

Dr. Anand Pratap Singh

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Indian Institute of Information Technology, Surat, 395007.
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Academic Positions:

July 2022 - Till date (Assistant Professor Grade-II)
Department of Mathematics
Indian Institute of Information Technology, Surat, Gujrat 395007, India.

August 2021 - July 2022 (Assistant Professor Grade-I)
Department of Mathematics
Vellore Institute of Technology, Vellore, Tamil Nadu 632014, India.

August 2018- July 2021 (Postdoctoral Researcher)
Institute for Research and Applications of Fuzzy Modeling,
University of Ostrava, Ostrava, Czech Republic.
Mentor: Prof. Irina Perfilieva.

PhD Details:

Mar 2013-Mar 2018: Indian Institute of Technology (ISM), Dhanbad
Title of PhD thesis: On the study of lattice-valued F -transforms.
Advisor: Prof. S. P. Tiwari

Research Interests

Fuzzy Sets and Systems, Fuzzy Transforms, Category Theory.

Education:

Degree	Board/University	Year	Specialization	% of Marks
M.Sc.	MNNIT Allahabad, U.P.	2012	Mathematics & Scientific Computing	8.8 CPI
B.Sc.	University of Allahabad, U.P.	2010	Mathematics, Physics, Chemistry	65.94 %
Intermediate (10+2)	U.P. Board, Allahabad	2007	Maths, Physics, Chemistry, Hindi, English	71.6 %
High School (10)	U.P. Board, Allahabad	2005	Hindi, English, Science Maths, Social Sc., Sanskrit	72.8 %

Teaching Experience

Teaching Assistant at IIT (ISM) Dhanbad (July 2013-April 2015) for following M.Sc. courses

- Numerical Analysis Lab
- C Programming.

Fall 2021-22

- Research Methodology.
- Advanced Statistical Methods (using R).

Winter Semester

- Differential Equations and Transforms.
- Statistical Applications (using SPSS/Excel).

Fall 2022-23

- Probability and Statistical Analysis.

Academic Achievements

1. International travel support from CSIR-HRDG, New Delhi to present a paper in International Conference IEEE-SSCI, 17, during Nov 27- Dec 01, 2017 held at Honolulu, Hawaii, USA.
2. International travel support from DST, New Delhi and European Society for Fuzzy Logic and Technology (EUSFLAT) to attend a summer school on Fuzzy logic and its Applications SFLA 2017, during July 17-21, 2017 held at Santiago De Compostela, Spain.
3. International travel support from SERB, DST, to present a paper in IFSA-SCIS 2017, during June 27-30, 2017 held at Otsu, Kyoto, Japan.
4. International travel support from SERB, DST, New Delhi and Indian School of Mines Alumani Association (ISMAA) to present a paper in IFSA EUSFLAT 2015, during 30th June - 3rd July, 2015 held at Gijon, Asturias, Spain.
5. **Postdoctoral** grant offered by IRAFM, University Of Ostrava, Czech Republic.
6. 2013-Awarded **DST INSPIRE Fellowship** for Doctoral Program.
7. 2012-Awarded **Gold Medal** for standing 1st at Master of Science (M.Sc.) in (Mathematics & Scientific Computing).
8. Qualified JAM 2010 organized by IIT Madras.
9. Availed **1st rank** in 10 and 10+2 at school level (Top 1% in board).

Membership

1. Annual member of EUSFLAT.
2. Life member of Society of Applied Mathematics (SAM).
3. President of SIAM IIT (ISM) Student Chapter. (2015-16).
4. Life member of International Rough Set Society (IRSS).
5. Life member of Calcutta Logic Circle

Abroad Visit

1. Presented a research paper in "Joint 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems" (IFSA-SCIS, 17) during June 27-30, 2017, organized at Otsu, Japan.

Journal Publications

1. **A. P. Singh** and S. P. Tiwari "Lattice F -transform for functions in two variables" *Journal of Fuzzy Set Valued Analysis* 3 (2016) 185-195 (MathSciNet).
2. I. Perfilieva, **A. P. Singh** and S. P. Tiwari "On the relationship among F -transform, fuzzy rough set and fuzzy topology" *Soft Computing* 21 (2017) 3513-3523 (SCI, IF 3.73).
3. S. P. Tiwari, I. Perfilieva and **A. P. Singh** "Generalized residuated lattices based F -transform" *Iranian Journal of Fuzzy Systems* 15 (2018) 165-182 (SCI, IF 2.10).
4. **A. P. Singh** and I. Perfilieva " M -fuzzifying approximation spaces, M -fuzzifying pretopological spaces and M -fuzzifying closure space" *New Mathematics and Natural Computations*, 16 (2021), 609-626 (ESCI).
5. Abha Tripathi, S. P. Tiwari and **A. P. Singh** "On L^M -valued F -transforms, L^M -valued fuzzy rough sets and L^M -valued fuzzy transformation systems" *New Mathematics and Natural Computations*, 17 (02) 339-359 (2021) (ESCI).
6. S. P. Tiwari, **A. P. Singh** and Saumya Pandey, "Note on Intuitionistic L -fuzzy rough sets, intuitionistic L -fuzzy preorders and intuitionistic L -fuzzy topologies," *Fuzzy Information and Engineering*, (ESCI) 13 (2), 196-198 (2021).
7. M. K. Dubey, **A. P. Singh** and Mallika Dhingra, "Characterization of lattice-valued multiset finite automata," *Granular Computing*, ESCI (Accepted) 2021.

Conference Publications (Selected)

1. I. Perfilieva, **A. P. Singh** and S. P. Tiwari "On F -transforms, L -fuzzy partitions and L -fuzzy pretopological spaces" in *Proceedings of IEEE SSCI* (2017) 1-8 (Scopus).
2. I. Perfilieva, S. P. Tiwari and **A. P. Singh** "Lattice-valued F -transforms as interior operators of L -fuzzy pretopological spaces" *Communications in Computer and Information Science*, 854 (2018) 163-174 (Scopus).
3. **A. P. Singh** and I. Perfilieva "On the relationship between L -fuzzifying approximation spaces and L -fuzzifying pretopological spaces" *Atlantis Studies in Uncertainty Modelling*, 1 (2019) 764-769 (Scopus).
4. **A. P. Singh** and I. Perfilieva "Measure of lattice-valued direct F -transforms and its topological interpretations" *Communications in Computer and Information Science*, 1239(2020) 240-253.(Scopus).
5. **A. P. Singh** and I. Perfilieva "On categories of L -fuzzifying approximation spaces, L -fuzzifying pretopological spaces and L -fuzzifying closure spaces" *Communications in Computer and Information Science*, 1239 (2020) 226-239.(Scopus).
6. **A. P. Singh**, M. K. Dubey, and I. Perfilieva, "On quotient structure of fuzzy multiset finite automata," *Atlantis Studies in Uncertainty Modelling*, 3 (2021) (Scopus).

Papers Communicated

1. **A. P. Singh**, S. P. Tiwari and I. Perfilieva “ F -transforms, L -fuzzy partitions and L -fuzzy pretopological spaces: An operator oriented view,” *Fuzzy Sets and Systems*, (Revised version submitted).

Conference Talk/Presentations

1. Presented a research paper in ” The 19th World Congress of the International Fuzzy Systems Association The 12th Conference of the European Society for Fuzzy Logic and Technology jointly with the AGOP, IJCRS, and FQAS conferences Bratislava, September 19-24, 2021.
2. Presented two research papers in “18th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. Lisbon, Portugal, June 15th – 19th 2020.
3. Presented a research papers in “35th Annual Conference of the Mathematical Society of BHU (AMATA-2019) during Nov 11-12, 2019, organized at Department of Mathematics, Institute of Science, BHU Varanasi, India.
4. Presented two research papers in “11th Conference of the European Society for Fuzzy Logic and Technology" (EUSFLAT, 19) during Sep 09-13, 2019, organized at Czech Technical University in Prague, Czech Republic.
5. Presented a research paper in “10th International Summer School on Aggregation Operators" (AGOP, 19) during July 01-04, 2019, organized at Olomouc, Czech Republic.
6. Presented a research paper in “Joint 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems" (IFSA-SCIS, 17) during June 27-30, 2017, organized at Otsu, Japan.
7. Presented a research paper in “International Conference of The Indian Mathematics Consortium in association with American Mathematical Society" during Dec. 14-17, 2016, organized by DST CIMS, BHU, Varanasi, India.

Reviewer of Journals

- (i) Fuzzy Sets and Systems
- (ii) IEEE Transactions on Fuzzy Systems.
- (iii) Iranian Journal of Fuzzy Systems.
- (iv) Axioms, Mathematics, Symmetry, Future Internet (MPDI Journals).
- (v) Journal of the Egyptian Mathematical Society.
- (vi) FUZZ-IEEE 2019, WCCI 2020, IPMU 20, EUSFLAT (Conference).
- (vii) Soft Computing (Springer Nature).

Summer Schools/Workshops/Conferences Attended (Organized)

1. Organized a special session entitled "Mathematical Methods Towards Dealing with Uncertainty in Data Sciences" in "The 19th World Congress of the International Fuzzy Systems Association The 12th Conference of the European Society for Fuzzy Logic and Technology jointly with the AGOP, IJCRS, and FQAS conferences Bratislava, September 19-24, 2021".
2. Organized an International five days online workshop on "New Trends in Fuzzy and Rough Set Theory and its Applications" during September 25-29, 2020.
3. Attended five days AICTE Faculty Development Program on "Data Sciences" during Nov 08-12, 2019, at IIIT Allahabad.
4. Participated in workshop on "Research Methodology" during Dec. 18-22, 2017, organized by Faculty Development Center IIT (ISM), Dhanbad.
5. Successfully completed GIAN Program on "Inverse problems in fuzzy approximation spaces with applications in computer vision" during Oct 23-27, 2017, organized by IIT(ISM), Dhanbad.
6. Participated in "6th Indian School on logic and its Applications-II" during Aug. 22-27, 2016, organized by Dept. of Philosophy, Jadavpur University, Kolkata.
7. Participated in "Science Academy Refresher's Course on Differential Equation and its Applications in Science and Engineering" during July 4-16, 2016, organized by Dept. of Applied Mathematics, ISM, Dhanbad.
8. Participated in "Workshop on Logic and Computability" during Sep. 16-17, 2015 organized by Applied Mathematics And Statistics Unit, ISI Kolkata.
9. Attended a workshop on "Modern trends in Soft Computing and Security Issues (MTSCS)" during Sep. 23-28, 2013 at NIST Behrampur organized jointly by Center for Soft Computing Research ISI, Kolkata and NIST Behrampur.
10. Summer Internship (SPIM) at Harish-Chandra Research Institute, Allahabad, India from June 20- July 09, 2011.

Teaching Interests

- Linear Algebra
- Fuzzy Set Theory
- Real Analysis
- Numerical Analysis

Administrative Responsibilities

- (i) Warden Men's Hostel at VIT Vellore, (March 2022 - July 2022).
- (ii) Chief Warden-Hostel at IIIT Surat, (Aug 2022 - till date).

Skills

Language: English, Hindi (Native), Sanskrit, Czech(Beginner).
Softwares: MATLAB, Latex, Mathematica, MS Excel.
Programming Language: C, R, Python.

Interests

Cricket, Volleyball, Cooking.

Personal Details

Date of Birth: July 05, 1992

Father's Name: Mr. Sheo Kumar Singh

Nationality: Indian

Marital Status: Unmarried

Passport Id: L5518528

Permanent Address : 70, Village- Sahupur, Po.- Haldharpur, District- Mau, 221705 (U.P.).