



## **Dr. Ranadheer Reddy Donthi**

Professor of Mathematics & Head of the Department

Department of Basic Sciences & Humanities,

Vignan Institute of Management & Technology for Women, Hyderabad

Mobile No: +91 9703737641

Email\_id: [ranapatel01@gmail.com](mailto:ranapatel01@gmail.com), [bsh@vmtw.in](mailto:bsh@vmtw.in), [ranapatel01@vmtw.in](mailto:ranapatel01@vmtw.in)

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### **Personal Profile:**

Dr. Ranadheer Reddy Donthi is a dedicated academician, researcher, and administrator with over 21 years of experience in teaching, research, mentoring, and academic leadership. My primary goal is to put forth a strong contribution in education and research to the institution, especially within my field of expertise. Holding a Ph.D. in Mathematics from Kakatiya University, I possess a strong multidisciplinary academic background in Mathematics, Management, and Education. Having served as Professor and Head of the Department in previous institutions, I have involved myself in teaching undergraduate students, research progress, and various administrative positions. One of my objectives is to contribute to the enlightening success of an institution by putting my best efforts into helping students achieve their best academic performance. I aim for continuous learning and the development of my teaching capabilities, and with this being said, I am confident that all these objectives can be achieved.

### **Portfolio, Profiles:**

Google Scholar: <https://scholar.google.co.in/citations?user=pTojoV8AAAAJ>

Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=56418723100>

ORCID ID: <https://orcid.org/0000-0002-8444-7605>

VIDWAN/IRINS: <https://vidwan.inflibnet.ac.in/profile/168696>

### **Education:**

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|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2017</b> | <b>Ph.D., Mathematics,</b><br>Kakatiya University, Warangal, Telangana, India.<br><i>“Performance Evaluation of Internet Router – Steady State Probability Distribution Vector of Block Circulant Markov Chains.”</i> |
| <b>2012</b> | <b>Master of Business Administration (HR &amp; Marketing),</b><br>Jawaharlal Nehru Technological University (JNTU), India.                                                                                            |
| <b>2010</b> | <b>Master of Philosophy (M.Phil.), Mathematics,</b><br>Sri Venkateswara University (SV University), Tirupati, India.                                                                                                  |
| <b>2006</b> | <b>Master of Science (M.Sc.), Mathematics,</b><br>Kakatiya University, Warangal, Telangana, India.                                                                                                                    |
| <b>2004</b> | <b>Bachelor of Education (B.Ed.), Mathematics,</b><br>Kakatiya University, Warangal, Telangana, India.                                                                                                                |
| <b>2002</b> | <b>Bachelor of Science (B.Sc.), Mathematics, Physics, Chemistry (MPC),</b><br>Kakatiya University, Warangal, Telangana, India.                                                                                        |

### **Work History:**

- **03.06.2026 to Till Date**  
**Professor & Head of the Department**  
Department of Basic Sciences & Humanities,  
Vignan Institute of Management & Technology for Women, Hyderabad
- **27.06.2019 – 02.06.2026 (6 Years 11 Months)**  
**Professor & Head of the Department (Department of Freshmen Engineering)**  
St. Martin's Engineering College, Hyderabad, India.  
Additional roles: Dean (Admissions) from 2022 to 2026  
Hostel Professor In-Charge from 2021 to 2026.
- **18.05.2018 – 12.06.2019 (1 year 1 month)**  
**Associate Professor of Mathematics**  
K L University (KLU), Guntur, Andhra Pradesh, India.
- **07.09.2011 – 16.05.2018 (6 years 8 months)**  
**Professor & HOD, Department of Humanities & Sciences**  
Medak College of Engineering & Technology, Telangana, India.
- **29.09.2007 – 06.09.2011 (4 years)**  
**Assistant Professor of Mathematics**  
Medak College of Engineering & Technology, Telangana, India.
- **2005 – 2007 (2 years)**  
**Degree Lecturer in Mathematics**  
SRK Degree College, Siddipet, Telangana, India.

### **Additional Information:**

**Teaching & Administration Experience: 21+ Years**

### **Profile of Academic Activities:**

#### **Roles and Responsibilities as HoD – Department of Basic Sciences & Humanities**

- Administering and coordinating all academic activities of the BSH Department.
- Maintaining discipline, punctuality, and academic standards among students and faculty members.
- Planning and monitoring class work, academic schedules, timetables, and workload distribution.
- Guiding and mentoring first-year engineering students for academic improvement and professional development.
- Monitoring faculty performance, teaching methodologies, and course delivery as per university and AICTE/JNTUH norms.
- Coordinating student counselling, parent interactions, and grievance redressal activities.
- Organizing bridge courses, remedial classes, orientation programs, and student development activities.
- Ensuring effective implementation of Outcome-Based Education (OBE) and continuous assessment processes.
- Supervising departmental documentation, accreditation activities, and compliance with NBA/NAAC requirements.

- Conducting departmental meetings and coordinating with higher management for institutional development.
- Encouraging faculty members towards research activities, publications, patents, FDPs, and consultancy work.
- Monitoring laboratory maintenance, infrastructure utilization, and resource management within the department.
- Coordinating examination activities, internal assessments, and university academic processes.
- Promoting discipline, ethical values, teamwork, and a positive academic environment among students.
- Supporting admission activities, student induction programs, and institutional promotional initiatives.
- Initiated and developed the “Idea Cafe Club” to promote innovation, creativity, problem-solving skills, and entrepreneurial thinking among first-year students.
- Established and coordinated the Literature Club to improve students’ English communication, presentation, writing, and interpersonal skills.
- Developed and organized activities through the Science Club to encourage scientific thinking, experimentation, teamwork, and technical awareness among students.
- Motivating students to participate in project expos, technical events, idea presentations, hackathons, and innovation-based activities from the first year onwards.
- Coordinated AICTE infrastructure data collection, verification, and submission activities for statutory compliance.
- Organized and conducted Board of Studies (BoS) meetings for curriculum planning and academic improvements.
- Oversee the preparation and publication of the departmental Newsletter every semester highlighting academic, research, co-curricular, and extracurricular activities.

### **Research Funding Projects:**

- Selected as an **Idea Mentor** for the MSME 4.0 project titled “Waste Water Treatment through Nanotechnology,” for which funding of ₹11.5 lakhs was sanctioned.
- Sanctioned the AICTE Training and Learning (ATAL) Academy **Faculty Development Program (FDP) Grant** for the academic year 2026–2027.

### **Certificate Courses:**

1. Completed “Mastering Statics” an online course authorized by The Hong Kong University of Science and Technology, 2020.
2. Completed “Introduction to Programming with MATLAB” an online course authorized by Vanderbilt University, 2020.
3. Completed “Stochastic Processes” an online course authorized by National Research University Higher School of Economics, 2020.
4. Completed “Fibonacci Numbers and the Golden Ratio” an online course authorized by The Hong Kong University of Science and Technology, 2020.
5. Completed “Matrix Methods” an online course authorized by University of Minnesota, 2020.
6. Completed “Mathematical Foundations for Cryptography” an online course authorized by University of Colorado, 2020.

### **Skills:**

- Ability to work independently as well as in a team with others.
- Strong academic leadership, administrative coordination, and mentoring skills.
- Proficiency in mathematical modelling, statistical analysis, and research methodology.
- Computer proficiency including MATLAB, Python, LaTeX, and Data Envelopment Analysis tools.

### **Memberships & Others:**

#### **Research Supervision & Recognitions:**

- Recognized Research Supervisor, JNTU Hyderabad (dated 06.11.2024).
- Recognized Research Supervisor, BEST Innovation University (BESTIU), Andhra Pradesh.
- Ratified Associate Professor, JNTUH (dated 24.11.2023).
- Member, Board of Studies (BoS) – Malla Reddy College of Engineering & Technology (MRCET), JNTUH.

#### **Reviewer / Editorial Memberships:**

- Review Member – International Journal of Environmental and Climate Change.
- Review Member – Asian Journal of Research in Computer Science.
- Review Member – Journal of Advances in Mathematics and Computer Science.

### **Research Experience:**

My area of research is mathematical modelling, stochastic processes, queuing theory, and their applications in decision-making systems, network traffic, and machine learning. To my research credit, I have published 34 research papers in reputed national and international journals, authored 12 academic books and book chapters, and hold 3 patents in emerging areas of research. I have successfully organized 6 International Conferences and 6 Faculty Development Programs (FDPs), demonstrating my commitment to promoting research culture, faculty development, and academic excellence. I have also attended nearly 30 Faculty Development Programs, Workshops, Seminars, and Training Programs conducted by reputed institutions and universities.

### **Publications:**

#### **Books / Book Chapters:**

1. Mathematical and Statistical Foundations, M/s Spectrum University Press, ISBN: 978-81-953687-2-3, 2024.
2. Ordinary Differential Equations and Vector Calculus, M/s Spectrum University Press, ISBN: 978-93-92933-91-2, 2024.
3. Matrices and Calculus, M/s Spectrum University Press, First Edition, ISBN: 978-93-92311-19-2, 2023.
4. Numerical Methods and Complex Variables, M/s Spectrum University Press, ISBN: 978-93-92933-80-6, 2023.
5. Computer Oriented Statistical Method, M/s S International Publishers, First Edition, ISBN: 978-81-952679-7-2, 2021.
6. Probability Statistics and Complex Variables, M/s Seven Hills International Publishers, First Edition, ISBN: 978-81-953918-1-3, 2021.

7. Discrete Mathematics, M/s Spectrum University Press, First Edition, ISBN: 978-81-948787-8-0, 2021.
8. Transformations, Complex Variables & Numerical Techniques, M/s Spectrum University Press, First Edition, ISBN: 978-93-82829-70-6, 2021.
9. Quantitative Aptitude-I, Spectrum Competitive Series, First Edition, ISBN: 978-81-948783-0-8, 2021.
10. Quantitative Aptitude-II, Spectrum Competitive Series, First Edition, ISBN: 978-93-82829-72-0, 2021.
11. Advanced Calculus for Engineers, ISBN: 978-93-83959-45-7, 2020.
12. Linear Algebra and Calculus for Engineers, ISBN: 978-93-83959-42-6, 2020.

#### **Journals:**

1. Modelling and Analysis of Stochastic Processes using Markov Chain Methods in Decision Making Systems, IJDDT, ISSN: 0975-4415, Vol 16, Issue 23, pp. 1000-1006, 2026.
2. Stimuli-Responsive Drug Delivery Platforms – Design Strategies and Therapeutic Applications, IJDDT, ISSN: 0975-4415, Vol 16, Issue 8, pp. 315-324, 2026.
3. Mathematical Modelling of Epidemic Dynamics with Stochastic AI Prediction Models, International Journal of Applied Mathematics, ISSN: 1311-1728, Vol 38, No 10, pp. 561-573, 2025.
4. Applications of Machine Learning in Computer Vision: A Review, Communications on Applied Nonlinear Analysis, ISSN: 1074-133X, Vol 32 No. 7s, pp. 432-445, 2025.
5. Advancements in Rotatable Designs: Enhancing Robustness and Efficiency in Response Surface Methodology, International Journal of Current Science (IJCS PUB), ISSN: 2250-1770, Volume 14, pp. 488-499, 2024.
6. Artificial Neural Networks for Predicting Mechanical Properties of Reinforced Concrete: A Comparative Study with Experimental Data, Library Progress International, ISSN: 2320-317X, Vol. 44, pp. 17476-17484, 2024.
7. AI-Driven Numerical Optimization for Carbon Footprint Reduction and Sustainable Supply Chain Management in the Fashion Industry, SEEJPH, ISSN: 2197-5248, pp. 1216-1222, 2024.
8. Multi-Task Deep Learning Approaches for Named Entity Recognition, Sentiment Analysis, and Summarization in Natural Language Processing, Afr. J. Biomed. Res., ISSN: 5713-5720, Vol. 27(4s), pp. 5713-5720, 2024.
9. Intelligent Transportation Systems – IoT Solutions for Traffic Optimization and Autonomous Vehicle Networks, (ICSES), IEEE Xplore, pp. 1-7, 2024.
10. A Study on Employee Attitude towards Organization Heritage, Shodhsamhita: Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. VIII, No. 5, pp. 159-171, 2022.
11. A Study on Rewards and Recognition at Doctor Reddy's Laboratories, Shodhsamhita: Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. VIII, No. 5, pp. 207-217, 2022.
12. A Study on Salary and Wages Administration at Grace Manpower and Security Services, Shodhsamhita: Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. VIII, No. 5, pp. 239-251, 2022.
13. A Study on Employee Engagement with reference to Genius Human Resource Solutions, Shodhsamhita: Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. VIII, No. 5, pp. 274-284, 2022.

14. A Study on Organizational Climate at Spencer's Limited, Shodhsamhita: Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. IX, No. 2, pp. 5-11, 2022.
15. A New Stepwise Method for Selection of Input and Output Variables in Data Envelopment Analysis, Journal of Mathematical and Computational Science, ISSN: 1927-5307, pp. 703-715, 2021.
16. A Precise Study on Solving the Multi Server Queuing Model through LPP by Using Python Program, IOP Conference Series: Materials Science and Engineering, ISSN: 1757-8981, pp. 1-5, 2020.
17. The Sensitivity Analysis of Service and Waiting Costs of a Multi Server Queuing Model, IOP Conference Series: Materials Science and Engineering, ISSN: 1757-8981, pp. 1-5, 2020.
18. A Concise Study and Analysis on Service Cost and Waiting Cost of the Multi Server Queuing Model, International Journal of Disaster Recovery and Business Continuity, ISSN: 2005-4289, pp. 1075-1081, 2020.
19. The Design of the Flyover Toll Plaza Model to Minimize the Construction Area of Toll Plaza, International Journal on Emerging Technologies, ISSN: 2249-3255, pp. 790-791, 2020.
20. Assessing the Environmental Efficiency of Indian Commercial Banks – an Application of Data Envelopment Analysis, Advances in Mathematics: Scientific Journal, ISSN: 1857-8438, pp. 8037-8045, 2020.
21. Some Aspects of Bioassays and Fieller's Theorem, Advances in Mathematics: Scientific Journal, ISSN: 1857-8438, pp. 7117-7126, 2020.
22. On Misspecification Tests for Stochastic Linear Regression Model, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
23. Criteria for Selection of Stochastic Linear Model Selection, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
24. A Glance on the Estimation of Cobb Douglas Production Functional Model, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
25. On Stochastic Linear Regression Model Selection, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
26. Estimation Methods of Nonlinear Regression Models, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
27. Numerical Techniques of Nonlinear Regression Model Estimation, AIP, ISSN: 0094-243X, pp. 1-5, 2019.
28. A Comparative Study between Multi Queue Multi Server and Single Queue Multi Server Queuing System, International Journal of Scientific and Technology Research, ISSN: 2277-8616, pp. 1821-1824, 2019.
29. An Application of LPP Graphical Method for Solving Multi Server Queuing Model, IJMET, ISSN: 0976-6359, pp. 1066-1069, 2018.
30. Block Triangular and Skew Symmetric Splitting Method for Steady State Vector of Linear System of Ergodic Block Circulant Markov Chains, Int. J. Computing Science and Mathematics, ISSN: 1752-5063, Vol. 8, No. 4, pp. 384-394, 2017.
31. Performance Analysis of Internet Switch with Variable Length Packet Input Traffic using Circulant Markov Modulated Poisson Process (CMMPP), IEEE, ISSN: 1486-8354, pp. 1-5, 2014.

32. Study of Delay and Loss Behavior of Internet Switch Markovian Modelling Using Circulant Markov Modulated Poisson Process (CMMPP), Applied Mathematics, ISSN: 2152-7385, pp. 512-519, 2014.
33. Validation of Variance Based Fitting for Self-Similar Network Traffic, Springer Proceedings in Mathematics and Statistics, ISSN: 2194-1009, pp. 427-435, 2014.
34. Self-Similar Network Traffic Modeling Using Circulant Markov Modulated Poisson Process, Springer Proceedings in Mathematics and Statistics, ISSN: 2194-1009, pp. 437-444, 2014.

#### **Patents:**

1. Design and Development of Wireless Artificial Arm, Application No. 202241012423 A, Journal No. 11/2022, dated 18/03/2022.
2. A Classifier for Attack Detection in Cloud Environment and Data Computing for Smart Cities and Smart Health Care System using Internet of Things, International Patent Number: 2021101959, IP Australia (Granted Patent), 2021.
3. Design and Fabrication of IoT based Solar Agriculture Weeder, Application No. 202141023740 A, Journal No. 24/2021, dated 11/06/2021.

#### **Conferences, FDPs & Workshops Conducted:**

1. Organized six Online/Offline International Conferences on “Continuity, Consistency and Innovation in Applied Sciences and Humanities” consecutively during the years 2020, 2021, 2022, 2023, 2024, and 2025.
2. National Level Two-Day Workshop on “Recent Advances in Engineering Technology and Sciences,” September 2-3, 2023.
3. A 2-Day Virtual Multidisciplinary Academic Workshop on Latest Trends in Enhancing English Language Learning Skills, July 8-9, 2023.
4. Organized a Three-Day National Workshop on “Advanced Software Tools for Young Technocrats and Engineering Faculty” during 24–26 June 2021.
5. Organized a Three-Day National Faculty Development Program (FDP) on “Building a Learning Culture Based on Collaboration, Shared Vision, and Teamwork” during 24–26 May 2021.
6. Organized a Three-Day Faculty Development Program (FDP) on “The Know-How of Teaching Learning and Progressive Research Methods” during 21–23 December 2020.
7. Organized an AICTE-sponsored One-Week Faculty Development Program (FDP) on “Life Skills and Emotional Intelligence” during 21–25 September 2020.

#### **Workshops & Seminars Attended:**

1. National Conference on NexGen Teaching Practices in Engineering, January 17, 2026, BITS, Hyderabad.
2. FDP on Computational Mathematics with MATLAB, 30.03.2026 to 04.04.2026, VNRVJIET.
3. One Week International Faculty Development Program on “Innovative Applications of Mathematics,” November 17–22, 2025, Bapatla Engineering College.
4. Role of Mathematics in Research, Vaagdevi College of Engineering, June 18, 2022.
5. 6 Days FDP on Internet of Things (IoT) Based Green Energy Systems, 14 to 19 September 2020, BVRIT.
6. FDP on Application of Mathematics in Engineering, 27 to 31 July 2020, KPRIET, Coimbatore.

7. Two Day Workshop on Research Initiatives and Proposal Drafting in Mathematical Sciences, 24-25 May 2019, KL University.
8. National Conference on Essence on Mathematics and Engineering Applications, December 14-15, 2018, KL University.
9. 15th Faculty Skill Enhancement Program, July 2018, KL University.
10. XXVI Congress of Andhra Pradesh Society for Mathematical Sciences & National Conference on Recent Advances in Mathematics, 11–13 August 2017, Kakatiya University.
11. International Conference on Vibration Problems, February 18-20, 2015, Kakatiya University.
12. 3rd International Conference on Reliability, Infocom Technologies and Optimization, October 8-10, 2014, Amity University, Delhi.
13. Two Week ISTE Workshop on Cyber Security, July 19-29, 2014, Alluri Institute of Management, in collaboration with IIT Bombay.
14. International Workshop on Fractals and Wavelets, 9-16 November 2013, Cochin, Kerala.
15. Two Day Training Programme on LaTeX & Statistics, 26-27 March 2013, Kakatiya University.
16. Faculty Development Programme on Engineering Mathematics – I, 30th July – 4th August 2012, Srinidhi Institute of Science and Technology.
17. Two Week ISTE Workshop on Research Methodology, 25th June – 4th July 2012, IIET, in collaboration with IIT Bombay.
18. Two Day Workshop on Graph Theory & Statistics, February 28-29, 2012, Kakatiya University.
19. Workshop on Research Methodology, May 2-5, 2012, Kakatiya University.
20. Two Day Workshop on Applications of Mathematics & Statistics for Engineering, July 23-24, 2010, JNTUH.

### **Achievements & Certifications:**

1. Ratified Associate Professor, JNTUH, dated 24.11.2023.
2. Qualified GATE-2011 in Mathematics with an All India Rank of 169 (Score 428).
3. Research Supervisor – JNTU, Hyderabad, dated 06.11.2024.
4. Research Supervisor – BEST Innovation University (BESTIU), Andhra Pradesh.
5. Received Certificate of Appreciation from NPTEL for mentoring the course “Problem Solving Through Programming in C.”
6. Received Certificate of Appreciation from NPTEL for mentoring the course “The Joy of Computing using Python.”
7. Member, Board of Studies (BoS) – Malla Reddy College of Engineering & Technology (MRCET), JNTUH.
8. Worked as an NSS Programme Officer (PO) in Medak College of Engineering & Technology from September 2010 to May 2018.
9. Post Graduate Diploma in Computer Applications (PGDCA) – 65% (Certified by APEL).

### **Academic & Research Events Organized:**

- Organized six consecutive International Conferences on “Continuity, Consistency and Innovation in Applied Sciences and Humanities” during 2020–2025.



- Organized National and International Workshops and Faculty Development Programs on advanced software tools, teaching-learning methods, research methodology, and life skills.
- Initiated and coordinated the “Idea Cafe Club,” Literature Club, and Science Club to promote innovation, communication skills, and scientific thinking among first-year students.

**Personal Profile:**

|                            |   |                                                                                             |
|----------------------------|---|---------------------------------------------------------------------------------------------|
| Date of Birth              | : | 01-07-1982                                                                                  |
| Father’s Name              | : | Donthi Satyanarayana Reddy                                                                  |
| Gender                     | : | Male                                                                                        |
| Marital Status             | : | Married                                                                                     |
| Nationality                | : | Indian                                                                                      |
| Languages Known            | : | English, Telugu and Hindi                                                                   |
| Mobile No.                 | : | 9703737641                                                                                  |
| Email ID                   | : | ranapatel01@gmail.com                                                                       |
| Address for correspondence | : | Flat No. 202, Balaji Homes, Nagi Reddy Nagar Colony,<br>Alwal, Hyderabad, Telangana, India. |

**(DR. RANADHEER REDDY DONTI)**