

Dr. Mahesh M. Jariya

Associate Professor | Department of Mathematics | Saurashtra University, Rajkot

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RESEARCH FOCUS

- Graph Labeling Techniques
- Cordial Labeling
- Graceful Labeling
- Harmonic Mean Cordial Labeling
- Root Cube Mean Cordial Labeling
- Graph Labeling and its Application
- Vedic Mathematics

TECHNICAL SKILLS

- LaTeX

RESEARCH IDS

- ORCID: 0000-0002-1614-424X
- Google Scholar: Mahesh Jariya
- Vidwan Profile: 279531

ACADEMIC PROFILE

Associate Professor of Mathematics with expertise in **Graph Theory, Graph Labeling Techniques, and Vedic Mathematics**. His research contributions primarily focus on **Graceful Labeling, Cordial Labeling, Harmonic Mean Cordial Labeling, Root Cube Mean Cordial Labeling**, and related areas of Graph Theory. He has **21 research publications, 5 authored books, 4 completed Ph.D. supervisions, and 3 ongoing Ph.D. supervisions**, along with **55+ Expert/Invited Talks** delivered at various academic institutions. He has also contributed to **Vedic Mathematics curriculum development, teaching, academic administration, and research activities**.

EDUCATION

Ph.D. (Mathematics) — Saurashtra University, Rajkot | 2016

M.Phil. (Mathematics) — Saurashtra University, Rajkot | 2011

B.Ed. (Mathematics) — Saurashtra University, Rajkot | 2009

M.Sc. (Mathematics) — Saurashtra University, Rajkot | 2008

B.Sc. (Mathematics) — Saurashtra University, Rajkot | 2006

ACADEMIC APPOINTMENTS

2024 – Present Associate Professor — Department of Mathematics, Saurashtra University, Rajkot

2021 – 2024 Associate Professor — Children's Research University, Gandhinagar

2018 – 2021 Assistant Professor — Government Arts and Science College, Bavla (Ahmedabad)

2009 – 2018 Assistant Professor — V. V. P. Engineering College, Rajkot

COURSES TAUGHT

Ordinary Differential Equation, Partial Differential Equation, Complex Analysis, Linear Algebra, Calculus, Advance Engineering Mathematics, Differential Geometry, Vaidik Mathematics, Abstract Algebra.

PUBLISHED PUBLICATIONS

1. Ramesh Solanki and Mahesh Jariya, "Hardware Acceleration of Image Processing Algorithm Using Vedic Multiplication in VLSI", Journal of Information Systems Engineering and Management, 10(26s) (2025), 941–954.
2. Harsh Gandhi, Jaydeep Parejiya and M. M. Jariya, "Harmonic Mean Cordial Labeling in the Scenario of Duplicating Graph Elements", TWMS Journal of Applied and Engineering Mathematics, 15(6) (2025), 1594-1607.
3. Sneha Mundadiya, Jaydeep Parejiya and M. M. Jariya, "Some Results on Root Mean Cordial Labeling", Discrete Mathematics, Algorithm and Applications, 17(2) (2025), 2450031-(1-14).

4. Yesha Hathi, Parth S. Javia, Mahesh M. Jariya and Minal Shukla, "Harmonic Mean Cordial Labeling of Some Families of Triangular Snake and Quadrilateral Snake Graph", Library Progress International, 44(3) (2024), 8519-8540.
5. Yesha Hathi, Parth S. Javia, Mahesh M. Jariya and Minal Shukla, "Harmonic Mean Cordial Labeling of Some Cyclic and Path Related Graphs", Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University (Engineering and Technology Edition), 43(9) (2024), 26–45.
6. Harsh Gandhi, Jaydeep Parejiya and M. M. Jariya and Ramesh Solanki, "Harmonic Mean Cordial Labeling of Some Cycle Related Graphs", Educational Administration: Theory and Practice, 30(1) (2024), 1180-1188.
7. Ramesh Solanki and Mahesh Jariya, "Low-Power DSP Architecture for Wireless Communication Using Vedic Mathematics", Communications on Applied Nonlinear Analysis, 31(8s) (2024), 971–988.
8. S. Mundadiya, J. Parejiya and M. M. Jariya, "Root Cube Mean Cordial Labeling of C_nVC_m for $n, m \in \mathbb{N}$ ", TWMS Journal of Applied and Engineering Mathematics, 14(2) (2024), 460–472.
9. Ramesh Solanki and Mahesh Jariya, "Optimized IIR Filter Design Using Vedic Multiplication for High-Speed Signal Processing", Panamerican Mathematical Journal, 34(4) (2024), 728–739.
10. Jaydeep Parejiya, Sneha Mundadiya, Harsh Gandhi, Ramesh Solanki and Mahesh Jariya, "Root Cube Mean Cordial Labeling of $K_1, n \times P_m$ ", AIP Conference Proceeding, 2963, 020020 (2023), 020020-(1-20).
11. Harsh Gandhi, Jaydeep Parejiya and M. M. Jariya and Ramesh Solanki, "Harmonic Mean Cordial Labeling of One Chord $CnvG$ ", International journal of Membrane Science and Technology, 10(4) (2023), 2449-2456.
12. Ramesh Solanki, M. M. Jariya and Jaydeep Parejiya, "Generalization of Anurupyen and Vilokanam", Neuroquantology, 20(17) (2022), 1745-1748.
13. M.M. Jariya, "Some Discussion on Change Rank of Matrix", International Journal of Advance Engineering and Research Development, 4(4) (2017), 1269–1271.
14. V.J. Kaneria, M.M. Jariya and Hardik Karavadiya, "Cordiality of the Complete Graphs", Journal of Graph Labeling, 2(2) (2016), 89–101.
15. V.J. Kaneria, M.M. Jariya and H. M. Makadia, "Graceful Labeling of Arrow Graph and Double Arrow Graphs", Malaya Journal of Matematik, 3(4) (2015), 382–386.
16. V.J. Kaneria, M.M. Jariya and Meera Meghpara, "Graceful Labeling for Some Star Related Graphs", International Mathematical Forum, Hikari Ltd, 9(26) (2014), 1289–1293.
17. V.J. Kaneria and M.M. Jariya, "Smooth Graceful Graphs and Its application to Construct Graceful Graphs", International Journal of Science and Research, 3(8) (2014), 909–912.
18. V.J. Kaneria, R.V. Viradia, M.M. Jariya and H. M. Makadia, "Various Labeling for the Graph $C(t, P_n)$ ", International Journal of Mathematics and Computer Research, 2(11) (2014), 745–751.
19. V.J. Kaneria and M.M. Jariya, "Semi Smooth Graceful Graph and Construction of New Graceful Trees", Elixir Appl. Math., 76 (2014), 28536–28538.
20. V.J. Kaneria, H.M. Makadia, M.M. Jariya and Meera Meghapara, "Graceful Labeling for Complete Bipartite Graph", Applied Mathematical Sciences, Hikari ltd., 8(103) (2014), 5099–5104.
21. V.J. Kaneria, H. M. Makadia and M. M. Jariya, "Graceful Labeling for Cycle of Graphs", International Journal of Mathematics Research, 6(2) (2014), 173–178.

BOOKS

- **Title:** Calculus **Author:** Dr. Mahesh Jariya **Publisher:** Bharat Publication.
- **Title:** Linear Algebra (engineering Point of View) **Author:** Dr. Mahesh Jariya **Publisher:** Bharat Publication.
- **Title:** Ordinary Differential Equation **Author:** Dr. Mahesh Jariya **Publisher:** Bharat Publication.
- **Title:** Advance Engineering Mathematics **Author:** Dr. Mahesh Jariya **Publisher:** Bharat Publication.
- **Title:** Introduction to Complex Number and Complex Function **Author:** Dr. Mahesh Jariya **Publisher:** Bharat Publication.

SYLLABUS DESIGN:

- Course of Vedic Mathematics CCVM-101(CC)
- Course of Vedic Mathematics CCVM-102(EC)
- Course of Vedic Mathematics CCVM-103(FC)
- Course of Vedic Mathematics CCVM-104(FC)

PH.D. SUPERVISION

- Completed: 1. Yesha Hathi 2. Harsh Gandhi 3. Sneha Mundadiya 4. Ramesh Solanki
- Pursuing: 1. Makadiya Purva 2. Kunj Kothiya 3. Sneha Garchar.

CONFERENCE PRESENTATIONS

- "Cordiality of the Complete Graphs" — Recent Advancement on Distance, Domination and Labeling in Graphs (RADDLG-2016), The Madura College, Madurai
- "Some Remarks on Smooth Graceful Graphs" — National Conference on Algebra, Analysis & Graph Theory (NCAAG-2017), Saurashtra University Rajkot
- "Some Discussion on Index of Cordiality" — International Science Symposium on Recent Trends in Science and Technology, Christ College, Rajkot.
- "Basic Discussion in Vector Space" — International Conference on Science and Innovative Engineering, Jawahar Engineering College, Chennai.
- "Some Discussion on Bounds of Characteristic Roots " — International Conference on Science Technology, Engineering and Management (ICSTEM-2017), GVR&S College of Engineering & Technology, Guntur, India.
- "Some Discussion on Smooth Graceful Labeling " — 4th International Conference on Engineering Technology and Science (ICETS 2017), Muthayammal Engineering Institutions, Rasipuram, Tamilnadu.
- "Some Discussion on Eigen Vectors " — International Conference on Recent Innovation in Engineering and Technology (ICRIET), Maharshi Arvind College, Jaipur, Rajasthan.
- "Some Results on Cordial Labeling " — International Conference on Innovative Science and Engineering Technology (ICISSET), V. V. P. Engineering College, Rajkot.
- "Construction of Graceful Trees from Smooth Graceful Graphs " — International Conference on Innovative Trends in Electrical and Computer Engineering (ITECE-2016), Shree Labhubhai Trivedi Institute of Engineering & Technology, Rajkot.

SESSION CHAIR

- Chairperson in National Seminar entitled Importance of Indian Literature in Contemporary Era with reference to Holistic Child Development organized by Children's University, Gandhinagar, Gujarat on 5th May 2022.
- Judge in Toycathon, 2021 organized by Ministry of Education's Innovation Cell (Government of India).
- Judge in Under-11 sports Athletics Meet-2023 organized by Children's University, Gandhinagar.

INVITED TALKS

- Delivered 55+ Expert/Invited Talks at various seminars, conferences, workshops, and academic programmes organized by universities and higher-education institutions on topics related to Mathematics, Research Methodology and allied areas.

EXTENSION ACTIVITIES & ACADEMIC ADMINISTRATION

- Member, LIC of affiliation of study center of Children's University, Gandhinagar.
- Co-Ordinator of Vedic Mathematics, Department of Balbhavan, Children's University, Gandhinagar.
- Co-Ordinator of Vigyan Abhiyan by Vigyan Bharti by Children's University, Gandhinagar.
- Academic Coordinator of Bharat Gyan Pariksha 2021-22 conducted by Children's University, Gandhinagar
- BoS Member of Certificate Courses of Vidyaniketan Department, Children's University, Gandhinagar

- Head of the Department of School Accreditation, Children's Research University, Gandhinagar
- Chairman, Purchase Committee, Children's Research University, Gandhinagar.
- Member, NAAC-IQAC Committee, Children's University, Gandhinagar.
- RAC expert at various Colleges/Universities.

Achievement

- Qualified the Gujarat Public Service Commission (GPSC) examination for the post of Assistant Professor in Government Science Colleges with an excellent rank.