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Assistant Professor, Department of Mathematics
Tripura University (A Central University)
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Employment History

- Dec. 2023 – 📌 **Assistant Professor** in the Department of Mathematics, Tripura University, Suryamaninagar-799022, Agartala, Tripura, India.
- Mar. 2023 – Dec. 2023 📌 **Research Assistant Professor** in the Department of Mathematics, SRM Institute of Science and Technology (SRMIST), Kattankulathur, 603203, Tamil Nadu, India.
- Mar. 2022 – Feb. 2023 📌 **Postdoctoral Fellow** in the Research Center for Wind Energy Systems, School of IT Information & Control Engineering, Kunsan National University, Gunsan-si, Jeonbuk- 54150, Republic of Korea.
- Sep. 2020 – Mar. 2021 📌 **Postdoctoral Fellow** under the SPARC project, Department of Electrical Engineering, NIT Silchar (In joint collaboration with Dalhousie University, Canada), 788010, Assam, India.

Education

- 2021 📌 **Ph.D. in Mathematics**, *National Institute of Technology, Agartala*, Tripura, India.
Thesis title: *Stability Analysis and Controller Synthesis of Fuzzy Time-Delay Systems in a Linear matrix Inequality Framework.*
Ph.D.Supervisor: Prof. Baby Bhattacharya, Department of Mathematics, NIT Agartala, Tripura, India and Dr. Rajeeb Dey, Department of Electrical Engineering, NIT Silchar, Assam, India.
- 2010 – 2012 📌 **Master of Science (M.Sc.) in Mathematics**, *Tripura University (A Central University)*, Suryamaninagar, Tripura, India.
- 2007 – 2010 📌 **Bachelor of Science (B.Sc)**, Mathematics (Honours), *Ramkrishna Mahavidyalaya, Kailashahar*, Tripura, India.
- 2005 – 2007 📌 **H.S. (+2 Stage) Examination**, *DSCM H.S. School under TBSE*, Tripura, India.

Area of Interest

- 📌 Fuzzy Control Theory, Time-delay Systems, Sampled-data Control, Mathematical Modeling, Mathematical Biology, Dynamical systems

Research Publications

Journal Articles

1. P. Anbalagan, C. Maharajan, **Rupak Datta**, & S. Ramasamy, "Fault-tolerant-based H-infinity control for Takagi–Sugeno fuzzy wind turbine systems under stochastic actuator failures with quantized sampled-data information", *Eng. Appl. Artif. Intell.*, v. 181, pp. 115474, 2026, **IF: 9.0, SCIE**.
2. S. Bondalapati, R. Dey, **Rupak Datta**, & M. Bajodek, "Frequency regulation of an interconnected cyber-physical power system", *J. Franklin Inst.*, v. 362 (15), pp. 108043, 2025, **IF: 3.7, SCIE**.

3. **Rupak Datta** & R. Saravanakumar, "New insights on dissipative control technique for Takagi–Sugeno fuzzy system with variable time-delays and random packet dropouts", *Eur. Phys. J. Spec. Top.*, v. 234 (8), pp. 1341–1359, 2025, **IF: 2.5, SCIE**.
4. **Rupak Datta** & Y. H. Joo, "Fuzzy memory sampled-data controller design for PMSG-based WECS with stochastic packet dropouts", *IEEE Trans. Fuzzy Syst.*, v. 31 (12), pp. 4421–4434, 2023, **IF: 11.9, SCIE**.
5. M. U. Asad, U. Farooq, J. Gu, R. Dey, N. Adhikary, **Rupak Datta**, & C. Chang, "Disturbance Observer-based Extended State Convergence Architecture for Multilateral Teleoperation Systems", *Int. J. Robotics and Automation*, v. 38 (10), pp. 1–10, 2023, **IF: 1.042, SCIE**.
6. **Rupak Datta**, R. Saravanakumar, R. Dey, & B. Bhattacharya, "Further results on stability analysis of Takagi–Sugeno fuzzy time-delay systems via improved Lyapunov–Krasovskii functional", *AIMS Mathematics*, v. 7 (9), pp. 16464–16481, 2022, **IF: 2.2, SCIE**.
7. R. Saravanakumar, **Rupak Datta**, & Y. Cao, "New insights on fuzzy sampled-data stabilization of delayed nonlinear systems", *Chaos, Solitons & Fractals*, v. 154, pp. 111654, 2022, **IF: 7.8, SCIE**.
8. R. Saravanakumar, A. Amini, **Rupak Datta**, & Y. Cao, "Reliable Memory Sampled-Data Consensus of Multi-agent Systems with Nonlinear Actuator Faults", *IEEE Trans. Circuits and Systems II: Express Briefs*, v. 64 (4), pp. 2201–2205, 2021, **IF: 3.691, SCIE**.
9. **Rupak Datta**, R. Saravanakumar, R. Dey, B. Bhattacharya, & C. K. Ahn, "Improved Stabilization Criteria for Takagi–Sugeno Fuzzy Systems with Variable Delays", *Inf. Sci.*, v. 579, pp. 591–606, 2021, **IF: 8.1, SCIE**.
10. **Rupak Datta**, R. Dey, B. Bhattacharya, R. Saravanakumar, & O.M. Kwon, "Stability of T–S fuzzy systems with variable delays via new Bessel–Legendre polynomial based relaxed integral inequality", *Inf. Sci.*, v. 522, pp. 99–123, 2020, **IF: 8.1, SCIE**.
11. **Rupak Datta**, R. Dey, & B. Bhattacharya, "Improved delay-range-dependent stability condition for T–S fuzzy systems with variable delays using new extended affine Wirtinger inequality", *Int. J. Fuzzy Syst.*, v. 22, pp. 985–998, 2020, **IF: 4.3, SCIE**.
12. **Rupak Datta**, R. Dey, R. Saravanakumar, & B. Bhattacharya, "New delay-range-dependent stability condition for fuzzy Hopfield neural networks via Wirtinger inequality", *J. Intell. Fuzzy Syst.*, v. 38 (5), pp. 6099–6109, 2020, **IF: 2.0, SCIE**.
13. **Rupak Datta**, R. Dey, B. Bhattacharya, R. Saravanakumar, & C. K. Ahn, "New double integral inequality with application to stability analysis for linear retarded systems", *IET Control Theory & Appl.*, v. 13 (10), pp. 1514–1524, 2019, **IF: 2.6, SCIE**.
14. **Rupak Datta**, R. Dey, & B. Bhattacharya, "Further improved stability condition for T–S fuzzy time-varying delay systems via generalised inequality", *Int. J. Advanced Intelligence Paradigms*, v. 14 (3), pp. 310–327, 2019, **Scopus**.
15. **Rupak Datta**, B. Bhattacharya, & A. Chakrabarti, "On improved delay-range-dependent stability condition for linear systems with time-varying delay using Wirtinger inequality", *Int. J. Dynamics and Control*, v. 6(4), pp. 1745–1754, 2018, **IF: 2.7, ESCI, Scopus**.

Books/Chapters

1. A.K. Das, R. Das, R. Datta & C. Granados, "An innovative approach to group decision-making based on weighted hypersoft expert system", *In Neutrosophic and plithogenic inventory models for applied mathematics*, pp. 483–518, IGI Global Scientific Publishing, 2025, **Scopus**.
2. M. U. Asad, J. Gu, U. Farooq, R. Dey, N. Adhikary, **Rupak Datta**, & C. Chang, "A Multi-Master Single-Slave Teleoperation System Through Composite State Convergence", *Communication and Control for Robotic Systems*, Vol. 229, pp. 141–153, 2020, **Scopus**.

3. N. Adhikary, R. Dey, M. Usman Asad, J. Gu, U. Farooq & **Rupak Datta**, "Adaptive robust control of tele-operated master-slave manipulators with communication delay", *Communication and Control for Robotic Systems*, Vol. 229, pp. 123–140, 2020, **Scopus**.
4. **Rupak Datta**, R. Dey, B. Bhattacharya, & A. Chakrabarti, "Delayed state feedback controller design for inverted pendulum using T–S fuzzy modelling: An LMI approach", *Innovations in Infrastructure. Advances in Intelligent Systems and Computing*, v. 757, pp. 67–79, 2019, **Scopus**.

Conference (National/International)

1. Razarshi Nath & **Rupak Datta**, "New approach on stability analysis of sampled-data system", *1st International conference on Statistics, Data Science and Optimization (ICSDO-2026)*, Tripura University, India, 2026.
2. R. Saravanakumar & **Rupak Datta**, "Memory Sampled-data Control for Fuzzy Chaotic Systems: An Extended Looped Functional Approach", *ICNCS-2024, VIT Chennai*, Tamil Nadu, India, 2024.
3. **Rupak Datta**, R. Dey, R. Saravanakumar, & K. Guelton, "Extended Dissipativity Analysis for Delayed Fuzzy Systems Using Polynomial Based Integral Inequality", *IFAC-PapersOnLine*, v. 56 (2), pp. 2196–2201, 2023, **Scopus**.
4. **Rupak Datta**, R. Dey, & N. Adhikari, "Dissipative Control for Single Flexible Joint Robotic System via T–S Fuzzy Modelling Approach", *IFAC-PapersOnLine*, v. 55, pp. 637–642, 2022, **Scopus**.
5. **Rupak Datta**, R. Dey, N. Adhikari, J. Gu, U. Farooq, & M. U. Asad, " H_∞ Control for T–S Fuzzy System via Delayed State Feedback: Application to Two-Link Robotic System", *IFAC-PapersOnLine*, v. 55, pp. 777–782, 2022, **Scopus**.
6. R. Saravanakumar, K. Shi, & **Rupak Datta**, "Reliable Memory Sampled-Data Control for T–S Fuzzy Systems", *IFAC-PapersOnLine*, v. 55, pp. 722–727, 2022, **Scopus**.
7. R. Saravanakumar & **Rupak Datta**, "State estimation for delayed memristor-based recurrent neural networks", *ICMSAE-2021, HITS*, Chennai, India, 2021.
8. **Rupak Datta** & R. Saravanakumar, "Dissipative Control for Delayed T–S fuzzy System with Data Packet Dropout", *ISCM, 2021, Cairo, Egypt*, pp. 43–47, IEEE Explore, 2021, **Scopus**.
9. **Rupak Datta**, R. Dey, B. Bhattacharya, & A. Chakrabarti, "Further results on delay-rangedependent stability condition for fuzzy time-delay systems: Less LMIs and decision variables", *ICERME, NIT Agartala*, India, 2019.
10. **Rupak Datta**, B. Bhattacharya, & A. Chakrabarti, "A novel stability condition for T–S fuzzy system with time-delay via the second-order Bessel–Legendre inequality", *ICRTMS, MBB University*, India, 2018.
11. **Rupak Datta**, R. Dey, B. Bhattacharya, & A. Chakrabarti, "Improved stability condition for fuzzy systems with interval time-varying delay", *Joint 17th World Congress of IFSA and 9th International Conference on SCIS, Otsu, Japan*, 2018, IEEE Explore, **Scopus**.

Research Supervision (Scholars Name, Topic and Status)

Ongoing Ph.D. Scholars

Nov. 2024 –



Mr. Razarshi Nath (Reg. NO. 2024-028957)

Area of Research: Developments on Memory-Based Sampled-data and Event-triggered Control Strategies for Fuzzy Systems

Date of Registration: 26-11-2024

M.Sc Project Guidance

Research Supervision (Scholars Name, Topic and Status) (continued)

2026 – 2027

Ongoing

■ Sutapa Dey (Roll No. 250616036); Moutoshi Nath (Roll No. 250616020); Joyabrata Bhowmik (Roll No. 250616016)

Project Topic: Mathematical Biology, Dynamical Systems

2025 – 2026

■ Joyashman Sen (Roll No. 240616025); Mohijit Das (Roll No. 240616033); Esha Das (Roll No. 240616021)

Project Topic: Mathematical Biology

Manodip Bhattacharya (Roll No. 240616032); Hrishap Paul (Roll No. 240616023); Diganta Sarkar (Roll No. 240616015)

Project Topic: Fuzzy Differential Equation and its Applications

2024 – 2025

■ Chandan Debnath (Roll No. 230616009); Dibyendu Malla (Roll No. 230616013)

Project Topic: Stability Analysis of Dynamical Systems

Rajesh Muhuri (Roll No. 230616037); Shib Sundar Das (Roll No. 230616044)

Project Topic: Mathematical Biology

2023 – 2024

■ Swagata Sarma (Roll No. 220616041); Niku Moni Kalita (Roll No. 220616022); Pooja Talukdar (Roll No. 220616044); Biswajit Debnath (Roll No. 1960400108); Diganta Baidya (Roll No. 220616052); Soumik Acharaya (Roll No. 220616056)

Project Topic: Fuzzy Set Theory and its Applications

IMD Project Guidance

2024 – 2025

■ Arpita Das (Roll No. 226100005); Arjita Chakraborty (Roll No. 226100142)

Project Topic: Real Analysis, Numerical Analysis and LPP

Kirtti Chakma (Roll No. 226100013); Sanad Barman (Roll No. 226100003)

Project Topic: Group Theory, Algebraic Number Theory

List of Seminar/Conference/Workshop/Refresher/Orientations Participated

1. Delivered an invited talk as a Resource Person at the **Impact Lecture on Student Learning Programme**, organized by **Techno College of Engineering Agartala**, Maheshkhola, Agartala, Madhuban-799004, Tripura, India, on **March 9, 2026**.
2. Refresher Course on **Recent Trends in Research Methodologies** organized by **UGC Malaviya Mission Teacher Training Centre, Tripura University (MMTTC-TU)**, during **Sept. 9-20, 2025**.
3. Four Weeks Faculty Induction Programme (FIP) **GURU-DAKSHTA** organized by **UGC Malaviya Mission Teacher Training Centre, Tripura University (MMTTC-TU)**, during **Nov. 26 – Dec. 23, 2024**.
4. Serve as the session chair at **IEEE SILCON 2024**, the flagship conference of the IEEE Silchar subsection on **Humanitarian Technology & Engineering Education**, organized by the National Institute of Technology Agartala, India, from **Nov. 15-17, 2024**.
5. International Conference on **Emerging Frontiers in Nonlinear Complex Systems, Computational Intelligence and their Applications** organized by Division of Mathematics School of Advanced Sciences VIT, Chennai, India, from **Feb. 7-9, 2024**.
6. International Conference on **Role of Mathematics for the Development of Science and Society** on the occasion of **National Mathematics Day**, organized by Department of Mathematics, Tripura University, Agartala, India, from **Dec. 21-22, 2023**.

7. **Faculty Refresher and Assimilation Programme (FRAP)** held at SRM Institute of Science & Technology, KTR Campus, Kattankulathur, Tamilnadu, India, on **May 22-23, 2023**.
8. 4th International Conference on **Mathematical Techniques and Applications (ICMTA-2023)** organized by Department of Mathematics, SRM Institute of Science & Technology, KTR Campus, Kattankulathur, Tamilnadu, India, on **March 22-24, 2023**.
9. 7th International Conference on **Advances in Control and Optimization of Dynamical Systems (ACODS-2022)** organized by NIT Silchar, Assam, India and, IIT Guwahati, Assam, India, from **Feb. 22-25, 2022**.
10. 8th International Conference on **Soft Computing & Machine Intelligence (ISCFMI-2021)** organized by India International Congress on Computational Intelligence (IICCI), Cairo, Egypt, during **Nov. 26-27, 2021**.
11. International Conference on **Emergent Research in Mathematics and Engineering (ICERME-2019)** held at the Department of Mathematics, National Institute of Technology Agartala (NIT Agartala) on **May 17-18, 2019**.
12. International Conference on **Recent Trends in Mathematical Sciences (ICRTMS-2018)** organized by Department of Mathematics, MBB University, Tripura, India, on **March 24-25, 2018**.
13. National workshop on **Soft Computing and its Application in Real Life Problems**, **April 9-12, 2018**, NIT Agartala, Tripura, India.
14. GIAN course on **Fuzzy Interpolative Controller and Applications**, **Sept. 19-26, 2016**, NIT Silchar, Assam, India.
15. National Conference on **Engineering Problems and Applications of Mathematics**, **June 11-12, 2016**, NIT Agartala, Tripura, India.
16. National workshop on **Computational study on Fluid Transport Phenomena**, **Feb. 5-6, 2016**, NIT Agartala, Tripura, India.
17. National workshop on **Recent Advances in soft computing Techniques**, **Jan. 29-31, 2016**, NIT Agartala, Tripura, India.
18. National workshop on **Techniques in Bioinformatics**, **Aug. 7-8, 2015**, NIT Agartala, Tripura, India.
19. Short term course (STC) on **Mathematical Methods for Scientists and Engineers**, **June 29 -July 10, 2015**, SVNIT Surat, Gujrat, India.
20. National workshop on **Recent Advances on Applied Mathematics**, **Sep. 20-21, 2014**, NIT Agartala, Tripura, India.
21. National Conference on **Ancient Indian Mathematics**, **Feb. 8-9, 2014**, Agartala, Tripura, India.
22. National workshop on **Advances in multi-criteria decision making (MCDM) Techniques**, **Jan. 13-14, 2014**, NIT Agartala, Tripura, India.

Skills

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| Languages |  Strong reading, writing, and speaking proficiency in English and Bengali, along with good speaking proficiency in Hindi. |
| Coding |  MATLAB/Simulink, MAPLE, Mathematica, C, C++, $\text{\LaTeX}$. |

Membership/Positions in Learned Academic Bodies/Organizations

July 2025 –	Board of PG Studies (BPGS) Member, Department of Mathematics, Tripura University, Agartala, India.
May 2025 –	Board of Faculty of Studies (BFS) Member for the Faculty of Science, Tripura University, Agartala, India.
Since 2023	Life Member of the Indian Mathematical Society (ID-L/2023/o69).
	Life Member of the Ramanujan Mathematical Society (Membership No-1858).
	Life Member of the Tripura Mathematical Society.
2019	Organizing Member, ICERME-2019, NIT Agartala, Tripura, India.
2016	Organizing Member, EPAM-2016, NIT Agartala, Tripura, India.

Miscellaneous Experience

Awards and Achievements

2022	Postdoctoral Fellowship from Basic Science research Program through the National Research Foundation (NRF) funded by the Ministry of Education, Republic of Korea.
2020	Institute Postdoctoral Fellowship under SPARC project, NIT Silchar, Assam, India.
2014	Institute Research Fellowship for Ph.D. funded by TEQIP-III.

Country Visited

Mar. 2023 – Feb. 2024	Kunsan National University, Republic of Korea.
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Reviewer

1. IEEE Transaction on Cybernetics
2. IEEE Transaction on Fuzzy Systems
3. IEEE Transactions on Systems, Man and Cybernetics: Systems
4. IEEE Transaction on Neural Networks and Learning Systems
5. IEEE Transactions on Circuits and Systems I: Regular Papers
6. IEEE Transaction on Circuits and Systems II: Express Briefs
7. IEEE Systems Journal
8. IEEE/ASME Transactions on Mechatronics
9. IEEE Transactions on Automation Science and Engineering
10. IEEE/CAA Journal of Automatica Sinica
11. IEEE Transactions on Industrial Informatics
12. IEEE Internet of Things Journal
13. Transactions of the Institute of Measurement and Control
14. Journal of the Franklin Institute
15. Chaos, Solitons & Fractals

16. IET Control Theory & Applications
17. International Journal of Systems Science
18. International Journal of Control
19. Science China Information Sciences
20. International Journal of control, Automation and Systems.
21. Fuzzy Sets and systems
22. Expert Systems With Applications
23. ISA Transactions
24. Nonlinear Dynamics
25. Engineering Applications of Artificial Intelligence
26. Neurocomputing
27. Scientific Reports
28. Scientific African
29. Mathematical Problems in Engineering
30. Mathematics and Computers in Simulation
31. International Journal of Robust and Nonlinear control
32. Journal of Applied Mathematics and Computing
33. Turkish Journal of Electrical Engineering & Computer Sciences
34. Mathematical Modelling and Control
35. International Journal of Bifurcation and Chaos
36. Proyecciones (Antofagasta, Online)
37. Quaestiones Mathematicae
38. Fuzzy Information and Engineering
39. Cognitive Neurodynamics
40. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations
41. Journal of Mechanical Engineering Science
42. Journal of Control and Decision
43. International Journal of Computer Mathematics
44. Communications in Theoretical Physics
45. Malaysian Journal of Mathematical Sciences
46. Canadian Journal of Physics

Research Collaboration

1. Dr. Rajeeb Dey, Dept. of Electrical Engineering, 788010, NIT Silchar, Assam, India
2. Prof. Baby Bhattacharya, Dept. of Mathematics, 799046, NIT Agartala, Tripura, India
3. Dr. Ramasamy Saravanakumar, MSU-BIT-SMBU Joint Research Center of Applied Mathematics, Shenzhen MSU-BIT University, Shenzhen, 518172, China
4. Pratap Anbalagan, College of Mechatronics and Control Engineering, Shenzhen University, Shenzhen 518060, China
5. Prof. Choon Ki Ahn, School of Electrical Engineering, Korea University, Seoul, 02841, Republic of Korea
6. Prof. O.M. Kwon, School of Electrical Engineering, Chungbuk National University, Cheongju 28644, South Korea
7. Prof. Young Hoon Joo, School of IT Information and Control Engineering, Kunsan National University, Gunsan-si, Jeonbuk 54150, Republic of Korea
8. Prof. Kaibo Shi, School of Electronic Information and Electrical Engineering, Chengdu University, Chengdu 610106, China
9. Prof. Kevin Guelton, CReSTIC EA3804 – Université de Reims Champagne-Ardenne, Moulin de la Housse BP1039, 51687 Reims cedex 2, France
10. Prof. Jason Gu, Department of Electrical and Computer Engineering, Dalhousie University, Halifax, NS, Canada
11. Dr. Amir Amini, Department of Electrical and Computer Engineering, Concordia University, Montreal, QC, Canada
12. Dr. Nabanita Adhikary, Dept. of Electrical Engineering NIT Silchar, 788010, India
13. Dr. Muhammad Usman Asad, Navel Fleet Engineering School, Dalhousie University, Halifax, Canada
14. Dr. Abanishwar Chakrabarti, Dept. of Electrical Engineering, NIT Agartala, Tripura, India

References

Available on Request

Thank you!