Dr. Sovan Samanta

Assistant Professor (Department of Mathematics)
Tamralipta Mahavidyalaya, West Bengal, India

Professor (Scientific Research)
Western Caspian University, Baku, Azerbaijan

Visiting Professor
Research Center of Performance and Productivity Analysis, Istinye University, Türkiye

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Professional Summary

- Expert in Fuzzy Logic, Graph Theory, Network Science, Decision Making, and certified in 'No Code AI and Data Science' from the **Massachusetts Institute of Technology (MIT).**
- Published 85 in SCI/SCIE journals (majorly in Q1/Q2), with several high-impact
- Recognized in Stanford University's Top 2% Worldwide Scientist List (2021–2025).
- Associate Editor in SCIE and Scopus journals (JAMC, Springer; Fuzzy Information and Engineering; Neutrosophic Sets and Systems; Transactions on Fuzzy Sets and Systems) and Reviewer for top-tier SCIE/Scopus-indexed journals.
- Speaker and Session Chair at a few national and international conferences.

Experience

- **Assistant Professor**, Tamralipta Mahavidyalaya (2017–Present)
- **Professor(Research)**, Western Caspian University, Azerbaijan (2024–Present)
- **Visiting Professor**, Istinye University, Türkiye (2024–Present)
- **Visiting Research Professor**, University of the Faroe Islands (2024–2025)
- **Academic Supervisor**, Algebra University, Croatia (2024–Present)
- **Assistant Professor**, IIIT Nagpur (2016–2017)

- **Postdoctoral Fellow**, Hanyang University, South Korea (2016)

Selected Publications (Top 12)

- Samanta, S., & Pal, M. (2015). Fuzzy planar graphs. *IEEE Transactions on Fuzzy Systems*, 23(6), 1936–1942. **(SCI, Impact Factor - 11.9, Scopus)**
- Samanta, S., Dubey, V. K., & Das, K. (2022). Coopetition bunch graphs: Competition and cooperation on COVID-19 research. *Information Sciences*, 589, 1-33. **(SCI, Impact Factor - 8.1, Q1, Scopus)**
- Samanta, S., Dubey, V. K., & Sarkar, B. (2021). Measure of influences in social networks. *Applied Soft Computing*, 99, 106858. **(SCI, Impact Factor - 8.7, Q1, Scopus)**
- Dubey, V. K., & Samanta, S. (2025). Influential nodes in ray cluster hypergraph networks. *Expert Systems with Applications*, 275, 127014. **(SCIE, Impact Factor - 7.5, Q1, Scopus)**
- Mandal, P., Samanta, S., & Pal, M. (2024). Failure mode and effects analysis in consensus-based GDM for surface-guided deep inspiration breath-hold breast radiotherapy for breast cancer under the framework of linguistic Z-number. *Information Sciences*, 658, 120016. **(SCIE, Impact Factor - 8.1, Q1, Scopus)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. C. (2023). Regret theory based three-way conflict analysis model under q-rung orthopair fuzzy information: Studies with parameter and three-way decision making based approaches. *Artificial Intelligence Review*, 56(Suppl 3), 3417–3469. https://doi.org/10.1007/s10462-023-10607-z
(SCIE, Impact Factor - 13.9, Q1, Scopus)
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. C. (2023). Social network trust relationship environment based advanced ovarian cancer treatment decision-making model: An approach based on linguistic information with experts' multiple confidence levels. *Expert Systems with Applications*, 229, 120407. https://doi.org/10.1016/j.eswa.2023.120407
(SCIE, Impact Factor - 8.652, Q1, Scopus)
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. (2022). Three-way decision model under a large-scale group decision-making environment with detecting and managing non-cooperative behaviors in consensus reaching process. *Artificial Intelligence Review*, 55 (7), 5517-5542. **(SCI, Impact Factor - 13.9, Q1, Scopus)**
- Mandal, P., Samanta, S., & Pal, M. (2021). Multiplicative consistency analysis of linguistic preference relation with self-confidence level and self-doubting level and its application in a group decision making. *International Journal of Intelligent Systems*, 36(10), 5389–5418. **(SCI, Impact Factor - 8.993, Q1, Scopus)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. (2020). Pythagorean linguistic preference relations and their applications to group decision making using group recommendations based on consistency matrices and feedback mechanism. *International Journal of Intelligent Systems*, 35(5), 826–849. **(SCI, Impact Factor - 8.709, Scopus)**
- Mandal, P., Mrsic, L., Kalampakas, A., Allahviranloo, T., & Samanta, S. (2025). Pythagorean linguistic information-based green supplier selection using quantum-based group decision-making methodology and the MULTIMOORA approach. *Artificial Intelligence Review*, 58, 199. https://doi.org/10.1007/s10462-025-11205-x
(SCIE, Impact Factor = 13.9, Q1, Scopus)

- Abdullah, S. I., Samanta, S., De, K., Kalampakas, A., Lee, J. G., & Allahviranloo, T. (2024). Properties of the forgotten index in bipolar fuzzy graphs and applications. *Scientific Reports*, 14(1), 28264. **(SCIE, Impact Factor - 3.7, Q1, Scopus)**

Talks and Conferences

- Invited Speaker, Symposium at Western Caspian University, 2025, Baku, Azerbaijan.
- Invited Speaker, National Workshop on Fuzzy Graph Theory, 2025, Vidyasagar University, Midnapore, India
- Paper Presented at IFSCOM-2022, Turkey
- Convenor, ICRDR 2023, 2025
- Session Chair, IEEE and International Fuzzy Logic Conferences
- Invited Speaker at national seminars in several state colleges, WB, India

All Article Publications

Metric	Value
Total journal articles	114
SCI/SCIE indexed journal articles	88
Scopus (including SCI/SCIE)	109
Highest Impact Factor (SCI/SCIE journals)	13.9
Total Impact Factor (SCI/SCIE journals only)	≈ 301

2026

- Pramanik T., Mahapatra R., Samanta, S., Allahviranloo, T., Mrsic, L., & Kalampakas, A. (2026). Spherical fuzzy hypergraph in decision making, Accepted in Scientific Reports. DOI : 10.1038/s41598-026-44917-3 **(SCIE, Impact Factor - 3.7, Q1, Scopus)**
- Meenakshi A., John J., Mršić Leo Kalampakas Antonios, Samanta Sovan, Allahviranloo Tofigh (2026). Fuzzy driven network Intelligence through Vertex coloring in virtual embedding, Accepted in Scientific Reports, **(SCIE, Impact Factor - 3.7, Q1, Scopus)**
- Samanta, S., Allahviranloo, T., Mrsic, L., & Kalampakas, A. (2026). Duckworth–Lewis–Stern Modeling with Fuzzy Logic and Contextual Indices for Target Revision in Cricket, Accepted in Scientific Reports. **(SCIE, Impact Factor - 3.7, Q1, Scopus)**
- Meenakshi A., John J., Mršić Leo Kalampakas Antonios, Samanta Sovan, Allahviranloo Tofigh (2026). Adaptive Security Models: Leveraging RSA and Intuitionistic Fuzzy Logic for Robust Cryptography, Accepted in *Ain Shams Engineering Journal*. **(SCIE, Impact Factor 5.9, Q1, Scopus)**
- Samanta, S., Allahviranloo, T., Mrsic, L., & Kalampakas, A. (2026). Graph Clustering and Prediction Models for DISC-based Personality and Competency Analysis, Scientific Reports. https://doi.org/10.1038/s41598-026-41013-4 **(SCIE, Impact Factor - 3.7, Q1, Scopus)**

- Samanta, S., Allahviranloo, T., Mrsic, L., & Kalampakas, A. (2026). An adaptive graph-based method for structured learning and decision analysis. *Decision Analytics Journal*, 7, Article 100691. https://doi.org/10.1016/j.dajour.2026.100691. **(Q1, Top 1% Journal in Scopus)**
- Mahapatra, T., Mahapatra, R., Samanta, S., Lee, J. G., & Pal, M. (2026). Link prediction in m-polar fuzzy environment and its application. *Discover Computing*, 29(1), 78. **(SCIE, Impact Factor 1.7, Q2, Scopus)**
- Amirteimoori, A., Allahviranloo, T., Nematizadeh, M., Mrsic, L., & Samanta, S. (2026). An analytical framework for sustainability assessment under stochastic conditions. *Decision Analytics Journal*, 100680. **(Q1, Top 1% Journal in Scopus)**
- Meenakshi, A., Mishra, J. S., Mršić, L., Kalampakas, A., & Samanta, S. (2026). Exploring domination in strongly connected product fuzzy digraphs: an optimised perspective. *Journal of Applied Mathematics and Computing*, 72, 97. **(SCIE, Impact Factor 2.7, Q1, Scopus)**
- Meenakshi, A., Mishra, J. S., Mršić, L., Kalampakas, A., Samanta, S., & Allahviranloo, T. (2026). Maximal product-based intuitionistic fuzzy line graphs for healthcare predictive analysis. *Ain Shams Engineering Journal*, 17(1), 103939. **(SCIE, Impact Factor 5.9, Q1, Scopus)**
- Pandey, S. D., Ranadive, A. S., Samanta, S., Mrsic, L., & Kalampakas, A. (2026). Energy and Laplacian Energy of Graphs under the Bipolar Valued Hesitant Fuzzy Framework. *Transactions on Fuzzy Sets and Systems*, 9(1), 26.

2025

- Dubey, V. K., & Samanta, S. (2025). Influential nodes in ray cluster hypergraph networks. *Expert Systems with Applications*, 275, 127014. **(SCIE, Impact Factor 7.5, Q1, Scopus)**
- Mandal, P., Mrsic, L., Kalampakas, A., Allahviranloo, T., & Samanta, S. (2025). Pythagorean linguistic information-based green supplier selection using quantum-based group decision-making methodology and the MULTIMOORA approach. *Artificial Intelligence Review*, 58(7), 199. **(SCIE, Impact Factor 13.9, Q1, Scopus)**
- Pandey, S. D., Samanta, S., Ranadive, A. S., Mrsic, L., Kalampakas, A., & Allahviranloo, T. (2025). Strength prominence index: a link prediction method in fuzzy social network. *Complex & Intelligent Systems*, 11(7), 307. **(SCIE, Impact Factor 4.6, Q1, Scopus)**
- Meenakshi, A., Dhanushiya, S., Mrsic, L., Kalampakas, A., & Samanta, S. (2025). A multi layered encryption framework using intuitionistic fuzzy graphs and graph theoretic domination for secure communication networks. *Scientific Reports*, 15(1), 20992. **(SCIE, Impact Factor 3.7, Q1, Scopus)**
- Muhammad, G., Allahviranloo, T., Hussain, N., Mrsic, L., & Samanta, S. (2025). Fully bipolar fuzzy linear systems: bounded and symmetric solutions in dual form. *Journal of Applied Mathematics and Computing*, 71(3), 4257–4282. **(SCIE, Impact Factor 2.7, Q2, Scopus)**
- Safikhani, L., Allahviranloo, T., Mrsic, L., & Samanta, S. (2025). Numerical solution for fuzzy fractional differential equations by fuzzy multi-step methods. *Symmetry*, 17(4), 545. **(SCIE, Impact Factor 2.2, Q2, Scopus)**
- Meenakshi, A., Mythreyi, O., Mrsic, L., Kalampakas, A., & Samanta, S. (2025). A fuzzy hypergraph-based framework for secure encryption and decryption of sensitive messages. *Mathematics*, 13(7), 1049. **(SCIE, Impact Factor 2.5, Q1, Scopus)**

- Nandi, S., Mondal, S., Samanta, S., Barman, S. C., Mrsic, L., & Kalampakas, A. (2025). Center of trapezoid graph: application in selecting center location to set up a private hospital. *Mathematics*, 13(5), 885. **(SCIE, Impact Factor 2.5, Q1, Scopus)**
- Samanta, S., & Allahviranloo, T. (2025). Introduction to Quantum Graphs and Their Stability Analysis. *Computational Methods for Differential Equations*. **(ESCI, Scopus indexed)**
- Mahapatra, R., Allahviranloo, T., Mrsic, L., Kalampakas, A., & Samanta, S. (2025). Applications of mixed fuzzy graph colouring in traffic signal optimization and supply chain management. *Computational and Applied Mathematics*, 44(8), 399. **(SCIE, Impact Factor 2.6, Q2, Scopus)**
- Sarfi, E., Noroozi, E., Lotfi, F. H., Shahriari, M., Allahviranloo, T., Samanta, S., *et al.* (2025). Fixed Cost Allocation with a Minimum Distance to Fair Allocation in Fuzzy Data Envelopment Analysis. *Mathematical Sciences*. **(Scopus, Q1)**
- Meenakshi, A., Mishra, J. S., Lee, J. G., Kalampakas, A., & Samanta, S. (2025). Advanced risk prediction in healthcare: Neutrosophic Graph Neural Networks for disease transmission. *Complex & Intelligent Systems*, 11(9), 413. **(SCIE, Impact Factor 4.6, Q1, Scopus)**
- Goswami, S., Mondal, S., Joardar, S., Ambudkar, B., Das, C. B., & Samanta, S. (2025). Fuzzy Inference System-Based Performance Analysis of Different Mobility Nodes on MANET. *International Journal of Fuzzy Logic and Intelligent Systems*, 25(1), 112–123. **(Scopus indexed)**
- Samanta, S., Das, K., Dubey, V. K., Mršić, L., & Kalampakas, A. (2025). Nature set: qualitative and quantitative representation of elements. *Universal Wiser Publisher*, 6(5), 7041–7057. **(ESCI, Q1, Scopus)**

2024

- Niroomand, S., Allahviranloo, T., Mahmoodirad, A., Amirteimoori, A., Mrsic, L., & Samanta, S. (2024). Solving a fully intuitionistic fuzzy transportation problem using a hybrid multi-objective optimization approach. *Mathematics*, 12(24), 3898. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Mandal, P., Mrsic, L., Kalampakas, A., Allahviranloo, T., & Samanta, S. (2024). Multicriteria group decision making based on TODIM and PROMETHEE II approaches with integrating quantum decision theory and linguistic Z number in renewable energy selection. *Mathematics*, 12(23), 3790. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Abdullah, S. I., Samanta, S., De, K., Kalampakas, A., Lee, J. G., & Allahviranloo, T. (2024). Properties of the forgotten index in bipolar fuzzy graphs and applications. *Scientific Reports*, 14(1), 28264. **(SCIE, Impact Factor 3.9, Q1, Scopus)**
- Mahapatra, R., Samanta, S., Pal, M., Allahviranloo, T., & Kalampakas, A. (2024). A study on linguistic Z-graph and its application in social networks. *Mathematics*, 12(18), 2898. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Pandey, S. D., Ranadive, A. S., Samanta, S., & Dubey, V. K. (2024). A study on coopetition using bipolar fuzzy bunch graphs. *Journal of Intelligent & Fuzzy Systems*, 1–20. **(SCIE, Impact Factor 1.7, Q2, Scopus)**
- Mahapatra, R., Samanta, S., & Pal, M. (2024). New concept of centrality measurement in fuzzy social networks. *Journal of Intelligent & Fuzzy Systems*. **(SCIE, Impact Factor 1.7, Q2, Scopus)**

- Kalampakas, A., Samanta, S., Bera, J., & Das, K. C. (2024). A fuzzy logic inference model for the evaluation of the effect of extrinsic factors on the transmission of infectious diseases. *Mathematics*, 12(5), 648. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Josen, J., John, S. J., Samanta, S., Allahviranloo, T., & Baiju, T. (2024). Study on multidimensional fuzzy graphs through modified partial ordering. *Mathematics in Applied Sciences and Engineering*, 1–25. **(Scopus indexed)**
- Goswami, S., Mondal, S., Joardar, S., & Samanta, S., Das, C. B. (2024). Fuzzy-based Bi-objective Energy Efficient Routing Protocol for Large Scale Mobile Ad-hoc Network. *International Journal of Intelligent Systems and Applications*, 16(6), 94–104. **(Scopus indexed)**
- Das, K., Maity, A., De, K., Mondal, S., Samanta, S., & Allahviranloo, T. (2024). Link Prediction in Co-Authorship Network Under Fuzziness and Application in Biomedical Analysis. *Fuzzy Information and Engineering*, 16(2), 155–174. **(Scopus indexed)**

2023

- Mandal, P., Samanta, S., & Pal, M. (2023). Failure mode and effects analysis in consensus-based GDM for surface-guided deep inspiration breath-hold breast radiotherapy for breast cancer under the framework of linguistic Z-number. *Information Sciences*, 658, 120016. **(SCIE, Impact Factor 6.8, Q1, Scopus)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. C. (2023). Regret theory based three-way conflict analysis model under q-rung orthopair fuzzy information: studies with parameter and three-way decision making based approaches. *Artificial Intelligence Review*, 56(Suppl 3), 3417–3469. **(SCIE, Impact Factor 13.9, Q1, Scopus)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. C. (2023). Social network trust relationship environment based advanced ovarian cancer treatment decision-making model: an approach based on linguistic information with experts' multiple confidence levels. *Expert Systems with Applications*, 229, 120407. **(SCIE, Impact Factor 8.5, Q1, Scopus)**
- Mandal, P., Samanta, S., & Pal, M. (2023). Large-scale alternative processing group decision-making under Pythagorean linguistic preference environment. *Soft Computing*, 27(14), 1–14. **(SCIE, Impact Factor 4.9, Q1, Scopus)**
- Muhiuddin, G., Samanta, S., Aljohani, A. F., & Alkhaibari, A. M. (2023). A study on graph centrality measures of different diseases due to DNA sequencing. *Mathematics*, 11(14), 3166. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Mahapatra, R., Samanta, S., & Pal, M. (2023). Detecting influential node in a network using neutrosophic graph and its application. *Soft Computing*, 27(14). **(SCIE, Impact Factor 4.9, Q1, Scopus)**
- Bera, J., Das, K. C., Samanta, S., & Lee, J. G. (2023). Connectivity status of intuitionistic fuzzy graph and its application to merging of banks. *Mathematics*, 11(8), 1949. **(SCIE, Impact Factor 2.3, Q1, Scopus)**
- Shelke, M. B., Lee, J. G., Samanta, S., Deshmukh, S. N., Bhalke, G., Mannade, R. B., & Sivaraman, A. K. (2023). An ensemble based approach for sentiment classification in Asian regional languages. *Computer Systems Science & Engineering*, 44(3), 2457–2468. **(SCIE, Impact Factor 3.1, Q1, Scopus)**
- Dhanalakshmi, R., Samanta, S., Sivaraman, A. K., Lee, J. G., Balasundaram, A., Tanaji, S. S., & Ravindran, P. (2023). Multi-attribute group decision-making based on hesitant bipolar-

valued fuzzy information and social network. *Computer Systems Science & Engineering*, 44(3), 1939–1950. **(SCIE, Impact Factor 3.1, Q1, Scopus)**

2022

- Das, R., Sahoo, L., Samanta, S., Simic, V., & Senapati, T. (2022). Identifying the shortest path of a semidirected graph and its application. *Mathematics*, 10(24), 4807. **(SCIE, Impact Factor 2.6, Q1, Scopus)**
- Pandey, S. D., Ranadive, A. S., Samanta, S., & Sarkar, B. (2022). Bipolar-valued fuzzy social network and centrality measures. *Discrete Dynamics in Nature and Society*, 2022, 9713575. **(SCIE, Impact Factor 1.9, Q2, Scopus)**
- Alanazi, A. M., Muhiuddin, G., Al-Balawi, D. A., & Samanta, S. (2022). Different DNA sequencing using DNA graphs: a study. *Applied Sciences*, 12(11), 5414. **(SCIE, Impact Factor 2.5, Q2, Scopus)**
- Sahoo, L., Sen, S., Tiwary, K., Samanta, S., & Senapati, T. (2022). Modified Floyd–Warshall's algorithm for maximum connectivity in wireless sensor networks under uncertainty. *Discrete Dynamics in Nature and Society*, 2022, 5973433. **(SCIE, Impact Factor 1.9, Q2, Scopus)**
- Sahoo, L., Sen, S., Tiwary, K., Samanta, S., & Senapati, T. (2022). Optimization of data distributed network system under uncertainty. *Discrete Dynamics in Nature and Society*, 2022, 7806083. **(SCIE, Impact Factor 1.9, Q2, Scopus)**
- Arunachalam, P., Janakiraman, N., Rashid, J., Kim, J., Samanta, S., Naseem, U., Sivaraman, A. K., & Balasundaram, A. (2022). Effective classification of synovial sarcoma cancer using structure features and support vectors. *Computers, Materials & Continua*, 72(2), 2521–2543. **(SCIE, Impact Factor 3.2, Q1, Scopus)**
- Akram, M., Ahmad, U., Shabbir, R., & Samanta, S. (2022). Threshold graphs under Pythagorean fuzzy information. *Journal of Multiple-Valued Logic & Soft Computing*, 38. **(SCIE, Impact Factor 1.1, Q3, Scopus)**
- Bhadoria, R. S., Chaudhari, N. S., & Samanta, S. (2022). Bunch graph based dimensionality reduction using auto-encoder for character recognition. *Multimedia Tools and Applications*, 81(22), 32093–32115. **(SCIE, Impact Factor 3.0, Q1, Scopus)**
- Karthik, S., Bhadoria, R. S., Sivaraman, A. K., & Samanta, S., *et al.* (2022). Prognostic Kalman Filter Based Bayesian Learning Model for Data Accuracy Prediction. *Computers, Materials & Continua*, 72(1), 243–259. **(SCIE, Impact Factor 3.2, Q1, Scopus)**
- Pandey, S. D., Ranadive, A. S., & Samanta, S. (2022). Bipolar-valued hesitant fuzzy graph and its application. *Social Network Analysis and Mining*, 12(1), 14. **(SCIE, Impact Factor 2.8, Q1, Scopus)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. (2022). Three-way decision model under a large-scale group decision-making environment with detecting and managing non-cooperative behaviors in consensus reaching process. *Artificial Intelligence Review*, 55(7), 5517–5542. **(SCIE, Impact Factor 10.7, Q1, Scopus)**
- Mahapatra, R., Samanta, S., & Pal, M. (2022). Edge colouring of neutrosophic graphs and its application in detection of phishing website. *Discrete Dynamics in Nature and Society*, 2022, 1149724. **(SCIE, Impact Factor 1.9, Q2, Scopus)**

2021

- Samanta, S., Dubey, V. K., & Das, K. (2021). Coopetition bunch graphs: competition and cooperation on COVID19 research. *Information Sciences*, 589, 1–33. **(SCIE, Impact Factor 6.8, Q1, Scopus)**
- Maity, A., Das, K., Samanta, S., Mondal, S., & Dubey, V. (2021). A study of cluster hypergraphs and its properties. *Social Network Analysis and Mining*, 11(1), 20. **(SCIE, Impact Factor 2.8, Q1, Scopus)**
- Hameed, S., Akram, M., Mustafa, N., & Samanta, S. (2021). Extension of threshold graphs under complex fuzzy environment. *International Journal of Applied and Computational Mathematics*, 7(5), 202. **(Scopus indexed)**
- Mandal, P., Samanta, S., & Pal, M. (2021). Multiplicative consistency analysis of linguistic preference relation with self-confidence level and self-doubting level and its application in a group decision making. *International Journal of Intelligent Systems*, 36(10), 5389–5418. **(SCIE, Impact Factor 8.9, Q1, Scopus)**
- Mandal, P., Samanta, S., & Pal, M. (2021). Large-scale group decision-making based on Pythagorean linguistic preference relations using experts clustering and consensus measure with non-cooperative behavior analysis of clusters. *Complex & Intelligent Systems*, 8(2), 819–833. **(SCIE, Impact Factor 5.8, Q1, Scopus)**
- Das, K., Samanta, S., & De, K. (2021). Fuzzy chordal graphs and its properties. *International Journal of Applied and Computational Mathematics*, 7(2), 36. **(Scopus indexed)**
- Samanta, S., Pal, M., Mahapatra, R., Das, K., & Bhadoria, R. S. (2021). A study on semi-directed graphs for social media networks. *International Journal of Computational Intelligence Systems*, 14(1), 1034–1041. **(SCIE, Impact Factor 3.2, Q1, Scopus)**
- Akram, M., Sattar, A., Karaaslan, F., & Samanta, S. (2021). Extension of competition graphs under complex fuzzy environment. *Complex & Intelligent Systems*, 7(1), 539–558. **(SCIE, Impact Factor 5.8, Q1, Scopus)**
- Samanta, S., Dubey, V. K., & Sarkar, B. (2021). Measure of influences in social networks. *Applied Soft Computing*, 99, 106858. **(SCIE, Impact Factor 6.6, Q1, Scopus)**
- Mahapatra, R., Samanta, S., & Pal, M. (2021). Generalized neutrosophic planar graphs and its application. *Journal of Applied Mathematics and Computing*, 65(1), 693–712. **(SCIE, Impact Factor 2.7, Q2, Scopus)**
- Das, K., Naseem, U., Samanta, S., Khan, S. K., & De, K. (2021). Fuzzy mixed graphs and its application to identification of COVID19 affected central regions in India. *Journal of Intelligent & Fuzzy Systems*, 40(1), 1051–1064. **(SCIE, Impact Factor 1.7, Q2, Scopus)**
- Mahapatra, R., Samanta, S., Pal, M., Lee, J. G., Khan, S. K., Naseem, U., & Bhadoria, R. S. (2021). Colouring of COVID-19 affected region based on fuzzy directed graphs. *Computers, Materials & Continua*, 68(1), 1219–1233. **(SCIE, Impact Factor 3.2, Q1, Scopus)**

2020

- Pramanik, T., Samanta, S., & Pal, M. (2020). Interval-valued fuzzy graphs. *International Journal of Fuzzy Logic and Intelligent Systems*, 20(4), 316–323. **(Scopus indexed)**
- Mahapatra, R., Samanta, S., Bhadoria, R. S., Pal, M., Allahviranloo, T., & Pandey, B. (2020). A graph networks based quality control model for packaged food smart traceability

& communication. *European Journal of Molecular & Clinical Medicine*, 7(6), 2830–2848. **(Scopus indexed)**

- Das, K., Samanta, S., De, K., Encarnacion, X., & Das, C. B. (2020). Ranking of educational institutions using fuzzy logic: a mathematical approach. *Afrika Matematika*, 31, 1295–1310. **(SCIE, Impact Factor 1.1, Q3, Scopus)**
- Samanta, S., & Sarkar, B. (2020). Isomorphism on generalized fuzzy graphs and image visualizations. *Soft Computing*, 24(19), 14401–14409. **(SCIE, Impact Factor 3.6, Q1, Scopus)**
- Mahapatra, R., Samanta, S., Pal, M., & Xin, Q. (2020). Link prediction in social networks by neutrosophic graph. *International Journal of Computational Intelligence Systems*, 13(1), 1699–1713. **(SCIE, Impact Factor 1.7, Q2, Scopus)**
- Samanta, S., Lee, J. G., Naseem, U., Khan, S. K., & Das, K. (2020). Concepts on colouring of cluster hypergraphs with application. *Mathematical Problems in Engineering*, 2020, 3705156. **(SCIE, Impact Factor 1.2, Q2, Scopus)**
- Das, K., Samanta, S., De, K., & Pal, M. (2020). Generalized neutrosophic competition graphs. *Neutrosophic Sets and Systems*, 31, 156–171. **(Scopus indexed)**
- Samanta, S., Muhiuddin, G., Alanazi, A. M., & Das, K. (2020). A mathematical approach on representation of competitions: competition cluster hypergraphs. *Mathematical Problems in Engineering*, 2020, 2517415. **(SCIE, Impact Factor 1.2, Q2, Scopus)**
- Akram, M., Bashir, A., & Samanta, S. (2020). Complex Pythagorean fuzzy planar graphs. *International Journal of Applied and Computational Mathematics*, 6(3), 58. **(Scopus indexed)**
- Mandal, P., Samanta, S., Pal, M., & Ranadive, A. S. (2020). Pythagorean linguistic preference relations and their applications to group decision making using group recommendations based on consistency matrices and feedback mechanism. *International Journal of Intelligent Systems*, 35(5), 826–849. **(SCIE, Impact Factor 8.7, Q1, Scopus)**
- Mahapatra, R., Samanta, S., & Pal, M. (2020). Applications of edge colouring of fuzzy graphs. *Informatica*, 31(2), 313–330. **(SCIE, Impact Factor 1.5, Q2, Scopus)**
- Das, K., Samanta, S., Khan, S. K., Naseem, U., & De, K. (2020). A study on discrete mathematics: sum distance in neutrosophic graphs with application. *Neutrosophic Sets and Systems*, 35(1), 13. **(Scopus indexed)**
- Kumar, P. R., John, S. J., & Samanta, S. (2020). On redundancy, separation and connectedness in multiset topological spaces. *AIMS Mathematics*, 5(3), 2484–2499. **(SCIE, Impact Factor 2.7, Q2, Scopus)**

2019

- Mahapatra, R., Samanta, S., Allahviranloo, T., & Pal, M. (2019). Radio fuzzy graphs and assignment of frequency in radio stations. *Computational and Applied Mathematics*, 38(3), 117. **(SCIE, Impact Factor 2.2, Q2, Scopus)**
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- Pal, M., Samanta, S., & Ghorai, G. (2020). Fuzzy Competition Graphs.

Chapters in *Handbook of Research on Advanced Applications of Graph Theory in Modern Society* (2019)

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Chapters in *Graph Theoretic Approaches for Analyzing Large-Scale Social Networks*

- Samanta, S., & Pal, M. (2018). Link Prediction in Social Networks.

Chapters in *Advanced Mathematical Techniques in Computational and Intelligent Systems*

- Pandey, A., Singh, C., & Samanta, S. (2023). Application of Graph Theory in Search of Websites and Web Pages.

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- Mandal, P., Samanta, S., Pal, M., & Kumar, J. R. R. (2025). Linguistic Z Numbers-Based FMEA of the Delivery of Stereotactic Body Radiation Therapy for Lung Cancer Treatment.
- Mandal, P., Samanta, S., Pal, M., & Kumar, J. R. R. (2025). Radiation Therapy for Lung Cancer.

Chapters in *Optimization Techniques for Sustainable Environment Under Uncertainty*

- Bhowmik, A., Pal, M., Sahoo, L., & Samanta, S. (2025). A Study on Fuzzy Set and Its Extensions.

Patents

- Mathematical Equation Analysis Device (Processed)
- IoT-based Financial Computing Device (Patent Granted)
- AI-enabled Wheelchair (Published)

Skills

- NO CODE AI, Data Sciences
- Graph Theory, Fuzzy Set Theory, Social Network Analysis

- Optimization, Numerical Methods, Linear Algebra
- MATLAB, Python (Basic), Decision-Making Models