

Dr. Mijanur Rahaman Seikh, Ph.D.

Assistant Professor(Stage-II)

Department of Mathematics

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Employment History

- 2018 – present **Assistant Professor(Stage-II)** Department of Mathematics, Kazi Nazrul University, Asansol-713 340, India since 19th September, 2018.
- 2014 – 2018 **Assistant Professor(Stage-I)** Department of Mathematics, Kazi Nazrul University, Asansol-713 340, India from 19th September, 2014 to 18th September, 2018.

Education

- M.Sc. **Department of Mathematics, Jadavpur University, Kolkata-700 032, India.**
- Ph.D. **Department of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, Midnapore-721 102, India.**

Specialization and Research Areas

- Specialization **Operations Research.**
- Research Areas **Fuzzy Sets, Game Theory, Multi-criteria Decision Making, Inventory Control, Supply Chain Management.**

Course/Subject Taught

- Operations Research, Numerical Analysis, Ordinary Differential Equations, Partial Differential Equations.**




Membership of Learned Society

- 2016 – present **Calcutta Mathematical Society(CMS), Life Member**
- 2017 – present **Operational Research Society of India(ORSI), Life Member**
- Soft Computing Research Society(SCRS), Life Member**

Books/Monographs Published

- 2019 **Integral Equations and Calculus of Variations**, Narosa Publishing House, (2019), ISBN: 978-81-8487-655-0
- 2018 **A Textbook of Complex Analysis**, Universities Press, (2018), ISBN: 978-93-86235-65-7.
- 2016 **A Study on Game Theory in Fuzzy Environment**, Lap Lambert Academic Publishing, Germany, (2016), ISBN: 978-3-659-91269-6.

Seminar/Conference/ Workshop organized

- International  Acted as Joint Organizing Secretary to organize two-day international e-conference on 'Emerging Issues in Supply Chain Management: Interruption, Opportunities and Challenges' during June 06-07, 2020.
- National  Acted as Convener to organize National Conference on 'Emerging Trends in Mathematics and its Applications' during March 20-21, 2018.
- National  Acted as Convener to organize two days work shop on 'C programming' during August 24-25, 2017






Ph.D. Thesis Guidance

Name of the Scholar	Title of the Thesis	Status	Year
Shuvasree Karmakar	A Study on Non-cooperative Games under Inexact Environment	Ongoing	2021 (Expected)
Subhendu Ruidas	Development of Some Production Inventory Models Considering Various Real-Life Issues	Ongoing	2022 (Expected)
Shibaji Dutta	Models and Methods for Solving Non-Cooperative Games under Imprecise Environment	Ongoing	2023 (Expected)

R & D Projects

Project title	Worked as	Funding agency	Amount(Rs.)	Duration
Effects of coordination, collaboration and integration among the members of supply chain	Co-PI	DST and BT Govt. of W.B	716250	Three years (2019-2022)

Research Publications

- 2021  **Seikh, M. R.**, Karmakar, S., Castillo, O., A novel defuzzification approach of Type-2 fuzzy variable to solving matrix games: An application to plastic ban problem, *Iranian Journal of Fuzzy Systems*, 2021. (**SCIE, Impact Factor: 2.276**), [DOI Link](#)
-  Ruidas, S., **Seikh, M. R.**, Nayak, P. K., A production-repairing inventory model considering demand and the proportion of defective items as rough intervals, *Operational Research*, 2021. (**Springer, SCIE, Impact Factor: 1.759**), [DOI Link](#)
-  Karmakar, S., **Seikh, M. R.**, Castillo, O., Type-2 intuitionistic fuzzy matrix games based on a new distance measure: Application to biogas-plant implementation problem, *Applied Soft Computing*, 106, 2021. (**Elsevier, SCI, Impact factor: 5.472**), [DOI Link](#)
-  **Seikh, M. R.**, Karmakar, S., Nayak, P. K., Matrix games with dense fuzzy payoffs, *International Journal of Intelligent Systems*, 36, 2021, 1770-1799. (**Wiley, SCIE, Impact Factor: 10.312**), [DOI Link](#)
-  Ruidas, S., **Seikh, M. R.**, Nayak, P. K., A Production Inventory Model with Interval-Valued Carbon Emission Parameters under Price-Sensitive Demand, *Computers & Industrial Engineering*, 154, 2021. (**Elsevier, SCI, Impact Factor: 4.135**), [DOI Link](#)

Research Publications (continued)

- 2020
- **Seikh, M. R.**, Dutta, S., Solution of Interval-valued Matrix Games Using Intuitionistic Fuzzy Optimization Technique: An Effective Approach, *International Journal of Mathematics in Operational Research*, 2021. (**Inderscience, SCOPUS**), [DOI Link](#)
 - **Seikh, M. R.**, Karmakar, S., Xia, M., Solving matrix games with hesitant fuzzy pay-offs, *Iranian Journal of Fuzzy Systems*, 17(4), 2020, 25-40. (**SCIE, Impact Factor: 2.276**), [DOI Link](#)
 - Ghosh, S.K, **Seikh, M. R.**, Chakraborty, M. Analyzing a stochastic dual-channel supply chain under consumers' low carbon preferences and cap-and-trade regulation, *Computers & Industrial Engineering*, 149, 2020. (**Elsevier, SCI, Impact Factor: 4.135**), [DOI Link](#)
 - **Seikh, M. R.**, Mandal, U., Intuitionistic fuzzy Dombi aggregation operators and their application to multiple attribute decision-making, *Granular Computing*, 2020. **Springer**, [DOI Link](#)
 - Ghosh, S. K, **Seikh, M. R.**, Chakraborty M., Pricing Strategy and Channel Co-ordination in a Two-Echelon Supply Chain Under Stochastic Demand, *International Journal of Applied Computational Mathematics*, 6:28, 2020 **Springer, SCOPUS**, [DOI Link](#)
 - Ruidas, S., **Seikh, M. R.**, Nayak, P. K., An EPQ model with stock and selling price dependent demand and variable production rate in interval environment, *Int J Syst Assur Eng Manag*, 11(2), 2020, 385-399. **Springer, SCOPUS**, [DOI Link](#)
- 2019
- Ruidas, S., **Seikh, M. R.**, Nayak, P. K., Sarkar, B., A Single Period Production Inventory Model in Interval Environment with Price Revision, *International Journal of Applied Computational Mathematics*, 5:7 2019
- 2018
- Ruidas, S, **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Interval valued EOQ model with two types of defective items, *Journal of Statistics & Management Systems*, 21(6), 2018, 1059-1082.
- 2017
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Intuitionistic fuzzy programming technique for solving interval valued matrix games, *International Journal of Pure and Applied Mathematics*, 113(6), 2017, 334-342.
 - Ruidas, S, **Seikh, M. R.**, Nayak, P. K., Pal, M. M., An interval valued EPQ model in imperfect production system with rework of regular production, shortages and sales return via particle swarm optimization, *International Journal of Pure and Applied Mathematics*, 113(6), 2017, 375-384.
- 2016
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Aspiration level approach to solve matrix games with I-fuzzy goals and I-fuzzy Pay-offs, *Pacific Science Review A: Natural science and Engineering*, 18, 2016, 5-13.
- 2015
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., An Alternative Approach to Solve Bi-matrix Games with Intuitionistic Fuzzy Goals, *International Journal of Fuzzy Computation and Modeling*, 1(4), 2015, 362-381.
 - **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Solving Bi-matrix Games with Pay-offs of Triangular Intuitionistic Fuzzy Numbers, *European Journal of Pure and Applied Mathematics*, 8(2), 2015, 153-171.

Research Publications (continued)

- 2015
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Matrix Games with Intuitionistic Fuzzy Pay-offs, *Journal of Information & Optimization Sciences*, 36(1-2), 2015, 159-181.
 - **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Application of intuitionistic fuzzy mathematical programming with exponential membership and quadratic non-membership functions in matrix games, *Annals of Fuzzy Mathematics and Informatics*, 9(2), 2015, 183-195
 - **Seikh, M. R.**, Nayak, P. K., Pal, M. M., An alternative approach for solving fuzzy matrix games, *International Journal of Mathematics and Soft Computing*, 5(1), 2015, 79-92.
- 2014
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Solving interval valued matrix games by using Fuzzy programming approach, *Wesleyan Journal of Research*, 7(1), 2014, 190-197.
- 2013
- **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Matrix games in intuitionistic fuzzy environment, *International Journal of Mathematics in Operational Research*, 5(6), 2013, 693-708.
 - **Seikh, M. R.**, Pal, M. M., Nayak, P. K., Non-normal triangular fuzzy numbers, its operations, inequalities and optimization techniques, *Journal of Fuzzy Mathematics*, 21(1), 2013, 113-128.
 - **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Notes on triangular intuitionistic fuzzy numbers, *International Journal of Mathematics in Operational Research*, 5(4), 2013, 446-465.
- 2012
- **Seikh, M. R.**, Pal, M. M., Nayak, P. K., Application of triangular intuitionistic fuzzy numbers in bi-matrix games, *International Journal of Pure and Applied Mathematics*, 79(2), 2012, 235-247.
 - **Seikh, M. R.**, Nayak, P. K., Pal, M. M., Generalized triangular fuzzy numbers in Intuitionistic fuzzy environment, *International Journal of Engineering Research and Development*, 5(1), 2012, 08-13.

Workshop/ Faculty Development Programme attended

- 2020
- One week faculty development programme on 'Soft Computing Techniques and their Applications' organized by the Department of Mathematics, Jaypee Institute of Information Technology, Noida during July 13-18, 2020.
 - Faculty development programme on 'Multi-objective Optimization' organized by the Soft Computing Research Society, New Delhi during June 23-27, 2020.
- 2018
- National workshop on 'Soft Computing and its Applications in Real Life Problems' organized by the Department of Mathematics, National Institute of Technology, Agartala, Tripura during 9th -13th April, 2018.
- 2017
- Workshop on 'MATLAB' organized by the Calcutta Mathematical Society, Kolkata, held on 12th April, 2017.
- 2014
- National workshop on Optimization and Fuzzy Mathematics organized by Department of Applied Mathematics, Vidyasagar University, Midnapore, during 9th-13th September 2014.




Seminar/Conference Attended

- 2021
- Presented a paper in international conference on "Fuzzy Mathematical Analysis and Advances in Computational Mathematics(FMAACM-2021)" organized by Pondicherry University, Pondicherry, during February 25-26, 2021.





Seminar/Conference Attended (continued)

- 2021 Participated in international conference on “Sustainable Development: Modelling and Optimization(ICSDMO)” organized by Operational Research Society of India, Meerut, India, during February 16-17, 2021.
- 2021 Presented a paper in international conference on “Emerging Trends in Mathematical Sciences and Computing” organized by Institute of Engineering & Management, Kolkata, West Bengal, during February 05-07, 2021.
- 2020 Participated in two-day national E-seminar on “Fuzzy Set Theory and its Applications(FSTA-2020)” organized by Institute of Science, GITAM, Visakhapatnam, Andhra Pradesh, during December 22-23, 2020.
- 2020 Participated in international webinar conference on “Uncertainty Theory and Decision Making” organized by Haldia Institute of Technology, Haldia, West Bengal, during November 28-30, 2020.
- 2017 Presented a paper in National Conference on “Futuristic Trends in Applied and Computational Mathematics” organized by the Department of Applied Mathematics with Oceanology and computer programming, Vidyasagar University, Midnapore, during 29-30 March, 2017.
- 2017 Presented a paper in National Conference on “Mathematical Techniques and their Applications” organized by SRM University, Kattankulathur, Tamil Nadu, during Jan 27-28, 2017.
- 2016 Presented a paper in International Conference on “Mathematics & Computer Science” organized by International Multidisciplinary Research Foundation (IMRF), Coimbatore, Tamil Nadu, during Dec 15-17, 2016.
- 2015 Presented a paper 2nd International Conference on “Recent Trends in Mathematics and its Applications” organized by the Department of Applied Mathematics with Oceanology and computer programming, Vidyasagar University, Midnapore, during 18-19th March, 2015.
- 2014 Presented a paper in 5 days National Workshop on “Optimization and Fuzzy Mathematics” organized by the Department of Applied Mathematics with Oceanology and computer programming, Vidyasagar University, Midnapore, during 9-13th September, 2014.
- 2014 Presented a paper in National Seminar on “Mathematics to Commemorate Sesquicentenary of Sir Asutosh Mukherjee” organized by the Department of Mathematics, Sidho-Kanho-Birsha University, Purulia, held on 25th April, 2014.
- 2014 Presented a paper in National Seminar on “Recent Aspects in Mathematics and their Applications” organized by the Department of Applied Mathematics with Oceanology and computer programming, Vidyasagar University, Midnapore, during 25-26th February, 2014.
- 2013 Presented a paper in 2nd International Conference on “Rough sets, Fuzzy Sets and Soft Computing” organized by the Department of Mathematics, Tripura University, Tripura, during 17-19th January, 2013.
- 2012 Presented a paper in UGC sponsored Seminar on “Emerging Trends in Mathematics” organized by the Department of Applied Mathematics with Oceanology and computer programming, Vidyasagar University, Midnapore, during 19-20th December, 2012.


Skills

- Languages  Reading, writing and speaking competencies for English, Hindi, Bengali.
- Coding  FORTRAN, C, MATLAB, MATHEMATICA, \LaTeX , ...
- Misc.  Academic research, teaching, training, consultation,

Awards and Achievements





- 2006  **National Merit Scholarship**, For University rank holders in UG level, Govt. of India.
- 2005  **Sachidananda Gold Medal**, For outstanding performance in B.Sc.(H) Examination.
- 2008  **CSIR-NET**, Govt. of India.
-  **GATE**, All India Rank 44, Percentile 98.33.

Certification









- 2021  **Best paper award**. Awarded by Institute of Engineering and Management(IEM), Kolkata, India.

Miscellaneous Experience

Administrative Experience

- 2020  Chairperson of Under Graduate Board of Studies (UGBOS) in Statistics
- 2018  Coordinator, Department of Geography, Kazi Nazrul University.
- 2016  Coordinator, Department of Mathematics, Kazi Nazrul University.
- 2015  Secretary, College Council (Additional Charge), Kazi Nazrul University.

Reviewer of the Academic Journals

-  International Journal of Intelligent Systems (9)
-  Journal of Intelligent & Fuzzy Systems (5)
-  IEEE Transactions on Neural Networks and Learning Systems (3)
-  Iranian Journal of Fuzzy Systems (3)
-  Artificial Intelligence Review (1)
-  Fuzzy Information and Engineering (1)
-  International Journal of Fuzzy Systems and Applications (1)
-  Operational Research (1)