




TAGORE ENGINEERING COLLEGE

(A Member of Tagore Group of Institutions Chennai)

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai

ACCREDITED BY IQAC-NAAC WITH 'A' GRADE

FACULTY PROFILE

| PERSONAL DETAILS | | | |
|---|--|----------------------------|---|
| Name & Qualification | Dr. R. Jothiraj., M.Sc., B.Ed., M.Phil., Ph.D., PGDCA. | |  |
| Designation | Assistant Professor | | |
| Department | Mathematics | | |
| Total Teaching Experience | 16 | | |
| Total Research Experience | 8 | | |
| Total Industry Experience | - | | |
| Area of Specialization | Graph Theory and Operation Research | | |
| AICTE Faculty ID | 1-37699243291 | | |
| Email ID | jothirajlvp@gmail.com | | |
| EDUCATIONAL DETAILS | | | |
| Degree | Branch/Specialization | University | Year |
| UG | Mathematics | Madurai Kamaraj University | 2004 |
| PG | Mathematics | Madurai Kamaraj University | 2006 |
| M.Phil | Mathematics | Madurai Kamaraj University | 2007 |
| Ph.D | Mathematics | Thiruvalluvar University | 2021 |
| RESEARCH/PUBLICATION DETAILS | | | |
| <u>Publications in Journal</u> | | | |
| <ul style="list-style-type: none"> R.Jothiraj and B.Chandralekha “Paired Neighbor Connected Dominator Coloring Set in Graphs”, Indian Journal of Natural Sciences, Volume 14, Issue 79, 2023, pp 58202-58211. (Web of Science) R.Jothiraj and B.Chandralekha “ Triple Connected Dominator Coloring Sets using TUS and Backtracking Algorithm for MANET ”, European Chemical Bulletin, Volume 12, Issue 7, 2023, pp 2157-2167. (Scopus Indexed) R.Jothiraj and B.Chandralekha “Mathematical Based Performance Comparison of TUS and Triple Connected Dominator Coloring Sets for MANET”, European Chemical | | | |

Bulletin, Volume 12, Issue 4, 2023, pp 3191-3197.

(Scopus Indexed)

- R.Jothiraj “A Strong Triple Connected Domination Set Based on Routing Scheme for MANET”, **Journal of Huazhong University of Science and Technology**, Volume 50 Issue 3, 2021, pp 1-11. **(Scopus Indexed)**
- R. Jothiraj, S. Jayakumar and P. Venugopal “Open Shop Scheduling in Circular Coloring and Dominator Coloring of Circular-Arc Graphs”, **International Journal of Pure and Applied Mathematics**, Volume 118 No. 10 2018, pp 185-193. **(UGC Approved)**
- R. Jothiraj, S. Jayakumar and P. Venugopal, (2018) “Cyclic Open Shop Scheduling in a Circular Coloring and Paired Neighbor Connected Dominator Coloring of Circular- Arc Graph” **Journal of Advanced Research in Dynamical & Control Systems**, Vol. 10, No. 5. pp 79-83. **(Scopus Indexed)**
- R. Jothiraj, S. Jayakumar and P. Venugopal “ Paired Neighbor Connected Dominator Coloring to Open Shop Scheduling ”, **International Journal of Pure and Applied Mathematics**, Volume 120 No. 8 2018, pp 31-39. **(UGC Approved)**
- R. Jothiraj, S. Jayakumar and P. Venugopal “Cyclic Open Shop Scheduling in a Paired Triple Connected Dominator Coloring of Circular-Arc Graph”, **Journal of Applied Science and Computations**, Volume 6 Issue 1, 2019, pp 675-680. **(UGC Approved)**
- R. Jothiraj, S. Jayakumar and P. Venugopal “Triple Connected Dominator Coloring to Cyclic Open Shop Scheduling of Unit Circular Arc Graph”, **International Journal of Research and Analytical Reviews**, Volume 6 Issue 1, 2019, pp 579-583. **(UGC Approved)**
- R. Jothiraj and A. Kathirvel, “A Mathematical Based Performance Comparison of TUS and Strong Triple Connected Domination Sets for MANET”, **International Journal on Recent Researches In Science, Engineering & Technology**, vol.4, Issue 2, Feb. 2016. **(UGC Approved)**

Conference Proceedings

- R. Jothiraj, “An Efficient Connected Dominating Set Based Routing Scheme in Ad Hoc Wireless Networks ”, International Conference on Recent Trends in Mathematics, Statistics, and Engineering (ICRTMSE 2023) organized by School of Technology Management and Engineering SVKM's NMIMS (Deemed-to-be University) Indore, Madhya Pradesh, India, 22-23 December 2023.
- R. Jothiraj, “Multi-Processor Cyclic Open Shop Scheduling Using Circular Coloring and Domination Number of Circular-Arc Graph ”, International Conference on Mathematical Modeling, Analysis and Computing -2023, Holy Cross Arts and Science College For Women, Tirupattur, 21st & 22nd October 2023.
- R. Jothiraj, “Multi-Processor Cyclic Open Shop Scheduling Problem using Coloring and Domination techniques of Circular-Arc Graphs”, 7th International conference on Recent Advances in Science, Engineering and Management (ICRASEM - 2022), pp. 175, Tagore Engineering College, 25th January 2023. **ISBN : 978-81-943033-7-4.**
- R. Jothiraj, “Paired neighbor connected dominator Coloring set in Graphs”, 7th International conference on Recent Advances in Science, Engineering and Management (ICRASEM -

2022), pp. 179, Tagore Engineering College, 25th January 2023. **ISBN : 978-81-943033-7-4.**

- R. Jothiraj “Triple Connected Dominator Coloring for some Standard Graphs”, Virtual International Conference on Discrete Mathematics and Combinatorics (ICDMC 2021), Poornaprajna College and Postgraduate Centre, Udupi during 22-23 July 2021.
- R. Jothiraj, “Triple Connected Dominator Coloring for some Special Graphs”, International Conference on Mathematical Computer Engineering (ICMCE 2020), Vol.1, pp.49, VIT University, Chennai, during 21–22, February 2020. **ISBN : 978-93-81899-37-3.**
- R. Jothiraj, S. Jayakumar and P. Venugopal, “Cyclic Open Shop Scheduling in a Paired Triple Connected Dominator Coloring of Circular Arc Graph”, National Conference on EMERGING TRENDS IN MATHEMATICS SCIENCES (NCETMS2018), Vol.1,pp.25, S.A. Engineering College, Chennai, 20 December 2018.
- R. Jothiraj, S. Jayakumar and P. Venugopal, “Triple Connected Dominator Coloring to Cyclic Open Shop Scheduling of Circular- Arc Graph”, International Conference on Mathematical Computer Engineering (ICMCE 2018), Vol.1, pp.104, VIT University, Chennai, during 23-24 November 2018. **ISBN : 978-93-81899-94-6**
- R. Jothiraj, S. Jayakumar and P. Venugopal, “Triple Connected Dominator Coloring in Graphs” in the National Conference on Emerging Trends in Mathematics & Applications in Engineering and Technology (NCETMAET-2018), organized by Hindustan institute of technology and science, Chennai, during 22-23 March 2018.
- R. Jothiraj, S. Jayakumar and P. Venugopal, “ Open Shop Scheduling in a Circular Coloring and Dominator Coloring in a Circular Arc Graphs”, National Conference on EMERGING TRENDS IN MATHEMATICS SCIENCES (NCETMS2017), Vol.1, pp.36, S.A. Engineering College, Chennai, 22 December 2017.
- R. Jothiraj, S. Jayakumar and P. Venugopal, “Paired Neighbor Connected Dominator Coloring to Open Shop Scheduling”, International Conference on Mathematical Computer Engineering (ICMCE 2017), Vol.1, pp.85, VIT University, Chennai, during 3-4 November 2017. **ISBN:978- 93- 81899-83-0**
- R. Jothiraj and Dr. A.Kathirvel, “A Mathematical Based Performance Comparison of TUS and Strong TripleConnected Domination Sets for MANET”, International Conference on Mathematical Computer Engineering (ICMCE 2015), Vol.1, pp.12, VIT University, Chennai, during 14-15, December 2015. **ISBN: 978- 93- 81899-64-9**

FDP attended

- R. Jothiraj attended the Five days National FDP on “Advances in Mathematical Theory and Practical Applications” organized by the Department of Mathematics, School of Basic Sciences, Vels Institute of Science, Technology and Advanced Studies(VISTAS),Chennai in association with Rabindranath Tagore University(RNTU), Bhopal from 06.11.2023 to 10.11.2023.
- R. Jothiraj attended the One Week National FDP on “Recent Advances in Applied Mathematics”, organized by the Department of Mathematics, , Sri Manakula Vinayagar Engineering College, Puducherry, from 4 to 8 September, 2023
- R. Jothiraj attended the 15days virtual International FDP on “Frontiers of Mathematics”, organized by the Department of Mathematics, SRM Institute of Technology, Ramapuram Campus in collaboration with “ 1 Decembrie 1918 University”, Chennai and Romania from 5 to 19 July, 2023.
- R. Jothiraj attended the One Week International FDP on “Mathematics in Real, Applied and Computational Domains”, organized by the Department of Mathematics, School of Science and Humanities, Sathyabama Institute of Science and Technology, Chennai, from 3 to 8 July, 2023.

- R. Jothiraj attended the six days FDP on “Recent Research Area and its Application in Mathematics”, organized by Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Department of Mathematics, Chennai, during 10th October to 15th October 2022.
- R. Jothiraj attended the two days FDP on “Spectral Graph Theory”, organized by IIT Madras (PALS) on 24th & 25th November 2022.
- R. Jothiraj attended the seven days FDP on “Mathematics and its Applications”, organized by V.O.Chidambaram College, PG and Research Department of Mathematics, Thoothukudi, during 23rd March to 30th March 2022
- R. Jothiraj attended the AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “CYBER SECURITY (Elementary Level)” conducted by the Computer science Engineering Department of Anand Institute of Higher Technology, Chennai, during 07-11 June 2021.
- R. Jothiraj attended the AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Productivity Enhancement through Meditation" conducted by Jaipur Engineering College and Research Center, Jaipur, during 24-28 May 2021.
- R. Jothiraj attended the five days FDP on “Green Technology for Enhancing Livelihoods”, organized by Center for Smart Infrastructure in association with Center for Renewable Energy & Environment (CREE) and Department of Electronics & Communication Engineering, held at Centurion University of Technology and Management, Bhubaneswar Campus, Odisha, during 31st May to 4th June 2021.
- R.Jothiraj attended the AICTE sponsored a two week FDP on “Soft Computing Techniques and its Applications” conducted by the Electronics and Communication Engineering Department of AnandInstitute of Higher Technology, Chennai, during 15-28 November 2019.

Workshop

- R. Jothiraj attended the two days national Workshop on “Fuzzy Theory and Combinatorics” organized by Division of Mathematics, School of Advanced Sciences, (SAS), VIT University, Chennai, during 14th -15th December 2022.
- R. Jothiraj attended the one day International Conference on Advancements in Applicable Mathematics (ICAAM-2022) organized by PG & Research Department of Mathematics, S.I.V.E.T. College, Gowrivakkam, Chennai, Tamil Nadu, India on 07th March 2022
- R. Jothiraj attended the one day International Conference on International Conference on Advancements in Applicable Mathematics (ICAAM-2022) organized by PG & Research Department of Mathematics, S.I.V.E.T. College, Gowrivakkam, Chennai, Tamil Nadu, India on 07th March 2022
- R. Jothiraj attended the three days International Workshop on Numerical and Analytical Techniques in Engineering Problems (IWNATEP – 2022), organized by Department of Mathematics, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India during 19th - 21st January 2022.
- R. Jothiraj attended the six days national level workshop on “Mathematical Analysis MATANA 2021”, organized by Department of Mathematics (Shift-II), Loyola College, Chennai, during 13 – 18 September 2021.
- R. Jothiraj attended the three days national level webinar on " Recent Trends in Applied Mathematics " conducted by the Mathematics Club in association with the Department of Applied Sciences & Humanities. Universal Engineering College Vallivattom, kerala, during 05-11 June 2021.
- R. Jothiraj attended the one days national level webinar on "How to write a scientific

research article for publication: A strategy" conducted by the Department of Mechanical Engineering, Akshaya College of Engineering & Technology, Coimbatore, on 7th June 2021.

- R. Jothiraj attended the three days national level webinar on “Three Day Mathematical Software Workshop" conducted by the Mathematics Club in association with the Department of Applied Sciences & Humanities. Universal Engineering College Vallivattom, kerala, during 02-06 June 2021.
- R. Jothiraj attended the five days national Workshop on “Data Science and Advanced Computing” conducted by the School of Advanced Sciences (SAS), VIT-AP University, during 13th -14th March 2021 (Level-I) and 19th -21st March 2021 (Level-II).
- R. Jothiraj attended the three days International Conference on “Algorithms and Discrete Applied Mathematics” (CALDAM 2021), IIT Ropar during 11-13 February 2021.
- R. Jothiraj attended the two days International Workshop on “Optimization Algorithms, Graph Theory and Geometrical Flows in Modern Computing” VIT University, Chennai, during 23-24 November 2018.
- R. Jothiraj attended the Three Day AICTE sponsored Workshop on “Opinion Mining” conducted by the Computer Science Department of Anand Institute of Higher Technology, Chennai, during 8-10 November 2017.
- R. Jothiraj attended the two days National Workshop on “Applications of Mathematics in Engineering” Hindustan Institute of Technology and Science, Chennai, during 23-24 September 2010.
- Convener for 1-day workshop on “Vedic Mathematics” organized by Anand Institute of Higher Technology, Chennai. During 18th Oct 2015.
- Convener for 1-day workshop on “Applications of Mathematics in Engineering” organized by Anand Institute of Higher Technology, Chennai. During 31th March 2018.

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Books/ChaptersPublished

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FundReceived

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| - | | |
| PatentApplied/ Published/Granted | | |
| <ul style="list-style-type: none"> • R. Jothiraj “Hydrated-Lime Activated Rice-Husk-Ash (HARHA) Modified Soft Soil for Pavement Construction Purposes By Artificial Neural Network (ANN) And Fuzzy Logic (FL)”. The Patent Journal pp. 780, No. 01/2023 Dated 06.01.2023. • R. Jothiraj “Artificial Intelligence Approach in Integrals of Special Functions and Umbral Methods with Applications”. The Patent Journal pp.10 (915337), Issue No. 51/2023 Dated 22.12.2023. • Indian Patent Applied Application No. 202341041649 - A Multivariate Approach for the Biometric Comparison of Analytical Methods in Clinical Chemistry | | |
| CITATIONS | 4 | |
| H-INDEX | 1 | |
| RESEARCH GUIDANCE DETAILS | | |
| Sl.No | University | SupervisorID/Reference |
| 1 | AnnaUniversity, Chennai | - |
| 2 | NumberofUGScholarsGuided | - |
| 3 | NumberofPGScholarsGuided | - |
| 4 | NumberofPh.D.Scholars Guided | - |
| 5 | NumberofPh.D. Scholars Pursuing | - |
| PROFESSIONAL SOCIETY MEMBERSHIP DETAILS | | |
| Sl.No | ProfessionalSocietyName | MemberID |
| 1 | Ramanujan Mathematical Society | 635 |