<table>
<tr><td>Name:
Dr.M.BOOPATHI</td><td colspan="4">  </td></tr>
<tr><td>Designation:</td><td colspan="4">ASSISTANT PROFESSOR</td></tr>
<tr><td>Qualification:</td><td colspan="4">M.sc.,M.Phil.,Ph.D.,</td></tr>
<tr><td>Area of specialization:</td><td colspan="4">SOFTWARE RELIABILITY, SOFTWARE TESTING, SOFT COMPUTING TECHNIQUES, OPTIMIZATION TECHNIQUES</td></tr>
<tr><td rowspan="2">Experience:</td><td colspan="2">Industrial Experience</td><td colspan="2">Teaching Experience</td></tr>
<tr><td colspan="2">NIL</td><td colspan="2">7 Years 8 Month</td></tr>
<tr><td rowspan="2">Number of workshops / FDP attended:</td><td colspan="2">Number of Workshops</td><td colspan="2">Number of FDPs</td></tr>
<tr><td colspan="2">6</td><td colspan="2">2</td></tr>
<tr><td rowspan="3">Publications:</td><td colspan="2">Conference</td><td colspan="2">Journal</td></tr>
<tr><td>National</td><td>International</td><td>National</td><td>International</td></tr>
<tr><td>1</td><td>4</td><td>-</td><td>13</td></tr>
<tr><td>Professional Body Membership</td><td colspan="4">▪ IEEE Membership (ID:99615796)
▪ Life Member in SRESA (Society for Reliability and Safety, Mumbai) – (ID: LM142)</td></tr>
<tr><td>Staff Achievements</td><td colspan="4">▪ NPTEL DISCIPLINE STAR
▪ NPTEL top performing mentoring</td></tr>
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Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc	Mathematics	2007	Periyar University	83.833 (%)	First Class & Distinction
PG	M.Sc	Mathematics	2009	Anna University	6.88 (CGPA)	First Class
	M.Phil	Mathematics	2010	Anna University	8.76 (CGPA)	First Class & Distinction
PhD	Ph.D	Software Reliability, Software Testing	2020	Anna University	-	-

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Tagore Engineering College – Chennai	Assistant Professor	24/08/2010	30/04/2013	2	8	6
St. Joseph's Institute of Technology, Semmencherry, Chennai	Assistant Professor	15/06/2018	28/03/2019	0	9	13
SMK Fomra Institute of Technology, Chennai	Assistant Professor	28/06/2019	10/10/2029	0	3	12
Bharath Institute of Science and Technology, BIHER, Selaiyur	Assistant Professor	22/11/2021	05/09/2023	1	9	13
Sri SaiRam Institute of Technology	Assistant Professor	07/09/2023	30/06/2025	1	10	24
Sri SaiRam Engineering College	Assistant Professor	01/07/2025	Till Date	-	4	-
TOTAL EXPERIENCE				**07**	**08**	**19**

Anna University Research Supervisor Ref no: NIL

Journal Publications:

1. **M. Boopathi, R**. Sujatha, C. Senthil Kumar, K. Sathish Kumar, 2021, "Multivariate Polynomial Fit: Decay Heat Removal System and Pectin degrading Fe3O4-SiO2 Nanobiocatalyst activity", IET Nanobiotechnology,"IET & Wiley" vol. 173. Issue 15, pp. 174-196.
2. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, 2020, "Application of particle swarm optimization for coverage estimation in software testing", International Journal of Computational Science and Engineering, Inderscience, vol. 23, Issue 4, pp. 367 – 380, 2020.
3. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, 2020 "A tool for automatic generation of DD-graph using adjacency matrix for software testing", Life Cycle Reliability and Safety Engineering, Publisher – Springer Nature, Vol. 9, 379–387.
4. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, 2020 "Identification of most critical paths using sparse matrix in software testing", Life Cycle Reliability and Safety Engineering, Publisher – Springer Nature, vol. 10, pp. 39–52.
5. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, S. Narasimman, A. Rajan, 2019 "Markov Approach for Quantifying the Software Code Coverage Using Genetic Algorithm in Software Testing", International Journal of Bio-Inspired Computation, Publisher – Inderscience, vol. 14 (1), pp. 27-44.
6. **M. Boopathi, R.** Sujatha, C. Senthil Kumar, S. Narasiman, 2017 "Quantification of Software Code Coverage Using Artificial Bee Colony Optimization Based on Markov Approach", Arabian Journal for Science and Engineering, Publisher – Springer, vol. 42, issue 8, pp. 3503–3519.
7. R. Sujatha, **M. Boopathi,** S. Nishanth, S. Vijayan, 2017 "Reliability Evaluation of Petri Nets System Using Fifth Order Runge – Kutta Method Based on Markov Model", International Journal of Pure and Applied Mathematics, Publisher – Academic Publisher, vol. 117, Issue 21, pp. 327-340.
8. C. G. Vignesh, V. K. Keshav, R. Sujatha, **M. Boopathi,** K. Sathish Kumar, 2017 "Computation of System Availability Using Fifth Order Runge–Kutta Method for Furnace Draft Air Cycle in a Thermal Power Plant" International Journal of Pure and Applied Mathematics, Publisher – Academic Publisher, vol. 117, Issue 21, pp. 341-360.
9. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, S. Narasimman, 2016 "Reliability estimation of *m-out-of-n:G* standby systems using fourth order Runge-Kutta algorithm", International Journal of Life Cycle Reliability and Safety Engineering, Publisher – Springer Nature, vol. 5, Issue 1, pp. 20-31.
10. R. Sujatha, **M. Boopathi,** C. Senthil Kumar, 2015 "Reliability Estimation of State Dependent Systems Using Fourth Order Runge - Kutta Algorithm", International Journal of Pure and Applied Mathematics, Publisher – Academic Publisher, vol. 101, Issue 6, 883-891.
11. R. Sujatha, **M. Boopathi,** C. Senthil Kumar, 2014 "Genetic Algorithm approach based on Markov Model and Basic Path Testing for MIMO Systems in Software testing", International

Journal of Life Cycle Reliability and Safety Engineering, Publisher – Springer Nature, Vol.3, Issue 4, pp. 01-07.

12. R. Sujatha, C. Senthil Kumar, **M. Boopathi,** 2014 "Application of Genetic Algorithm for Generation of Error Prone Path in Software Systems", Pensee Journal (International), Publisher - Espaces Marx, France, Vol. 76, Issue 2, pp. 34-44.

13. M. Boopathi, C. Senthil Kumar, R. Sujatha, 2022 "Test data generation using flocking of fireflies in software testing", *Life Cycle Reliability and Safety Engineering*, Vol. *11, Issue* 2, pp.117-133.

Conference Attended:

1. **Boopathi M,** Sujatha, R, Senthil Kumar, C, Aravinthan, Sadhasivam, S 2016, 'Estimation of software code coverage using artificial fish school algorithm based on data-flow testing' 1st International and 4th National conference on reliability and safety engineering (INCRS-2018), Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (IIITDM) - Jabalpur, Madhya Pradesh, February 26-28.
2. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, S. Narasimman, Reliability Estimation of *m–out–of–n:G* standby system systems using Fourth Order Runge–Kutta Algorithm, 2nd SRESA National Conference on Reliability & Safety Engineering (NCRS-15), held at Anna University Campus, Chennai (Organised by Society for Reliability and Safety), Oct. 8–10, 2015.
3. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, S. Narasimman, The Mathematics of Software Testing using Genetic Algorithm, 3rd International Conference on Reliability, Infocom Technologies and Optimization, Oct. 8–10, in Amity Institute of Information Technology, Noida Campus, Amity University published in IEEE Conference Publications, 1–6, 2014.
4. R. Sujatha, C. Senthilkumar, M. Boopathi, Reliability Estimation of State Dependent Systems Using Fourth Order Runge – Kutta Algorithm, International Conference on Mathematical Computer Engineering, VIT (Chennai), PP. 734-739, 2013.
5. **M. Boopathi,** R. Sujatha, C. Senthil Kumar, S. Narasimman, 2014, "The Mathematics of Software Testing using Genetic Algorithm", International 3rd International Conference on Reliability, Infocom Technologies and Optimization, Amity Institute of Information Technology (AIIT), Noida, Amity University, IEEE Conference, pp. 1-6

FDP / STTP Attended:

1. Attended & Organized a Two Days - Faculty Training Programme: "ASSESSMENT, ACCREDITATION, RESEARCH AND CLASSROOM MANAGEMENT", organized by the School of Science and Humanities, Bharath Institute of Higher Education and Research, Selaiyur, Chennai – 73 during 10.08.2023 – 11.08.2023.
2. Attended INS National Workshop on "Probabilistic Safety Assessment in Chemical and Nuclear Industries" at Indian Nuclear Society, Anushakti Nagar, Mumbai-400094, 03.10.2016 – 07.10.2016.

3. Attended the Third Summer Programme in Mathematics 2010 held at Ramanujam Institute for Advanced Study in Mathematics, University of Madras, Chepauk, Chennai – 600 005, 31.05.2010 – 19.10.2010.
4. Attended pedagogical training, ”Bridging gap in the learning process between School and College education” Sponsored by ”Tamil Nadu State Council for Science and Technology", Chennai and NCSTC New Delhi, Supported by ISTE Chapter [Local] held on 13.10.2012 in Department of Science & Humanities, Jerusalem College of Engineering – 600 100.

Workshops / Seminars attended:

1. “Mathematical Approach to Physical Sciences”, SSN College of Engineering, Rajiv Gandhi Salai, OMR, Kalavakkam, held on 14 – 15 Feb., 2013, Chennai.
2. Workshop on “Wireless Sensor Networks & Interconnection Networks” conducted as a part of International conference on “Mathematical Computer Engineering – 2013” in “Division of Mathematics, School of Advanced Sciences and School of Computing Science”, in VIT, Chennai on 30 Nov., 2013, Chennai.
3. Workshop on “Fuzzy Logic & Queuing Theory” at Sri Sairam Institute of Technology, Sai Leo Nagar, West Tambaram, held on 20 Apr., 2012, Chennai.
4. Participated “National workshop on Application of Fuzzy Theory” in Hindustan Institute of Technology & Science, Rajiv Gandhi Salai, Padur, held on 10 & 11 Aug., 2011, Chennai.
5. One Day Seminar on Geometric Function Theory – GFT 2010 held at Department of Mathematics in Madras Christian College (Autonomous) on 30 Mar., 2010, Chennai.
6. Participated in National Seminar on GFT held on 26 Mar., 2011 in Department of Applied Mathematics, Sri Venkateshwara College of Engineering Sripermubudur, Chennai.

Subjects Handled

- Matrices and Calculus
- Engineering Mathematics 1
- Engineering mathematics 2
- Transform and Partial Differential Equations
- Discrete Mathematics
- Probability and Queuing Theory
- Probability and Statistics
- Probability and Random Process
- Statistics and Numerical Methods
- Probability and Statistical Modelling
- Numerical Methods

- Business Optimization Techniques
- Applied Mathematics for Electronics Engineers

Patent:

Dr. Boopathi Muthusamy published a patent titled "Artificial Intelligence and Machine Learning-Based Framework for Automated Software Testing". Application no: 202441041543 and publication date 07/06/2024.

Courses Completed:

1. **SIRD Certified Course:** (Reg. No: CC2025 / BIII / 09) Certificate course on Panchayat Administration and Rural Development Schemes, completed the training program at State Institute of Rural Development and Panchayat Raj, Rural Development & Panchayat Raj Department, Government of Tamil Nadu, Maraimalai Nagar – 603 209.

2. **Completed 7 models in NITTTR** (National initiative for Technical Teachers Training) conducted by **AICTE (**All India Council for Technical Education**).**
   - **Module 1:** Orientation Towards Technical Education and Curriculum Aspects
   - **Module 2:** Professional Ethics and Sustainability
   - **Module 3:** Communication Skills, Modes and Knowledge Dissemination
   - **Module 5:** Technology Enabled learning and Life-long self-Learning
   - **Module 6:** Students Assessment and Evaluation
   - **Module 7:** Creative Problem solving, innovation and Meaningful R&D
   - **Module 8:** Institutional management and Administrative Procedures.

3. **NPTEL Certified Courses**
   - Advanced R Programming for Data Analytics in Business
   - Data Analytics with Python
   - Artificial Intelligence: Knowledge Representation and Reasoning
   - Learning Analytics Tools
   - Probability for Computer Science
   - Python for Data Science
   - Data Analytics for Python
   - Introduction to Machine Learning

Programming Languages

- MatLab & Maple
- C & FORTRAN
- R & Python

Software Tools

- Type Setting in L_AT_EX
- L_AT_EX Beamer
- L_AT_EX Poster
- Flash 5.0
- Dia. Editor
- Microsoft Mathematics 4.0

Academic Contributions:

- External and Internal Examiner for University Examinations
- Course coordinator (M.B.A & M.E Programs)
- Class coordinator and Mentor for students