

# Dr. Kirupa

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## Education

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- **Ph.D.** in Mathematics, University of Madras, 2023
- **M.Phil** in Mathematics, Loyola College, University of Madras, 2009
- **M.Sc** in Mathematics, Loyola College, University of Madras, 2008
- **B.Sc** in Mathematics, Loyola College, University of Madras, 2006

## Teaching Experience

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- **Assistant Professor** (2011–present), Department of Science and Humanities, LICET
- **Lecturer** (July 2010–June 2011), Vel Tech High Tech Engineering College
- **Lecturer** (July 2009–June 2010), Jaya Engineering College

## Academic Responsibilities

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- Board of Studies of the Department of Science and Humanities - Internal Member in LICET
- Course Coordinator for Probability and Complex Function (MA3303)
- Course Coordinator for Transforms and Partial Differential Equation (MA3351)
- Course Coordinator for Laplace Transforms and Complex Variables (MA24202)
- Course Coordinator for Transforms and Partial Differential Equations (MA24304)

## Administrative Responsibilities

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- Overall Timetable Coordinator(2022–present)
- NSS - Program Officer (2024–present)
- Research Committee - Member (2024–present)
- Cultural Committee - Member (2024-2025)
- Anti-Durg Committee - Member (2024-2025)
- Science Club - Member (2022-2024)

## Publications

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1. **Pathinathan, T.** and **Kirupa, A.** (2021). "Intuitionistic k-Partitioned Fuzzy Graph." *Advances in Mathematics: Scientific Journal*, Vol. 10, No. 1, pp. 181–192. ISSN: 1857-8365.
2. **Pathinathan, T.** and **Kirupa, A.** (2020). "k-Partitioned Fuzzy Graph." *South East Asian Journal of Mathematics and Mathematical Sciences*, Vol. 16, No. 1, pp. 223–240. ISSN: 2582-0850.
3. **Kirupa, A.** and **Jesintha Roseline, J.** (2019). "Domination in Double Layered Fuzzy Graphs." *AIP Conference Proceedings*, Vol. 2112, Issue 1, Article No. 020117.
4. **Kirupa, A.**, **Jesintha Roseline, J.** and **Pathinathan, T.** (2019). "Balanced k-Partitioned Fuzzy Graph." *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 9, No. 2, pp. 269–275. ISSN: 2278-3075. DOI: 10.35940/IJITEE.B6152.129219.
5. **Pathinathan, T.** and **Kirupa, A.** (2014). "A Study on Differences in Judgment Based on a Civil Case Using Fuzzy Multi-Person Decision Making Model." *International Journal of Computing Algorithm*, Vol. 3, pp. 490–494.
6. **Kirupa, A.** and **Pathinathan, T.** (2013). "A Study on the Problems Faced by Rural Tamil

Medium Students in Professional Engineering Colleges Using CETD Matrix.” *International Journal of Computing Algorithm*, Vol. 2, pp. 45–47.

## Areas of Interest

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**By Research:** Fuzzy MCDM Models, Fuzzy Graph Theory

**By Teaching:** Discrete Mathematics, Algebra and Number Theory and Statistics

## Software Skills

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- Programming: Beginner in MATLAB
- Tools: Google Workspace, Latex, Microsoft Visio. Abode flash, Moodle(LMS)

## Conferences Organised

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- Member in Organizing – The International Conference on Next-Gen Mathematical Sciences (IC-NMS 2025)

## Conferences Attended (National / International)

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### International Conferences

- International Conference on Next Generation Technologies for a Sustainable Future (ICNGTS - 2026)
- International Conference on Re-Envisioning Higher Education in India: Excellence, Equity Sustainability (RHEES'25)
- The International Conference on Next-Gen Mathematical Sciences- (ICNMS 2025)
- International Conference on "Informatics and Smart Engineering Systems (INSES -2024)
- International Conference on Advanced Mathematical Modeling and Computational Techniques (AMMCT - 2021)
- International Conference on Integrated Knowledge Towards Enriched Society (IKTES–2020)
- International Mathematics Congress (IMC-2012)
- International Conference on "Informatics and

### National Conferences

- National Conference on Applications of Number Theory, Graph Theory, Fuzzy Logic and Combinatorics in Engineering and Technology (NCANGFCET'19)
- National Conference on Mathematical Techniques and Applications (NCMTA-2019)
- National Workshop on Fuzzy Set Theory and its Applications (2015)

## Paper Presentations

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2021 “Hesitancy k-Partitioned Fuzzy Graph” – International Conference on Advanced Mathematical Modeling and Computational Techniques (AMMCT), AMET Deemed to be University, Chennai. [28.02.21-30.6.2021]

2020 “Intuitionistic k-Partitioned Fuzzy Graph” – International Conference on Integrated Knowledge Towards Enriched Society (IKTES–2020),

Loyola-Racine Research Institute of Mathematics and Computing Sciences (LIMCOS), Loyola College, Chennai.[22.1.2020-23.1.2020]

2019 “k-Partitioned Fuzzy Graph using Equal Sum” – National Conference on Applications of Number Theory, Graph Theory, Fuzzy Logic and Combinatorics in Engineering and Technology (NCANGFCET'19), Sriram Engineering College, Chennai.[1.3.2029]

- 2019 “Domination in Double Layered Fuzzy Graphs” – National Conference on Mathematical Techniques and Applications (NCMTA–2019), SRM Institute of Science and Technology, Kattankulathur. [11.1.2019–12.1.2019]
- 2015 “Multi Attribute Decision Making in Fuzzy Environment” – National Workshop on Fuzzy Set Theory and its Applications, Loyola College, Chennai.[9.2.1015]
- 2012 “A Study on Differences in Judgment Based on a Civil Case Using Fuzzy Multi Person Decision Making Model using CETD Matrix” – International Mathematics Congress, Loyola College, Chennai.[23.7.2012–25.7.2012]

## Workshop / Camp Organised

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- Member in "Teaching Mathematics for Engineering Students(Series - Transforms- PDE)", - LICET (2017)
- Member in “Teaching Mathematics for Engineering students” – LICET (2015)

## Workshop / FDP: Attended

| Year | Title / Organizer                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | “One Day Orientation Programme for YRC Programme Officers of Anna University“– (Chennai Region) at TAG Auditorium, CEG Campus, Anna University. (04.03.2025)                                              |
| 2025 | “AI in Pedagogy and Scientific Writing, E and ICT Academy IIT Guwahati“ – Meston Centre for Teacing and Learning, IQAC and MCC-MRF Innovation Madras Christian College, Offline FDP (27.1.20205–2.2.2025) |
| 2024 | “Best Practices and Institutional Distinctiveness“ - St.Joseph’s College, Tiruchirappalli online workshop(4.3.2024–7.3.2024)                                                                              |
| 2021 | “Modeling and Simulation: The Applied World of Mathematics” – National Seminar, Rajpur (03.07.2021)                                                                                                       |
| 2020 | “Universal Human Value – Inculcating Universal Human Values in Technical Education“, All India Council for Technical Education(AICTE), Online Workshop– (2.11.2020 - 6.11.2020)                           |
| 2020 | “Applications of Mathematics in Engineering” – Department of Mathematics, KPR Institute of Engineering and Technology (KPRIET), Coimbatore, Online FDP (20.07.2020–25.07.2020)                            |
| 2020 | “ASTUTE-EFFLUX Trends in Mathematics” – Department of Science and Humanities, SNS College of Engineering, Coimbatore (02.07.2020–07.07.2020)                                                              |
| 2020 | “Recent Trends in Fourier Transformation and Machine Learning: Mathematical Approach” – Department of Science and Humanities, KGiSL Institute of Technology, Online FDP (22.06.2020–23.06.2020)           |
| 2020 | “Recent Research Developments in Mathematics, Statistics and Their Applications” – Department of Basic Science and Humanities, GMR Institute of Technology, Andhra Pradesh (20.05.2020–26.05.2020)        |
| 2019 | “Workshop on Algebra and Number Theory” – Easwari Engineering College, Ramapuram (19.06.2019–21.06.2019)                                                                                                  |
| 2019 | “Informing Gen Z Engineers” – LICET Faculty Development Forum (FDF) (12.06.2019–13.06.2019)                                                                                                               |
| 2019 | “Short-Term NBA Training Programme” – LICET (22.04.2019–26.04.2019)                                                                                                                                       |
| 2017 | “Teaching Mathematics for Engineering Students – Series, Transforms and Partial Differential Equations” – LICET (02.06.2017)                                                                              |

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| 2015 | “Teaching Mathematics for Engineering Students” – LICET (30.10.2015)                     |
| 2013 | “Centre for Faculty Development” – Anna University, Chennai, FDP (22.06.2013–23.06.2013) |
| 2012 | “Aakash for Education” – LICET (10.11.2012–11.11.2012)                                   |

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## Any Other Details

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- Conducted "Voluntary Blood donation Camp at LICET" on 30.1.2026 in collaboration with "The Tamil Nadu Dr.M.G.R Medical University"
- Conducted "NSS Special Rural Camp" for second and first year NSS students on 28.3.2025 at Roshanagaram, Thiruvallur District.
- Conducted "Voluntary Blood donation Camp at LICET" on 17.3.2025 in collaboration with "The Tamil Nadu Dr.M.G.R Medical University"