

## BIO DATA



Name : Dr. T. Manimaran

Designation : Associate Professor

Department : Mathematics

Address for Communication : 57, Babuji Nagar,

Thiruvalluvar Nagar West,

Rajapalayam-626117

Email : manimaran@ritrjpm.ac.in

Mobile Number : 9942748320

Google Scholar link :

<https://scholar.google.com/citations?user=NPqPrkkAAAAJ&hl=en>

### 1. Educational Qualification

| Degree  | Branch / Specialization | Institute/University    | Year of Passing |
|---------|-------------------------|-------------------------|-----------------|
| B.Sc.   | Mathematics             | Madurai Kamaraj         | 1994            |
| M.Sc.   | Mathematics             | Madurai Kamaraj         | 1996            |
| B.Ed.   | Mathematics             | Madurai Kamaraj         | 1997            |
| M.Phil. | Mathematics             | Madurai Kamaraj         | 1999            |
| PGDCA   | Computer Science        | Madurai Kamaraj         | 1999            |
| SET     | Mathematics             | Bharathiyar University  | 2012            |
| Ph.D    | Graph Theory            | Kalasalingam University | 2017            |

### 2. Professional/ Industry Experience

: (in chronological order)

| S.No | Designation         | Institution/ Organization                                    | Period     |            |
|------|---------------------|--|------------|------------|
|      |                     |  | From       | To         |
| 1    | Lecturer            | VLB Janakiammal College of Engineering and Technology,       | 01.06.2000 | 07.06.2002 |
| 2    | Lecturer            | Hindusthan College of Engineering and Technology, Coimbatore | 10.06.2002 | 30.05.2008 |
| 3    | Assistant Professor | Kalasalingam University, Krishnankoil                        | 02.06.2008 | 31.05.2014 |
| 4    | Associate Professor | Ramco Institute of Technology, Rajapalayam                   | 05.06.2014 | Till Date  |

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### 3. Research Interest: Graph Theory-Irregularity Strength of a Graph

## 4 Publications

### 4.1 JOURNAL PUBLICATIONS

1. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “On Total Edge Irregularity Strength of Graph”, ARS Combinatoria, 129 (2016) 173-183, Impact Factor 0.27
2. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “1-Distant Irregularity Strength of Graphs”, ICTCSDM 2016, LNCS 10398, pp. 182-190, 2017, Impact Factor 0.8.
3. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “Irregularity Strength of Corona of Two Graphs”, ICTCSDM 2016, LNCS 10398, pp. 175-181, 2017, Impact Factor 0.8.
4. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “Irregularity Strength of Edge Corona of Two Graphs”, Journal of Graph Labeling, 3(1), pp. 01-08, 2017.
5. Selvaraj G, Manimaran T, Selvaganesh T, “Numerical Solution for Linear Programming Problem with A Fuzzy Objective Function” Gazi University Journal of Science, 34 (02), pp. 179-188, 2021, Impact Factor 0.49.
6. T. Selvaganesh, T. Manimaran, K. Subramanian, G. Selvaraj, R. Saravanakumar, Muthukrishnan Anand, “A Note On Strongly Gorenstein  $\mathcal{X}$ -Flat Modules”, Journal of Advanced Zoology 45(S3) (2024), pp. 82-86.
7. T. Manimaran, T. Selvaganesh, K. Subramanian, G. Selvaraj, S. Karthikeyan, “Edge Irregularity Strength of Graphs on Mean Labeling”, Library Progress International Vol.44 No. 3, Jul-Dec 2024: P.9287-9294.
8. T. Manimaran, T. Selvaganesh, G. Selvaraj, K. Subramanian, S. Karthikeyan, “Strength of Vertex Irregularity of Some Product of Graphs”, Advances in Nonlinear Variational Inequalities, ISSN: 1092-910X, Vol.28 No.5s (2025), P. 512-520.

### 4.2 CONFERENCE PUBLICATIONS

1. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “1-Distant Irregularity Strength of Graphs”, in International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2016) in Kalasalingam University, Krishnakoil, Dec. 19-21, 2016.
2. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “Irregularity Strength of Corona of Two Graphs”, in International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2016) in Kalasalingam University, Krishnakoil, Dec. 19-21, 2016.
3. Muthu Guru Packiam K, Manimaran T, ThuraiSwamy A, “Irregularity Strength of Edge Corona of Two Graphs”, in NBHM Sponsored Two Day National Seminar on Some Recent Research Directions in Graph Theory, 9<sup>th</sup> & 10<sup>th</sup> March 2017 organized by Ayya Nadar Janaki Ammal College, Sivakasi.
4. T.Selvaganesh, T.Manimaran, U.Kumaran, “A Characterization of Strongly Gorenstein  $x_y$ - projective and  $x_y$ - injective modules”, International Web Conference on Smart Engineering Technologies – 2020 during 26-27, June 2020 organised by Ramco Institute of Technology, Rajapalayam.

5. T. Selvaganesh, T. Manimaran, “A Note on Strongly Gorenstein X-Flat Modules”, International Web Conference on Smart Engineering Technologies – 2022 during 11-12, March 2022 organised by Ramco Institute of Technology, Rajapalayam.
6. T. Manimaran, K. Subramanian, T. Selvaganesh, “Mean Irregularity Strength of Graphs”, International Conference on Sustainable Technology in Civil Engineering and Applied Sciences 2023 during 24-25, March 2023 organised by Ramco Institute of Technology, Rajapalayam.
7. T. Manimaran, K. Vignesh Saravanan, T. Selvaganesh, K. Muth Guru Packiam, “2-Distant Irregularity Strength of Paths and Cycles”, International Conference on Evolution in Pure and Applied Mathematics (ICEPAM - 2024) during 20-22, November 2024 organised by Akal University Talwandi Sabo, Punjab in Collaboration with Eternal University, Himachal Pradesh.
8. Prashanthi P, Nitin Chopde, Manimaran T, Chakrapani K, RajeshKannan S, Manikandakumar M, “Lung Cancer Diagnosis - Visualizing Deep Learning Decision Pathways”, International Conference on Intelligent Computing and Automation for Sustainable Solutions (ICASS 2026) during 12-13, February 2026 organized by School of Engineering, Manav Rachna University, Faridabad, Haryana 121004.

#### 4.3 Book/Book chapter publications

1. “**Engineering Mathematics for First Year**”, Magnus Publication, Chennai.
2. “**Matrices and Calculus**”, Pearson Publication, ISBN No. 978-81-198-4774-7.
3. “**Statistics and Numerical Methods**”, VRB Publishers, Chennai, ISBN: 978-93-95018-56-2.
4. “**Statistics and Numerical Methods**”, Pearson Publication, ISBN No. 978-93-615-9771-8.
5. “**Discrete Mathematics**”, Vishnu Prints Media, Chennai, ISBN No. 978-81-19432-48-6.

#### 5 Funded Projects

| S.No. | Title of the project   | Funding Agency  | Duration                                | Amount     | Status    |
|-------|--|---|---|------------|-----------|
| 1     | Handholding Support for Preparation of Village Panchayat Development Plan under the RRGSA Scheme | State Institute of Rural Development and Panchayat Raj (SIRD), Maraimalainagar, Chennai | 1 year<br>2023-24                       | Rs. 30000  | Completed |
| 2     | Portable Squeezer for Lemon Juice Extraction   | National Coordinating Institute, UBA, IIT Delhi   | 6 Months<br>Sanctioned on<br>28-05-2024 | Rs. 100000 | Completed |
| 3     | Handholding Support for Preparation of Village Panchayat Development Plan under the RRGSA Scheme | State Institute of Rural Development and Panchayat Raj (SIRD), Maraimalainagar, Chennai | 1 year<br>2025-26                       | Rs. 50000  | Completed |

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**6 Short term Courses / Seminars /FDP/Workshop/ConferenceAttended:**

| Sl.No | Title of the event   | Organized by  | Date       |            |
|-------|--|---|------------|------------|
|       |  |   | From       | To         |
| 1     | FDP on Theory of Computation   | Kongu Engineering College, Perundurai, Erode                  | 23.06.2003 | 27.06.2003 |
| 2     | FDP on Probability and Queueing Theory   | Sri Krishna College of Engineering and Technology, Coimbatore | 24.11.2003 | 29.11.2003 |
| 3     | National Level Seminar on Mathematical Modeling  | PSGR Krishnammal College for Women, Coimbatore                | 06.08.2004 | -          |
| 4     | Delivered Lecture to the Participants of the 6-day Training Programme on Theory of Computation | Tamilnadu College of Engineering, Coimbatore                  | 23.05.2005 | 28.05.2005 |
| 5     | One Day National Level Seminar on Recent Applications in Mathematics                           | Kongunadu Arts and Science College, Coimbatore                | 05.08.2006 | -          |
| 6     | International Workshop on Graph Labeling   | Kalasalingam University, Krishnankoil                         | 07.01.2009 | 10.01.2009 |
| 7     | IMS 75 <sup>th</sup> Annual Conference   | Kalasalingam University, Krishnankoil                         | 27.12.2009 | 30.12.2009 |
| 8     | Instructional Workshop on Graph Colorings  | Kalasalingam University, Krishnankoil                         | 10.03.2010 | 15.03.2010 |
| 9     | Instructional Workshop on Mathematical Modeling and Simulation                                 | Kalasalingam University, Krishnankoil                         | 07.07.2010 | 14.07.2010 |
| 10    | Workshop on Latex  | Kalasalingam University, Krishnankoil                         | 20.08.2011 | -          |
| 11    | National Seminar on Research and Consultancy Services  | Kalasalingam University, Krishnankoil                         | 30.12.2011 | -          |
| 12    | National Conference on Theoretical Computer Science and Discrete Mathematics                   | Kalasalingam University, Krishnankoil                         | 09.01.2012 | 11.01.2012 |
| 13    | One Day Workshop on MATLAB Programming   | Kalasalingam University, Krishnankoil                         | 10.02.2012 |            |
| 14    | International Workshop On Combinatorial Algorithms (IWOCA 2012)                                | Kalasalingam University, Krishnankoil                         | 19.07.2012 | 21.07.2012 |
| 15    | Workshop on Life Skill Management  | Kalasalingam University, Krishnankoil                         | 03.02.2013 | -          |
| 16    | Instructional Workshop on Graph Labeling Problems  | Kalasalingam University, Krishnankoil                         | 05.02.2014 | 11.02.2014 |

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|----|---|--|------------|------------|
| 17 | Seven Days Faculty Development Training Programme on MA6151-MATHEMATICS I                                   | Ramco Institute of Technology, Rajapalayam                                     | 09.06.2014 | 15.06.2014 |
| 18 | Bridge Course on Mathematics  | Centre for Faculty Development, Anna University, Chennai                       | 25.06.2014 | 26.06.2014 |
| 19 | Seven Days Faculty Development Training Programme on MA6351 - Transforms and Partial Differential Equations | Ramco Institute of Technology, Rajapalayam                                     | 12.06.2017 | 18.06.2017 |
| 20 | Two Days Workshop on Linear Algebra   | Ramco Institute of Technology, Rajapalayam                                     | 27.06.2018 | 28.06.2018 |
| 21 | Workshop on MATLAB onramp   | Group discussion on research proposal writing in Mathematics                   | 22.11.2018 | -          |
| 22 | A Three Day Faculty Development Programme on Recent Trends In Engineering Mathematics                       | Kalasalingam University, Krishnankoil  | 19.12.2018 | 21.12.2018 |
| 23 | Teachers Enrichment Workshop on Linear Algebra and Multivariable Calculus                                   | National Centre for Mathematics at MEPCO Schlenk Engineering College, Sivakasi | 13.05.2019 | 18.05.2019 |
| 24 | Group discussion on research proposal writing in Mathematics  | Ramco Institute of Technology, Rajapalayam                                     | 06.07.2019 | -          |
| 25 | 3 day FDP on Team Building  | Conducted by ICT Academy at RIT  | 18.11.2019 | 20.11.2019 |
| 26 | Orientation and Awareness program on OBE and SAR preparation  | Ramco Institute of Technology, Rajapalayam                                     | 23.11.2019 | -          |
| 27 | Linear Regression Model in Machine Learning   | Sri Eshwar College of Engineering, Coimbatore                                  | 14.07.2020 | -          |
| 28 | Applications of Differential Equations in Civil Engineering   | Kumaraguru college of Technology, Coimbatore                                   | 11.08.2020 | -          |
| 29 | Graphs in World   | Rathinam Technical Campus, Coimbatore  | 15.09.2020 | -          |
| 30 | Applications of Graph Theory  | K.S.Rangasamy College of Arts and Science, Tiruchekode                         | 30.12.2020 | -          |
| 31 | How to publish Good Research Articles in High Impact Journals   | Ramco Institute of Technology, Rajapalayam                                     | 12.01.2021 | -          |
| 32 | How to write a Mathematical Documents in LaTeX  | Hindusthan College of Arts and Science, Coimbatore                             | 03.02.2021 | -          |

|    |  |  |            |            |
|----|--|--|------------|------------|
| 33 | Implementation of National Education Policy-2020   | Ramco Institute of Technology, Rajapalayam   | 24.03.2021 | -          |
| 34 | Role of NAAC in Enhancing Quality in Higher Education Institutions   | RIT – Internal Quality Assurance Cell (IQAC)   | 16.12.2022 | 17.12.2022 |
| 35 | Applications of Combinatorial Objects to Graph Labeling Problems   | Department of Mathematics, RIT   | 12.04.2023 | -          |
| 36 | Workshop on the Localization of Sustainable Development Goals and Panchayat Development Index  | Gandhigram Rural Institute (Deemed to be University), Gandhigram                           | 04.12.23   | 05.12.23   |
| 37 | Machine Learning Based Statistical Methods for High Dimensional Databases  | Kalasalingam Academy of Research and Education, Krishnankoil                               | 29.06.2024 | -          |
| 38 | One Day Orientation and Proposal Development Workshop  | UBA, The Gandhigram Rural University, Gandhigram   | 22.12.2025 | -          |
| 39 | Six Day Online Faculty Development Program on Agentic & Generative AI for Societal Transformation: Applications in Healthcare, Governance, and Education | Department of Computer Science and Engineering, Ramco Institute of Technology, Rajapalayam | 27.01.2026 | 02.02.2026 |

#### 7. Short term Courses / Seminars /FDP/Workshop/Conference organized:

| Sl.No | Title of the event   | Organized by  | Date       |            |
|-------|--|---|------------|------------|
|       |  |   | From       | To         |
| 1     | Faculty Development Programme on “Computational Intelligence and Data Science for STEM Faculty using R & Python” | Department of Mathematics and Mechanical Engineering, RIT | 09.06.2025 | 13.06.2025 |

#### 8. Online Courses

| Sl.No | Course title                                       | University                                 | Date                  |
|-------|--|--|-----------------------|
| 1     | Introduction to Differential Equations             | Boston University                          | 2015-16 Even Semester |
| 2     | Calculus IC Coordinate systems and infinite series | Massachusetts Institute of Technology, USA | 2015-16 Even Semester |
| 3     | Linear Differential Equations                      | Boston University                          | 2015-16               |

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|----|---|---|--------------------------|
|    |   |   | Even Semester            |
| 4  | Linear algebra: Foundation to frontiers   | The University of Texas, Austin                       | 2016-17<br>Odd Semester  |
| 5  | Introduction to Complex Analysis  | Wesleyan University                                   | 2016-17<br>Even Semester |
| 6  | Calculus IA: Differentiation  | Massachusetts Institute of Technology, USA            | 2017-18<br>Odd Semester  |
| 7  | Differential Equations: 2x2 systems   | Massachusetts Institute of Technology, USA            | 2017-18<br>Even Semester |
| 8  | Calculus IB: Integration  | Massachusetts Institute of Technology, USA            | 2017-18<br>Even Semester |
| 9  | STAT110x Introduction to Probability  | Harvard University                                    | 2018-19<br>Odd Semester  |
| 10 | MITx: 18.03Fx Differential Equations: Fourier Series and Partial Differential Equations | Massachusetts Institute of Technology, Cambridge, USA | 2018-19<br>Odd Semester  |
| 11 | Mathematics for Machine Learning: Multivariate Calculus                                 | Imperial College, London                              | 2018-19<br>Even Semester |
| 12 | Calculus 1C: Coordinate Systems & Infinite Series                                       | MIT   | 2018-19<br>Even Semester |
| 13 | Combinatorics and Probability   | University of California San Diego                    | 2019-20<br>Odd Semester  |
| 14 | Numerical Methods for Engineers   | The Hong Kong University of Science and Technology    | 07.01.2025               |
| 15 | Multivariable Calculus  | NPTEL   | Jan - Mar 2025           |
| 16 | Introduction to Abstract and Linear Algebra   | NPTEL   | July-September-2025      |

### 9. Patents filed/awarded

| S.No | Title  | Application Number | Date of filing | Date of publication |
|------|--|--------------------|----------------|---------------------|
| 1    | Novel Algorithm for Rapid Prime Number Factorization Using Quantum Computing   | 202341080268 A     | 25.11.2023     | 22.12.2023          |
| 2    | AI-Optimized Management of Smart Grids and Development of Advanced Nanotechnology-Enhanced Energy Storage Technologies                             | 202541001915 A     | 08.01.2025     | 24.01.2025          |
| 3    | AI-Driven Mathematical Forecasting System Using Hybrid Regression Models for Dynamic Event Prediction in Financial and Meteorological Applications | 202541088018 A     | 13.09.2025     | 31.10.2025          |

### 10. Membership in Professional societies: ISTE member (LM 59047)

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