Name:	Dr. Romit S Beed	
Designation:	Associate Professor	
Department:	Computer Science	
Date of Join:	16th August, 2005	
Email:	rbeed@yahoo.com | rbeed@sxccal.edu	
Qualification:	• M.Sc. (CS) 2003	University of Calcutta
	• M.Tech. (CSE) 2005	University of Calcutta
	• Ph.D. (Comp. Sc) 2021	Assam University, Silchar
Doctoral Research Topic:	"Multi-Objective Optimization Using Computational Intelligence Techniques and its Applications"	
Teaching Experience:	• U.G. 20 years of teaching experience.	
	• P.G. 20 years of teaching experience.	
	• Research Guidance 20 years at Master's Level.	
	4 years at Ph.D. Level	
Administrative Responsibilities:	• Head of the Department, Department of Computer Science (Since July 2019)	
	• Deputy President, St. Xavier's College Students' Council (Since July 2009)	
	• Coordinator (Previously Prof-in-Charge), Postgraduate Department of Comp. Sc. (April 2006-June 2019)	
	• Coordinator, SXC -IBM ACE Programme, M.Sc (Tech) under University of Mysore for IBM employees (2007-2012)	

Member:		
	• Academic Council	• Disaster Management Committee
	• Board of Studies, Computer Science	• ICT Resource Management Committee
	• Students' Advisory Council	• ISO 9001-2015 Core Committee
	• Consultancy Cell	• SXCCAA- St. Xavier's College Calcutta Alumni Association
	• Placement Cell	
	• College Magazine Committee	• ALUMNORUM SOCIETAS – St. Xavier's School Old Boys' Association
	• Programme and Publication Committee	
	• Games and Sports Committee	
	• Information Resource Committee	

Research Interests:	• Multi-Objective Optimization	• Software Engineering
	• Computational Intelligence Techniques	• IOT
	• Database Management Systems	
Research Guidance	• Scholars registered for Ph.D. at present: 1 | Enrolled 3	
Consultancy	• Calcutta High Court Notes Online – Digitization and Search Engine Implementation for Court Proceedings, Statutes, Act etc.	
	• Kolkata Customs - Passenger Satisfaction Survey, 2023.	
	• Senco Gold and Diamond Jewelry - Providing analytical and forecasting support of their marketing and inventory management.	
	• NCC Directorate Training of officers and staff	
	• Trustee, Stepping Stone School	

List of papers published in Journals

1. Romit Beed, Debapriya Ghosh, Farhana Javed Zareen, Nikita Goyal, (2009) "Signature Authentication", Aviskaar: A Xaverian Journal of Research, ISSN (Print): 2277-8411 ISSN(Online): 2278-1048, vol 1.

2. Romit S Beed, Sayan Chakraborty, Swati Ganguli, (2011) "Content Based Image Retrieval System", Aviskaar: A Xaverian Journal of Research, Vol III.

3. Romit S Beed, Rana Biswas, Sneha Mitra, Sohini Saha & Sagnik Sinha, (2012) "Alternative Keyboard Based on Infrared Technology", Undergraduate Academic Research Journal (UARJ), ISSN: 2278 – 1129, vol. 1, issue 1.

4. Enakshi Mukhopadhyay, Priyanka Mazumder, Saberi Goswami, Romit S Beed, (2014) "An Efficient Automated English to Bengali Script Conversion Mechanism", International Journal of Advanced Computer Research, Volume-4, Number-2 Issue-15. [(ISSN (print): 2249-7277 ISSN (online): 2277-7970)]

5. Rana Biswas, Spandan Ray Chaudhuri, Nandini Barman, Romit S Beed, (2014) "Solar-Powered GSM Based Multipurpose Alert System", American Journal of Advanced Computing, vol. 1, no. 2, pp: 36-44. [ISSN: 2368-1209]

6. Biswarup Nandi, Souvik Sur, Upasana Roy Chowdhury, Romit Beed, (2015) "Drishti – Automated Machine Interface", International Journal of Computer Architecture and Mobility, Volume 3 -Issue 4. (ISSN 2319-9229)

7. Rana Biswas, Romit S. Beed, Dibyabiva Seth, Proyag Pal, Kaustav Basu, Triparna Mukherjee, (2015) Traffic Rule Violation Information System TRuVIS, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 5, Issue 7. ISSN: 2277 128X

8. Rana Biswas, Romit Beed, Ankita Bhaumik, Shamik Chakrabarty, Raghav Toshniwal, (2015) "Solar-Powered Automated Plant/Crop Watering System", International Journal of Advanced Engineering and Global Technology, Vol-03, Issue-01. [ISSN No: 2309-4893]

9. Romit S Beed, Ankita Kedia, (2018) A Dynamic School Bus Routing System, Aviskaar: A Xaverian Journal of Research Vol X.

10. Beed R, Roy A, Sarkar S, Bhattacharya D. (2020) A hybrid multi-objective tour route optimization algorithm based on particle swarm optimization and artificial bee colony optimization, Computational Intelligence, Volume36, Issue3, 884-909. https://doi.org/10.1111/coin.12276

11. Romit S. Beed, Ankita Sarkar, Raya Sinha, Deboshruti Dasgupta (2020) A Study of the Effect of the Parameters for Optimizing Profit Using Simulated Annealing to Solve Shelf Space Allocation Problem, Azerbaijan Journal of High Performance Computing, 2020, Vol 3, Issue 2, , pp. 255-268 https://doi.org/10.32010/26166127.2020.3.2.255.268

12. Beed, R.S., Sarkar, S. & Roy, A. (2021) Bayesian hierarchical multi-objective optimization for vehicle parking route discovery. Innovations in Systems and Software Engineering 17, 109–120. https://doi.org/10.1007/s11334-020-00373-4

13. Beed, R.S., Sarkar, S. Roy, A., Biswas S.D., Biswas S, (2021) Hybrid Multi-Objective Carpool Route Optimization Technique using Genetic Algorithm and A* Algorithm, *Computer Research and Modeling*, vol. 13, no. 1, pp. 67–85 (Russian).

14. Beed, R.S., Sarkar, S. & Roy, A. (2021) Hierarchical Bayesian Approach for Improving Weights for Solving Multi-Objective Route Optimization Problem", International Journal of Information Technology, 13, 1331–1341 https://doi.org/10.1007/s41870-021-00643-9

11. Tanushree Parmar, Romit S. Beed, Lithological Mapping And Spectral Characterization of Rocks of Different Ages Exposed in Southern Rajasthan Using Multispectral and Hyperspectral Remote Sensing, International Journal for Multidisciplinary Research (IJFMR), Volume 7, Issue 3, May-June 2025, E-ISSN: 2582-2160. https://doi.org/10.36948/ijfmr.2025.v07i03.47064

List of Papers published as Book Chapters

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2. Romit S. Beed, Sunita Sarkar, Arindam Roy, Durba Bhattacharya, (2020) Hierarchical Multi-objective Route Optimization for Solving Carpooling Problem; In: Mandal J., Mukhopadhyay S. (eds) Proceedings of the Global AI Congress 2019, Springer Singapore - Advances in Intelligent Systems and Computing, vol. 1112, eBook ISBN 978-981-15-2188-1, DOI 10.1007/978-981-15-2188-1

3. Sunita Sarkar, Romit Beed & Arindam Roy (2020) Role of Information and Communication Technology in Sustainable Tourism in North East India; In: Debarshi Mukherjee, Mahasweta Saha (eds) Purvottaran - The Rise of North East: Paradigms of Development in the VUCA World, Bloomsbury Prime, (1st Ed.), ISBN 9789390513017

4. Beed R.S., Biswas S, Sarkar S., Roy A. (2021), Carpooling as a Go Green Solution for Environmental Sustainability, Go Green for Environmental Sustainability: An Interdisciplinary Exploration of Theory and Applications (1st ed.). Ed. Savarimuthu, X., Rao, U., & Reynolds, M.F. CRC Press. https://doi.org/10.1201/9781003055020

5. Tiwari, A., Beed, R.S. (2023). Applications of Internet of Things in Smart Agriculture. In: Mukhopadhyay, S., Sarkar, S., Mandal, J.K., Roy, S. (eds) AI to Improve e-Governance and Eminence of Life. Studies in Big Data, vol 130. Springer, Singapore. https://doi.org/10.1007/978-981-99-4677-8_6

6. Mitra, R., Beed, R.S., Chakraborty, T. (2025). Quantum-Inspired Coalition Formation Techniques in Multi-agent Systems for Human Centric Applications—A Review. In: Bhattacharyya, S., Banerjee, J.S., De, D., Mahmud, M. (eds) Intelligent Human Centered Computing. HUMAN 2024. Springer Tracts in Human-Centered Computing. Springer, Singapore. https://doi.org/10.1007/978-981-96-1761-6_40

7. Rupali Mitra, Tamal Chakraborty, Romit S. Beed, (2025), A Review of Quantum-Inspired Genetic Algorithms, Applications of Quantum Computing in a Variety of Domains (AAP), 9, Apple Academic Press, ISBN: 9781998511044

8. Rupali Mitra, Romit S Beed, Anuska Saha, Shreya Mukhopadhyay, and Sritama Ghosh, Analysing the Impact of Delivery Agent Optimization on Profitability in Online Food Delivery System, Intelligent Systems and Emerging Technologies: Interdisciplinary Advances in AI, Engineering, and Computational Modeling, NOVA Publishers. [Under Process]

9. Attri Ghosh, Rupali Mitra, Romit S Beed, Urboshee Biswas and Subham Kumar Singh, Multi-Objective Food Delivery Route Optimization using Hybrid Pareto based Differential Evolution Algorithm; Data Management, Analytics and Innovation, Proceedings of ICDMAI 2025, Eds: Saptarsi Goswami, Sajal Saha, Kanadpriya Basu, Romit S Beed, Lecture Notes in Networks and Systems, Springer Singapore, ISBN 978-981-96-5859-6. [Under Process]

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6. R. S. Beed and S. Sarkar, "A study on the use of information and communication technology in tourism," IEEE, *2017 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, Udupi, 2017, pp. 1737-1744. doi: 10.1109/ICACCI.2017.8126095

7. R. S. Beed, S. Sarkar, A. Roy and S. Chatterjee, "A Study of the Genetic Algorithm Parameters for Solving Multi-objective Travelling Salesman Problem," in IEEE, *2017 International Conference on Information Technology (ICIT)*, Bhubaneswar, 2017, pp. 23-29. doi: 10.1109/ICIT.2017.49

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1. Romit S Beed, Nandini Barman, Spandan Ray Chaudhuri, Rana Biswas, "GSM based Multi-purpose Alert System", in 1st International Science and Technology Congress IEMCONGRESS 2014, Kolkata, India, 28-30 August 2014

2. Sunita Sarkar, Arindam Roy, Romit S Beed, "Cash to Cashless Economy: A study on the role of Information Technology"; in ICSSR Sponsored National Seminar on Transition to Cashless Economy, Priorities, Opportunities & the Modes and Options organized by Jawaharlal Nehru School of Management Studies, Assam University, Silchar, 8th to 10th Sept, 2017.

3. Romit S Beed, Sunita Sarkar, "A Study on the Use of Information and Communication Technology in Tourism"; in 6th International Conference on Advances in Computing, Communications and Informatics (ICACCI), Manipal University, 13-16 Sept 2017.

4. Romit S Beed, Sunita Sarkar, Arindam Roy, Shubham Chatterjee "A Study of the Genetic Algorithm Parameters for Solving Multi-Objective Travelling Salesman Problem"; in 16th International Conference of Information Technology (ICIT 2017), Bhubaneswar, 21st to 23rd Dec, 2017.

5. Romit S Beed, Arindam Roy, Sunita Sarkar, Durba Bhattacharya, "Hierarchical Multi-Objective Route Optimization for Solving Car-Pooling Problem," in Global AI Congress 2019, IEM: IC 59.

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7. Beed R.S., Biswas S, Sarkar S., Roy A. "A Study on Heuristic Shortest Path A* Algorithm and its Applications in Smart Route Planning"; in International Conference on Computational Intelligence, Data Science and Cloud Computing 2020, Institute of Engineering & Management, 25-27 September 2020, Kolkata.

8. Romit S. Beed, Ankita Sarkar, Raya Sinha, Deboshruti Dasgupta, "A study of the effect of the parameters for optimizing profit using Simulated Annealing to solve shelf space allocation problem", International Workshop on High Performance Computing Application AAHiPC 2020, 17th and 18th November, 2020, Online.

9. Sangita Bose, Romit S Beed, A Smart Farming Production Approach Using Drones and IoT after COVID -19 Pandemic, Fourth International Conference on Computational Intelligence in Communications and Business Analytics, Assam University, Silchar, 7-8 January 2022, Online

10. Rupali Mitra, Romit S Beed, Tamal Chakraborty, Quantum-Inspired Coalition Formation Techniques in Multi-Agent Systems for Human Centric Applications– A Review, Second Doctoral Symposium on Human Centered Computing (HUMAN-2024), March 30, 2024.

11. Attri Ghosh, Rupali Mitra, Romit S Beed, Urboshee Biswas and Subham Kumar Singh, Multi-Objective Food Delivery Route Optimization using Hybrid Pareto based Differential Evolution Algorithm, 9th International Conference on Data Management, Analytics & Innovation, Kolkata, India 17-19 January,2025.

12. Tanushree Parmar, Romit S. Beed, Application of Machine Learning Techniques for Remote Sensing in Lithological Mapping: A Review, 9th International Conference on Data Management, Analytics & Innovation, Kolkata, India 17-19 January,2025

13. Sangita Basu, Romit S Beed, Clustering-based Multivariate Prediction model for Infectious Disease Forecasting in India, 9th International Conference on Data Management, Analytics & Innovation, Kolkata, India 17-19 January,2025

Lectures delivered as Resource Person

1. Resource Person, Online Special Lecture organized by Department of Computer Science, Mrinalini Dutta Mahavidyapith, West Bengal State University on 7.9 21 Topic: Distributed Database Management System

2. Distinguished Resource Person, Two-day Foundation Course organized by Department of Education, St. Xavier's College (Autonomous), Kolkata on Thursday 03.03.2022. Topic: Importance of Database Management System and Data Security in today's world

3. Resource Person, One-Day Webinar organized by department of Software Development, B.Voc Studies, in association with IQAC, Asutosh College, on 24th June, 2022. Topic: Optimizing Or Maximizing Growth? A Challenge For Sustainability.

4. Resource Person, Two-Day National Level Seminar on "Revisiting the Intellectual History of India's Struggle for Independence: Decoding the Debates and Discourses Emphasizing the Importance of Thoughts and Actions"

organized by Maulana Abul Kalam Azad Institute of Asian Studies, Kolkata and St. Xavier's College (Autonomous), Kolkata - Department of Education, 13th and 14th August, 2022. Topic: Optimizing Resources For India's Sustainable Development

5. Resource Person, e-resource generation using Adobe Photoshop, St. Xavier's College, 25th February, 2023

6. Resource Person, Two-day Foundation Course organized by Department of Education, St. Xavier's College (Autonomous), Kolkata on Thursday 13.04.2023. Topic: Relevance of Database Management in teacher education.

7. Resource Person, Google Apps and Certificate Creation using Adobe Photoshop, St. Xavier's College, July, 2023.

8. Resource Person, International Conference For Teachers (ICFT), Jyotirmoy School of Education, 25th February 2024. Topic: "Artificial Intelligence: Impact on School Education and Teachers"

9. Resource Person, Network Security and advanced DBMS, NCC Directorate, February - March, 2024.

10. Resource Person, LinkedIn as a Powerful Tool for Networking, Searching and Securing Internships – St. Xavier's College, 1st year students, Batch of 2024-2028, 19.08.2024

11. Resource Person, Advanced Excel for Group C Office Staff, St. Xavier's College, 22nd March, 2025

12. Resource Person, LinkedIn as a Powerful Tool for Networking, Searching and Securing Internships – St. Xavier's College, 1st year students, Batch of 2025-2029, 12.04.2025

Session Chair

1. Session Chair in the 7th International Conference on Emerging Applications of Information Technology (EAIT 2022) organised by CSI Kolkata Chapter held in hybrid mode from 29th March, 2022 to 31st March 2022

2. Session Chair in Three-day WORKSHOP ON ARTIFICIAL INTELLIGENCE: A TOOL FOR MODERN RESEARCH organized by St. Xavier's College (Autonomous), Departments of Physics, Computer Science, Microbiology and Chemistry in collaboration with RUSA & DBT Star College Scheme, 13TH March to 15th March, 2023

3. Session Chair, 3rd Doctoral Symposium on Human Centered Computing (HUMAN-2025), JIS College of Engineering, Kalyani, 28 March AND 29TH MARCH 2025

Editor

1. Data Management, Analytics and Innovation, Proceedings of ICDMAI 2025, Eds Saptarsi Goswami, Sajal Saha, Kanadpriya Basu, Romit S Beed, Lecture Notes in Networks and Systems, Springer Singapore, Series ISSN: 2367-3370, eBook ISBN 978-981-96-5860-2, 23 September 2025