SHIVANI SINGH

Curriculum Vitae

DST-CIMS, Institute Of science
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Education

2017–August 18,2022	**PhD (Mathematics)**, DST-Center for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi, India. **Topic of Research:** Fuzzy Rough Sets Assisted Mathematical Models for Feature Selection and Missing Data Imputation. **Supervisor:** Prof. Tanmoy Som, Department of Mathematical Sciences, IIT(BHU), Varanasi, India **Thesis Defended:** August 18, 2022
2013–2015:	**Master of Science (Mathematics)**, (1st division, PPN PG College, CSJM University, Kanpur, India.
2010–2013 :	**Bachelor of Science (Mathematics, Physics & Chemistry)**, (1st division), PPN PG College, CSJM University, Kanpur, India.

Publications

Journal Articles

2021 S Shreevastava, **Singh, Shivani**, AK Tiwari, and T Som. Different classes ratio and laplace summation operator based intuitionistic fuzzy rough attribute selection. *Iranian Journal of Fuzzy Systems*, volume 18, pages 67–82. University of Sistan and Baluchestan, 2021.

2020 **Singh, Shivani**, Shivam Shreevastava, Tanmoy Som, and Gaurav Somani. A fuzzy similarity-based rough set approach for attribute selection in set-valued information systems. *Soft Computing*, volume 24, pages 4675–4691. Springer, 2020.

2019 **Singh, Shivani**, Shivam Shreevastava, Tanmoy Som, and Pankhuri Jain. Intuitionistic fuzzy quantifier and its application in feature selection. *International Journal of Fuzzy Systems*, volume 21, pages 441–453. Springer, 2019.

In Conference Proceedings

2019 **Singh, Shivani**, Shivam Shreevastava, and Tanmoy Som. Attribute reduction of incomplete information systems: An intuitionistic fuzzy rough set approach. In *International Conference on Information Technology and Applied Mathematics*, pages 628–643. Springer, 2019.

Book Chapters

2021 **Singh, Shivani** and Tanmoy Som. Intuitionistic fuzzy rough sets: Theory to practice. *Mathematics in Computational Science and Engineering*, pages 52–66. Scrivener Publishing, 2021.

2020 Tanmoy Som, Shivam Shreevastava, Anoop Kumar Tiwari, and **Singh, Shivani**. Fuzzy rough set theory-based feature selection: A review. *Mathematical Methods in Interdisciplinary Sciences*, pages 145–166. Wiley Online Library, 2020.

Communicated Journal Article

2021 **Singh, Shivani**, Missing Value Imputation using Intuitionistic Fuzzy Rough Set Approach.

Fellowships & Awards

2020 –2022 **CSIR Junior & Senior Research Fellowship** of Council of Scientific and Industrial Research, Government of India, as a PhD fellow at Banaras Hindu University.

2017 Awarded **Graduate Apptitude Test in Engineering(GATE)** by National Co-ordination Board-GATE, DoHE, MHRD,Government of India.

Membership of Academic Bodies

2020–present **European Society of Fuzzy Logic and Technology (EUFSLAT)**, Member ID 1255.

2019–present **European Mathematical Society (EMS)**, Member ID 28605.

Experience

Feb 2022–present **Teaching at 'Academy of Mathematical Education', New Delhi, India**, Specialization- Abstract Algebra.

2017–2022 **Research at 'Banaras Hindu University', Varanasi, India**, Specialization- Fuzzy Rough Sets, Data Mining.

Project Work

2022 Completed project on the topic **Intuitionistic fuzzy c-means and entropy based feature selection.**

2018 Completed project on the topic **Machine learning & Deep learning for computer vision.**

Position of Responsibility

2019 Recipient of **Certificate of Appreciation** for contribution in organizing an *'International Workshop: CIMPA School on Finsler Geometry and Applications'* during Dec 05-15, 2019 held at **DST-CIMS, Banaras Hindu University, Varanasi, India.**

2017 Contribution in organizing a ***'Short term course on Fixed Point Theory and Dynamical System'***, during Nov 20-23, 2017 at **Department of Mathematical Sciences, IIT(BHU), Varanasi, India**.

Presented research paper in National/International Conferences

2022 ***International e-conference on Fuzzy Sets & Fuzzy Logic- Generalizations and Applications*** on the topic *"Feature Selection in Set-valued Information System using Fuzzy Tolerance-based Rough Set Approach"* organized by Fuzzy and Rough Sets Association, Agartala, Tripura, India during Sept. 06-08, 2022.

2022 ***International Conference on Fuzzy Set Theory and Applications (FSTA)*** on the topic *"Intuitionistic Fuzzy Rough Sets Assisted Missing Data Imputation"* organized by University of Ostrava, Bratislava during Jan. 30-Feb 04, 2022.

2021 ***International conference on (FMAACM)*** on the topic *"Laplace Distribution based Intuitionistic Fuzzy Rough Set Attribute Selection"* hosted online by Pondicherry University, India during Feb. 25-26, 2021.

2019 ***International conference on New Vistas in Pure & Applied Mathematics and Statistics (ICNVPAMS)*** on the topic *"Missing Data Imputation using Intuitionistic Fuzzy Rough Set Approach"* organized by University of Rajasthan, Jaipur, Rajasthan, India during Nov. 24-26, 2019.

2019 ***International Conference on Information Technology and Applied Mathematics(ICITAM)*** on the topic *"Incomplete Information Systems: An Intuitionistic Fuzzy Rough set Approach"* organized by Haldia Institute of Technology, Haldia, West Bengal, India during March 07 -09, 2019.

2018 **International Conference of International Academy of Physical Sciences (CONIAPS XXIII)** on the topic *"DC's ratio based Intuitionistic fuzzy rough attribute selection"* organized by Nepal Academy of Science and Techonology (NAST), Kathmandu, Nepal during Nov. 16-18, 2018.

2018 **International Conference on Frontiers in Industrial and Applied Mathematics (FIAM)** on the topic *"A Tolerance based Fuzzy Rough Set Approach for Attribute Selection in Set-Valued Information System"* organized by Dept. of mathematics, NIT Hamirpur, India during May 01-02, 2018.

2018 **One-Day National Conference on Recent Advances in Mathematical Sciences** on the topic *"Feature Selection in an Information System by Fuzzy Rough Set Approach"* organized by DST-CIMS, BHU, Varanasi, India held on April 22, 2018.

Computer skills

Operating Systems	Windows, Linux
Programming Languages	Python, MATLAB
Database Softwares	WEKA, KEEL

Personal Data

Date of Birth	August 30, 1994
Gender	Female
Nationality	Indian
Marital Status	Single
Languages	Hindi, English

Referees

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