Basic Details:

- **Name:** Dr. B. Roopa
- **Designation**: Assistant Professor (OG)
- **Phone Number:** 9790982620
- **Email ID:** roopar@srmist.edu.in
- **Area or Subject:** Graph Theory
- **Affiliation:** Department of Mathematics, SRM Institute of Science and Technology, Ramapuram.

Educational Details:

- **Degree** – M. Sc., M. Phil, Ph. D.
- **Area or Subject** – Mathematics
- **University**

  Ph. D. Mathematics – 2021, SRM Institute of Science and Technology, Kattankulathur, Tamil nadu.

  M.Phil – 2007, Madurai Kamarajar University, Madurai, Tamilnadu.

  M.Sc. Mathematics – 2003, Bharathiar University, Coimbatore, Tamilnadu.

  B.Sc. Mathematics – 2001, Bharathiar University, Coimbatore, Tamilnadu

Other Details: Courses:

- Engineering Mathematics-I
- Engineering Mathematics-II
- Transforms and Partial Differential Equations
- Statistics and Numerical Methods
- Numerical Methods

- Probability and Queuing Theory
- Probability and Statistics
- Algebra and Number Theory
- Graph Theory and its applications
- Research Methodology and Techniques

Research Interests: Graph Theory.

Publications:

1. Roopa.B, Shobana.L, On face magic labeling of double duplication of some families of graphs, International Journal of Pure and Applied mathematics, 114(6), (2017) pp. 49-60.
2. Roopa.B, Shobana.L, Face magic labeling for double duplication of cycle related graphs, Journal of Advanced Research in Dynamical & Control Systems, 10(7), (2018) pp. 48-53.
3. Roopa.B, Shobana.L, On face bimagic labeling for duplication and double duplication graphs, AIP Conference Proceedings 2112, 020155 (2019).
4. Roopa.B, Shobana.L, R. Kalaiyarasi, On Face Magic Labeling of Duplication of a Tree, Applied Mathematics & Information Sciences, 13(S1), (2019) pp. 275-278.
5. Roopa.B, Shobana.L, On Face Bimagic Labeling for Double Duplication of Tree related Graphs, International Journal of Advanced Science and Technology, 29(04) (2020) pp. 5687-5694.
6. Roopa. B, Shobana. L, Face Bimagic Labeling on some Graphs, Turkish Journal of Computer and Mathematics Education, Vol.12, No.6, (2021) pp.101-107.
7. Roopa.B, Shobana. L, Ismail Naci Cangul, Face Magic Labeling of Double Duplication of Graphs, Advanced Studies in Contemporary Mathematics 31(04) (2021) pp.423-431.
8. Roopa.B, Shobana.L, Vasuki. B, Data Encryption using Face antimagic labeling and Hill cipher, Mathematics and Statistics, Horizon Research Publication Corporation, volume 10, No-2, (2022), pp. 431 - 435.

Papers Presented in international/national conferences:

1. National conference on "Computational Convolution in intelligent system and mathematics" on 4th to 5th January 2017 at MGR Janaki College for women and presented a paper titled, "On Face Magic Labeling on Double Duplication Graphs" by L. Shobana and B. Roopa.

2. National conference on "Recent trends in Mathematics and its applications" on 24th and 25th February 2017 at SRM University, Vadapalani and presented a paper titled, "On Face Magic Labeling on Double Duplication on some families of Graphs" by L. Shobana and B. Roopa.

3. International Conference on "Mathematical Computer Engineering" on 3rd and 4th Nov 2017 at VIT University - Chennai Campus and presented paper titled, "Face Magic Labeling for Double Duplication of Cycle related graphs", by B. Roopa and L. Shobana.

4. National Conference on "Emerging Trends in Mathematics & Applications in Engineering and Technology" on 22nd and 23rd Mar 2018 at Hindustan Institute of Technology & Sciences and presented paper titled, "On Face Magic Labeling for Duplication of a tree", by B. Roopa and L. Shobana.

5. International Conference on "Mathematical Computer Engineering" on 23rd and 24th November 2018 at VIT Chennai and presented paper titled, "Face Bimagic Labeling for Double Duplication Graphs" by B. Roopa and L. Shobana.

6. The National Conference on "Mathematical Techniques and their Applications" on 11th and 12th January 2019 at SRM Institute of Science and Technology, Kattankulathur and presented paper titled, "On Face Bimagic Labeling for Duplication and Double duplication graphs", by B. Roopa and L. Shobana.

7. International Conference on "Mathematical Techniques and Applications" from 30-01-2020 to 01-02-2020 at SRM Institute of Science and Technology, Kattankulathur and presented paper titled "On Encryption through double duplication graphs" by B. Roopa and L Shobana.

8. International Conference on "Micro Electronics, Electromagnetics and Telecommunications" from 19-12-2024 to 20-12-2024 at Software Technology Park of India, Kolkata, West Bengal, India and presented paper titled "Revolutionizing Motor Functionality in Carpel Tunnel Syndrome and Radial Nerve Palsy Patients through EOG controlled Robotic Claw" by Prema. S and Roopa. B

Academic Experience:

- Worked as Assistant Professor in PERI Institute of Technology, Mannivakkam, Chennai from August 2017 to December 2020.
- Worked as Assistant Professor in Tagore Engineering College, Chennai from April 2013 to April 2017.
- Worked as Lecturer in Vel's University, Chennai from June 2008 to May 2011.

Seminars, Webinars, Workshops and Conferences Attended

- Workshop on MATHLAB-Advanced Mathematics Numerical Computation ,Optimization of Functions & Differential Equations on 29th and 30th July 2016 at Mathematics Department,Hindustan University.
- Short term course on Finite element method on 6-12 -Dec2016 at SRM IST, Kattankulathur
- Short Term Training Program on "Numerical Methods and Their Applications" conducted on 4th and 5th Nov 2016 at SRM IST, Kattankulathur.

- Short Term Training Program on "Graph Theory and Their Applications" conducted on 3rd and 4th Nov 2017 at SRM IST, Kattankulathur.

Competitions Participated and Won

- NPTEL: Basic Linear Algebra – Awarded with Elite during January – March 2025.
- NPTEL: Calculus of One Real Variable – Awarded with silver medal during July - September 2024.
- NPTEL: Multivariable Calculus – Awarded with silver medal during January – March 2024.
- NPTEL: Calculus of Several Real Variables – Awarded with silver medal during J July - September 2023.
- NPTEL: Engineering Mathematics-II – Awarded with Elite during January – April 2023.
- NPTEL: Operations Research – Awarded with silver medal during July - September 2022.
- NPTEL: Graph Theory – Awarded with silver medal during January – March 2020.
- Alison : Strand 4 Leaving certificate Higher Level Algebra with a score of 89%

Membership:

- Life Member of the Indian Mathematical Society
- Life Member of International Association of Engineers