Pure and Applied Mathematics**, Gogte Institute of Technology, Belagavi, India.
3. **Gnanasekar, M.** (2021). *Present trends in applied mathematics*. Paper presented at the **International Seminar on Present Trends in Applied Mathematics**, Holy Cross College, Tiruchirappalli, Tamil Nadu, India.
4. **Gnanasekar, M.** (2021). *Paper presentation at Indian Science Techno Festival (ISTF2021)*, organized by **VIPNET, Vigyan Prasara Network of Science Clubs, DST, Govt. of India**.
5. **Gnanasekar, M.** (2021, July). *Wavelet transforms and image processing*. Lecture presented at the **International Lecture Series on Wavelet Transforms and Image Processing**, Al-Ameen College, Edathala, Kerala.

6. **Gnanasekar, M.** (2022, September). *Computational mathematics and its applications*. Paper presented at the **International Interdisciplinary Research Conference on Recent Technological Development in Computational Mathematics and its Applications**, Sri Ramakrishna College of Arts & Science, Coimbatore, Tamil Nadu, India.
7. **Gnanasekar, M.** (2022). *Progress in mathematics towards industrial applications*. Paper presented at the **International Virtual Conference on Progress in Mathematics towards Industrial Applications (PMTIA-2022)**, SRM Institute of Science and Technology, Tamil Nadu, India.

PRESENTATIONS

	State Level	National	International
Conference	1	17	9
Seminar	7	53	13

PARTICIPATION

	State Level	National	International
Conference	8	28	21
Seminar	19	31	37
Workshop	11	58	24
Orientation	17	28	17
FDP/PDP	1	8	1

Events Organized (Seminar/Conference/Workshop)

1. **Two-Day National Seminar on New Horizons in Mathematics** – Organizer: M. Gnanasekar, funded by CSIR (2 Days).
2. **International Conference on Emerging Area of Mathematics for Science and Technology** – Organizers: Sargurunathan K & M. Gnanasekar (1 Day, Self-funded).
3. **International E-Conference on New-Gen Education: E-learning from Blackboard to Broadband** – Organizers: Sargurunathan K & M. Gnanasekar (5 Days, Self-funded).
4. **National Level Virtual FDP on Agile Mathematical Tools for Modern World** – Organizers: Brindha Devi S, Jeyanthi Prasanna & M. Gnanasekar (4 Days, Self-funded).
5. **Maths India Week Celebration (Faculty Development Program)** – Organizer: M. Gnanasekar (7 Days, Self-funded).
6. **International Conference on Recent Development in Computational Mathematics** – Organizer: M. Gnanasekar (1 Day, Self-funded).
7. **Infinity Awards – 2020** – Organizer: M. Gnanasekar (1 Day, Self-funded).
8. **ICPR Sponsored Lecture Series on Research & Philosophy in Mathematics** – Organizer: M. Gnanasekar, funded by ICPR, New Delhi (2023).
9. **TNSCST Student Project Scheme – Student Research Presentations** – Organizer: M. Gnanasekar, funded by Tamil Nadu State Council for Science & Technology (TNSCST) (2022).

10. **Virtual Faculty Development Programme: Listening to Students' Mathematical Voice (LSMV)** – Organizer: M. Gnanasekar, **Rathinam College of Arts & Science** (2021).

Invited Speaker / Session Chair- Conference / Seminar / Workshop

1. Resource Person in National Level Seminar New Trends in Mathematics, Pioneer College of Arts And Science, July 2017
2. Resource Person in National Level Seminar on Recent Development in Mathematics/ Using Labeling for Some Definition Related Graphs, Morappur Kongu College of Arts And Science, Aug 2018
3. Resource Person in National Conference on “Soft Computing and Applicable Mathematical tools for science and engineering, Sasurie College of Arts and Science Feb 2019
4. Resource Person in National Level webinar on Hands-on session on Graph theoretical approaches on python Network-X, Infinity Research & Development Institute, July 2020
5. Resource Person in National Level webinar on Hands-on session on AI Tools for Mastering the Modern Teaching, Indian Mathematical Professors Association and Infinity Research & Development Institute, Mar - 2023
6. Resource Person in National Level workshop on Hands-on session on AI Tools for Effective Teaching, Alpha College of Engineering and Technology, 2023.
7. Resource Person in National Level workshop on Hands-on session on Graph theoretical approaches on python, Indian Mathematical Professors Association and Infinity Research & Development Institute, July - 2023
8. Resource Person in National Level workshop on Hands-on session on Graph theoretical approaches on python Network-X, Arjun College of Technology and Indian Mathematical Professors Association, Oct - 2023
9. Resource Person in National Level workshop on Hands-on session on AI Tools for Effective Research, Indian Mathematical Professors Association and Infinity Research & Development Institute, Sep - 2023.
10. Resource Person in National Level workshop on Hands-on session on AI Tools for Mastering the Modern Teaching, Indian Mathematical Professors Association and Infinity Research & Development Institute, Nov - 2023
11. Resource Person in National Level FDP on Hands-on session on AI Tools for Effective research, Organized by M.O.P. Vaishnav College for Women, Chennai. Nov – 2023
12. Resource Person in National Level Lecture series on Statistics, Organized by Central University, Kerala. 2, December – 2023
13. Resource Person in A Two-Day Online Hands-On Workshop to Mastering Fuzzy Mathematical Concepts with Python Programming, Organized by Indian Mathematical Professors Association, December 23,24- 2023
14. Resource Person in A Two-Day Online Hands-On Workshop to Mastering Operations Research Concepts with Python Programming, Organized by Indian Mathematical Professors Association and Infinity Research & Development Institute, January 20,21- 2024
15. Resource Person in Faculty Development Programme on Research Methodology, AI Tools in Research and Intellectual Property Rights, Organized by Bharathians Alumni

Trust (BAT) Sri Venkateswara College of Computer Applications and Management
January 22-26, 2024

16. Resource Person in National Level FDP on Hands-on session on AI Tools for Effective research, Organized by M.O.P. Vaishnav College for Women, Chennai. Nov, 2023
17. Resource Person in National Level Hands-on workshop on Graph theoretical approaches on python, Indian Mathematical Professors Association and Infinity Research & Development Institute, November - 2023.
18. Resource Person in National Level Hands-on workshop on Mathematical approaches on python, Indian Mathematical Professors Association and Arjun College of Engineering, December - 2023.
19. Resource Person in National Level Hands-on workshop on Fuzzy Mathematics approaches on python, Indian Mathematical Professors Association and Infinity Research & Development Institute, January – 2024
20. Resource Person in National Level Hands-on workshop on Fuzzy Mathematics approaches on python, Indian Mathematical Professors Association and Yadava College of Arts and Science, March– 2024
21. Resource Person in National Level Hands-on workshop on Computation approaches on python, Indian Mathematical Professors Association and Aligarh Muslim University, April– 2024
22. Resource Person in National Level Hands-on workshop on Graph Theory approaches on python, Indian Mathematical Professors Association and K.L.N.College of Engineering, June - 2024
23. Resource Person in National Level Hands-on workshop on Graph Theory approaches on python, Indian Mathematical Professors Association, August - 2024
24. Resource Person in National Level Research Workshop on Data Science and Financial Analytics with Python, Indian Mathematical Professors Association, November – 2024
25. Resource Person in National Level Hands-on Harnessing the Mathematician's New Toolkit, Indian Mathematical Professors Association and Infinity Research & Development Institute, January – 2025
26. Resource Person in National Level Hands-on Exploring Linear Algebra and Graph Theory with SageMath, Indian Mathematical Professors Association and Infinity Research & Development Institute, February– 2025
27. Resource Person in National Level Hands-on SAGEMATH for Mathematicians: Unlocking Advanced Computation, Indian Mathematical Professors Association and Infinity Research & Development Institute, March – 2025

Members in BoS/ Editorials/ Professional Bodies

Director – Indian Mathematics Professors Association (IMPA).

AWARDS, HONORS AND RECOGNITION

Awards / Honors / Recognition	Agency / Institution	Year of Award
Dr. A. P. J. Abdul Kalam International Educators Honor – Outstanding Contribution & Achievement in Education	Sri Krishna Educare	2020
Indian Teacher Scientist Innovation NCTS Award	Raman Science & Technology Foundation and National Council for Teacher Scientist & VIPNET (DST, Govt. of India)	2020
Young Researcher Award	ARAM Foundation	2020
Best Motivational Teacher Award	Ayutha Siragukal Foundation	2020
Dr. A. P. J. Abdul Kalam Award	KG Hospitals, Kalam Furniture	2023
Dr. A. P. J. Abdul Kalam Award – Best NSS Officer	World Youth Federation	2023
Best Leadership Award	Akshit Foundation, Coimbatore	2017
Brand Ambassador of the Institution	Sree Saraswathi Thiyagaraja College of Arts and Science	2019
Best Contributor in Traffic Control and Targeted Zero Accident Award	UYIR CLUB	2020
Samuga Sirppi Award	Aalam Viluthugal Foundation	2020
Dr. A. P. J. Abdul Kalam Award for Excellence in Teaching	KG Hospitals, Kalam Furniture & Magilchi FM	2020