

SUJEET KUMAR SINGH

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Google Scholar Link: https://scholar.google.com/citations?user=8Wr_hRcAAAAJ&hl=en

RESEARCH INTEREST

Polynomial optimization, Multi-objective optimization, Supply chain optimization, Vehicle routing problem, Transportation problem, Fuzzy optimization.

WORK EXPERIENCE

Indian Statistical Institute (Hyderabad Campus), India

Assistant Professor November 2022-Present.

Indian Institute of Management Jammu, India

Assistant Professor June 2020 - November 2022

National University of Singapore, The Logistics Institute-Asia Pacific

(Postdoc) Research Fellow June 2016- June 2019 (3 years)

- P.I- Prof. Mark Goh
- Research Field: Multi-objective and logistics optimization



EDUCATION

Indian Institute of Technology Roorkee, Roorkee, India

Ph.D in Mathematics (Operations Research) July 2011- April 2016

- Thesis: Development of algorithms for some optimization problems in intuitionistic fuzzy environment.
- Supervisor: Prof. Shiv Prasad Yadav.

Banaras Hindu University, Varanasi, India

M.A in Mathematics 2009-2011

- Thesis: Multi-objective programming problem with generalized convexity. CGPA
- Supervisor: Dr. Shashi kant Mishra 8.32/10

Vinoba Bhave University, Hazaribagh, India

B.A Mathematics Honours 2005-2008

- Graduated with Distinction 82.25%
- Stood top in Mathematics honours examination of the university.

FELLOWSHIPS

- CSIR-NET-JRF and GATE qualified in Mathematics, 2011.
- Offer for faculty position from UIST, Macedonia, 2016, not availed.
- Proposed postdoc position from NTU Singapore and Mc Master University Canada, 2016, not availed.
- *Offer for postdoc position from NUS Singapore, 2016, availed.*
- Postdoc position from University of Sydney and NTU Singapore, 2019, not availed.
- *Offer for Senior postdoc position from NUS Singapore 2020, could not avail due to COVID 19 lockdown.*

REVIEWER

EJOR, Annals of Operations Research, CAIE, IEEE Transactions on Fuzzy Systems , International Journal of Fuzzy Systems (Springer), Journal of Intelligent and Fuzzy Systems, IEEE Transactions on Systems, Man and Cybernetics: Systems , International Journal of Machine Learning and Cybernetics, Information Sciences, IJOR, IJSAEM, IJFSA, etc.

MEMBERSHIP

- International Society of Global Optimization (<http://www.globaloptimization.org/>)
- Editorial board member, Modern Management Forum, Nov 2017-Nov 2018.
- Editorial board member, American Journal of Operations Management and Information Systems.

PUBLICATIONS

Mathematical Optimization

- Homogeneous scalarization for a class of multi-objective polynomial optimization problems (*to be submitted soon-SIOPT*).
- Modified goal programming approach for solving multi-objective environmental management problem, *Annals of Operations Research*, 2023, *Accepted* (**IF= 4.854, SCI, ABDC-A, Q1**)
- Multi-objective optimization problems with s-norm fuzzy relation constraints (Applied Mathematics and Computation-*communicated*).
- Unbiased scalarization technique for multi-objective fractional feed formulation problem (*to be submitted soon*).

Supply Chain Optimization

- Sustainable collection systems and incentivisation mechanism for single-use flexible packaging-a closed loop supply chain (*In preparation*).
- Non-homogeneous capacitated vehicle routing problem with time window and multiple delivery trips (*In preparation*).
- Rizwan Manzoor, BS Sahay, **Sujeet Kumar Singh**, Blockchain technology in supply chain management: an organizational theoretic overview and research agenda. *Annals of Operations Research*, 2022 (**IF= 4.854, SCI, ABDC-A, Q1**). <https://doi.org/10.1007/s10479-022-05069-5>.
- Shuya Zhong, **Sujeet Kumar Singh** and Mark Goh, Efficient supplier selection: one way to better inventory control, In book: Optimization and Inventory Management, 2019, DOI: 10.1007/978-981-13-9698-4_15 (Book Chapter).
- **Sujeet Kumar Singh** and Mark Goh, "Multi-objective mixed integer programming and an application in a pharmaceutical supply chain", *International Journal of Production Research*, 57(4), 1214-1237, 2019 (**IF= 8.568, SCI, ABDC-A, Q1**).

Fuzzy Optimization and Transportation Problem

- Awadh Pratap Singh, Shiv Prasad Yadav and **Sujeet Kumar Singh**, A multi-objective optimization approach for DEA models in a fuzzy environment, *Soft Computing*, 2022 <https://doi.org/10.1007/s00500-021-06627-y> (**SCI, IF-3.693, Q2**).

- **Sujeet Kumar Singh** and Shiv Prasad Yadav, Scalarizing fuzzy multi-objective linear fractional programming with application, *Computational and Applied Mathematics*, 2022, Accepted (SCI, IF=2.239, Q2).
- Vishnu Singh, Shiv Prasad Yadav and **Sujeet Kumar Singh**, Duality theory in Atanassov's intuitionistic fuzzy mathematical programming problems: Optimistic, pessimistic and mixed approaches, *Annals of Operations Research*, Springer, 296(1), 667-706, 2021 (IF= 4.854, SCI, ABDC-A, Q1).
- **Sujeet Kumar Singh** and Deepika Rani, A branching algorithm to solve binary problem in uncertain environment: An application in machine allocation problem, *OPSEARCH*, 56, 1007–1023, 2019 (Scopus, ABDC-C, Q2).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Intuitionistic fuzzy multi-objective linear programming problem with various membership functions”, *Annals of Operations Research*, Springer, 269(1), 693-707, 2018 (IF= 4.854, SCI, ABDC-A, Q1).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “A new approach for solving intuitionistic fuzzy transportation problem of type-2”, *Annals of Operations Research*, Springer, 243(1-2), 349-363, 2016 (IF= 4.854, SCI, ABDC-A, Q1).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Fuzzy programming approach for solving intuitionistic fuzzy linear fractional programming problem”, *International Journal of Fuzzy System*, Springer, 18(2), 263-269, 2016 (IF=4.673, SCI, Q2).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Modeling and optimization of multi objective non-linear programming problem in intuitionistic fuzzy environment”, *Applied Mathematical Modelling*, 39, 4617–4629, 2015 (IF=5.129, SCI, Q1).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Intuitionistic fuzzy non-linear programming problem: Modeling and optimization in manufacturing systems”, *Journal of Intelligent and Fuzzy Systems*, 28, 1421–1433, 2015 (IF=1.851, SCI, Q2).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “A novel approach for solving fully intuitionistic fuzzy transportation problem”, *International Journal of Operational Research*, Inderscience, 26(4), 460-472, 2016 (Scopus, ABDC-C, Q3).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Intuitionistic fuzzy transportation problem with various kinds of uncertainties in parameters and variables”, *International Journal of System Assurance Engineering and Management*, Springer, 7(3), 262-272, 2016 (Scopus, Q3).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Efficient approach for solving type-1 intuitionistic fuzzy transportation problem”, *International Journal of System Assurance Engineering and Management*, Springer, 6(3), 259-267, 2015 (Scopus, Q3).
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Multiobjective non-linear programming problem in intuitionistic fuzzy environment”, *Proceedings of the International Conference on Mathematics & Engineering Sciences-2014 in Mathematical Sciences International Research Journal*, 3(1), 147-151, 2014.
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, “Fuzzy relational programming problem with intuitionistic fuzzy coefficients”, *Proceedings of the International Conference on Mathematical Sciences*, Elsevier, 430-434, 2014.

PROJECTS COMPLETED

- Distribution operations optimization for a logistics company of Singapore.

- Re-shaping the FMCG chain for possible profit enhancement for a global logistics company in Singapore.
- Development of an optimization model for plastic recycling supply chain for an MNC.

RESEARCH PROPOSAL WRITING

- A proposal for a plastic recycling supply chain based in Indonesia.

CONFERENCE ATTENDED AND PRESENTED PAPERS

- **Sujeet Kumar Singh**, Unbiased scalarization technique for multi-objective fractional feed formulation probl, *International Symposium on Applied Optimization and Game Theoretic Models for Decision Making*, Indian Statistical Institute Delhi, Delhi, India, Feb 01-03, 2023.
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, Algorithmic Approach for solving Balanced IFTP, *International Conference on Optimization Modeling and Applications*, Dept. of Operational Research University of Delhi, Delhi, India, Nov. 29- Dec. 01, 2012.
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, A New Approach for solving Balanced IFTP of Type-2, *International Symposium on Applied Optimization and Game Theoretic Models*, Indian Statistical Institute Delhi, Delhi, India, Jan. 9-11, 2013.
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, Multiobjective Non Linear Programming Problem in Intuitionistic Fuzzy Environment, *International Conference on Mathematics & Engineering Sciences-2014*. Chitkara University, Himachal Pradesh, India, March 20-22, 2014.
- **Sujeet Kumar Singh** and Shiv Prasad Yadav, Fuzzy Relational Programming Problem with Intuitionistic Fuzzy Coefficients, *International Conference on Mathematical Sciences*, Sathyabama University, Chennai, India, July 17-19, 2014.

WORKSHOPS

- **Advanced Workshop and Tutorial on Operations Research**, IIM Indore, India, Aug. 22-25, 2012.
- **Scientific Computing: Theory and Practices**, Gurukula Kangri University, Haridwar, India, Oct. 8-13, 2012.

INVITED TALK

- Research talk on Multi-Objective Polynomial Optimization at Dept. of Mathematics, IIT Madras, March 14, 2023.
- Guest lecture on Statistical Applications in Quality Management at VIT Vellore, March 09, 2023.
- Fuzzy Logic, Optimization and Soft Computing in Context of Artificial Intelligence, February 12-18, 2022, Chaudhary Charan Singh University, India.
- 11th Annual International Conference on Industrial Engineering and Operations Management, March 07-11, 2021, Singapore.
- Advancement of Mathematics and its Emerging Areas, July 23-24, 2021, Teerthanker Mahaveer University, India.

TEACHING

At Indian Statistical Institute as an Assistant Professor

- *OR-II(Operations Research), MS(QMS), Postgraduate Course*

At IIM Jammu as an Assistant Professor

- Quantitative Methods 1(Business Statistics), PG Course, Teaching Feedback-(4.37, 4.49)/5
- Quantitative Methods 2 (Optimization), PG Course, Teaching Feedback-(4.01, 3.96)/5
- Business Research Methods, PG Course, Teaching Feedback-(4.09, 4.23)/5
- Research Methodology II (Quantitative) -Doctoral Course
- Advances in Operations Management- Doctoral Course
- Quantitative Techniques for Managers-EMBA, Teaching Feedback-4.67/5

At IIT Roorkee during my Ph.D.

- IMA-12 (Operations Research), B.Tech, Undergraduate Course.
- MA-102 (Mathematics), B.Tech, Undergraduate Course.
- MA-501E (Optimization Technique), M.Tech, Postgraduate Course.
- MA-002 (Mathematical Methods), B.Tech, Undergraduate Course.

ADMINISTRATIVE ACTIVITIES

- Chairperson (Research), IIM Jammu, Aug 2020-Nov 2022
- Elected as a Senator in Student Affairs Council, IIT Roorkee, Session 2013-14.

OTHER ACTIVITIES

- Conducted 17 Editors' Research Seminars by Editors' of top-class management journals at IIM Jammu.
- Conducted a 3 weeks long Management Development Program in General Management for Executives of SJVN Limited as program Director, Aug 09-27, 2021 at IIM Jammu.

COMPUTATIONAL SKILLS

- MATLAB, LATEX, MS OFFICE, LINGO, R, etc.
- Attended a training course on *AnyLogistix*, Supply Chain Analytics Software, Feb 18-20, 2019, Singapore.

PERSONAL INFORMATION

- Name: Dr. Sujeet Kumar Singh, Date of Birth: May 05, 1987
- Marital Status: Married with two children, Religion: Hindu, Sex: Male
- Citizenship: Indian, Language: English, Hindi

REFERENCES

Dr. Shiv Prasad Yadav
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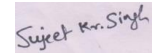
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I do hereby confirm that the information furnished above is true to the best of my knowledge and belief.



(Sujeet Kumar Singh)