List of Publications

A. Publications in Journals

1. A. Tripathi, **S.P. Tiwari**, K. Jacob, and S. Mahato, F-transforms determined by overlap and grouping maps over a complete lattice, *Soft Computing*, 2024, https://doi.org/10.1007/s00500-024-09887-6.

2. A.P. Singh, **S.P. Tiwari** and I. Perfilieva, L-fuzzy transforms: An operator oriented approach, *Soft Computing*, 2024, Accepted.

3. M. Kumari, V.K. Yadav, S. Ruhela and **S.P. Tiwari**, On categories associated with crisp deterministic automata with fuzzy rough outputs and fuzzy rough languages, *Soft Computing*, 2024, https://doi.org/10.1007/s00500-024-09818-5.

4. A. Tripathi and **S.P. Tiwari**, On categories associated with L-valued fuzzy approximation spaces, *Journal of Multiple-Valued Logic and Soft Computing*, **42** (2024), 517-543.

5. N. Choudhary, **S.P. Tiwari** and S. Singh, On compositions of (L-fuzzy) automata: A categorical approach, *Fuzzy Sets and Systems*, **475** (2024), 108749.

6. A. Tripathi, **S.P. Tiwari**, K. Jacob, D. Nagarajan, A fuzzy function granular F-transform and inverse F-transform with application, *Decision Analytics Journal*, 2023 (accepted).

7. Renu, R.K. Upadhyay, **S.P. Tiwari**, R.P. Yadav, Analysis of interval-valued model for interaction between plankton-fish population in marine ecosystem, *Ecological Modelling*, **484** (2023), 110448.

8. S. Singh, **S.P. Tiwari** and S. Mahato, On L-fuzzy automata, coalgebras and dialgebras: Associated categories and L-fuzzy topologies, *Fuzzy Sets and Systems*, **460** (2023), 143-185.

9. S. Singh and **S.P. Tiwari**, L-fuzzy automata theory: Some characterizations via general fuzzy operators, *Fuzzy Sets and Systems*, **460** (2023), 123-142.

10. A. Tripathi and **S.P. Tiwari**, On L-fuzzy topological spaces determined by implicators, *New Mathematics and Natural Computation*, **19**(3) (2023), 805-830.

11. S. Yadav, **S.P. Tiwari**, M. Kumari and V.K. Yadav, Generalized rough and fuzzy rough automata for semantic computing, *International Journal of Machine Learning and Cybernetics*, **13** (2022) 4013-4032.

12. S. Singh and **S.P. Tiwari**, On unification of categories of fuzzy automata as Qua category, *Soft Computing*, **26** (2022) 1509-1529.

13. S. Singh and **S.P. Tiwari**, Fuzzy partitioned discrete-event system and its supervisory control, *International Journal of General Systems*, **50** (2021) 339-365.

14. P. Pal, **S.P. Tiwari** and S. Singh, L-fuzzy rough automaton: A mathematical model for natural languages, *International Journal of Machine Learning and Cybernetics*, **12** (2021) 2091-2107.

15. A. Tripathi, **S.P. Tiwari** and I. Perfilieva, F-transforms determined by implicators, *Iranian Journal of Fuzzy Systems*, **18** (2021) 19-36.

16. S. Singh, **S.P. Tiwari** and P. Pal, On factorized L-fuzzy automaton and its L-fuzzy topological characterization, *Fuzzy Sets and Systems*, **420** (2021) 29-53.

17. S. Singh and **S.P. Tiwari**, On category of L-fuzzy automata, coalgebras and dialgebras, *Fuzzy Sets and Systems*, **420** (2021) 1-28.

18. P. Pal and **S.P. Tiwari**, Category of L-valued multiset automata and Brzozowski's algorithm, *New Mathematics and Natural Computation*, **16**(3) (2020), 481-496.

19. S. Mahato and **S.P. Tiwari**, On relationship between L-valued approximation spaces and L-valued transformation systems, *International Journal of Computational Intelligence Systems*, **13** (2020), 1464-1472.

20. P. Pal, **S.P. Tiwari** and J. Kavikumar, Measure of operators associated with fuzzy automata, *New Mathematics and Natural Computation*, **16**(1) (2020), 17-35.

21. M.K. Dubey, **S.P. Tiwari** and A. Šostak, Categories of quantale-valued fuzzy automata: determinization and minimization, *Journal of Applied Mathematics and Computing*, **63** (2020), 771-785.

22. P. Pal and **S.P. Tiwari**, On L^M-valued automata: an operator oriented view, *Journal of Applied Mathematics and Computing*, **62** (2020), 587-609.

23. J. Kavikumar, **S.P. Tiwari**, N.A. Ebas and A.H. Nor Shamsidah, General fuzzy finite switchboard automata, *New Mathematics and Natural Computation*, **15**(2) (2019), 283-305.

24. M.K. Dubey and **S.P. Tiwari**, On the relationship among fuzzy languages, upper sets and fuzzy ordered monoids, *New Mathematics and Natural Computation*, **15**(2) (2019), 1-12.

25. J. Kavikumar, **S.P. Tiwari**, A.H. Nor Shamsidah, Shambhu Sharan, Restricted cascade and wreath products of fuzzy finite switchboard state machines, *Iranian Journal of Fuzzy Systems*, **16** (2019), 75-88.

26. P. Pal, **S.P. Tiwari** and R. Verma, On different operators in automata theory based on residuated and co-residuated lattices, *New Mathematics and Natural Computation*, **15** (1) (2019), 169-190.

27. R. Verma, **S.P. Tiwari** and R.K. Upadhayay, Transmission dynamics of epidemic spread and outbreak of Ebola in West Africa: Fuzzy modeling and simulation, *Journal of Applied Mathematics and Computing*, **60** (2019), 637-671.

28. **S.P. Tiwari**, V.K. Yadav, B. Davvaz and R. Verma, A categorical approach to minimal realization for a fuzzy language, *Fuzzy Sets and Systems*, **351** (2018), 122-137.

29. V. Gautam, **S.P. Tiwari**, P. Pal and J. Tripathi, On categories of automata and languages based on a complete residuated lattice, *New Mathematics and Natural Computation*, **14** (2018), 423-444.

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31. **S.P. Tiwari**, I. Perfilieva and A.P. Singh, On generalized residuated lattices based F-transform, *Iranian Journal of Fuzzy Systems*, 2017, **15** (2018), 165-182.

32. 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.

33. R. Verma and **S.P. Tiwari**, Distinguishability and completeness of crisp deterministic fuzzy automata, *Iranian Journal of Fuzzy Systems*, **14** (2017), 19-30.

34. S. Sharan, A.K. Srivastava and **S.P. Tiwari**, Characterizations of rough finite state automata, *International Journal of Machine Learning and Cybernetics*, **8** (2017), 721-730.

35. **S.P. Tiwari**, V.K. Yadav and V. Gautam, On minimal fuzzy realization for a fuzzy language: A categorical approach, *Journal of Multiple-Valued Logic and Soft Computing*, **28** (2017) 361-374.

36. B.K. Sharma, V. Gautam, **S.P. Tiwari** and V. Bhattacherjee, On fuzzy multiset regular languages, *Journal of Fuzzy Set Valued Analysis*, **2017(1)** 2017, 50-61.

37. S. Sharan, **S.P. Tiwari** and N. Kumari, On relationship between generalized rough multisets and multiset topologies, *International Journal of Machine Learning and Cybernetics*, **8** (2017) 2017-2024.

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41. **S.P. Tiwari** and V. Gautam, On a category of fuzzy automata with relations, *Journal of Intelligent and Fuzzy Systems*, **30**(6) (2016) 3301-3309.

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44. A.K. Singh, **S.P. Tiwari**, On IF-closure spaces vs IF-rough sets, *Annals of Fuzzy Mathematics and Informatics*, **11** (2016), 159-171.

45. **S.P. Tiwari**, V. Gautam and B. Davvaz, On minimal realization for a fuzzy language and Brzozowski's algorithm, *Journal of Intelligent and Fuzzy Systems*, **29**(2015), 1949-1956.

46. **S.P. Tiwari**, V.K. Yadav and A.K. Singh, On algebraic study of fuzzy automata, *International Journal of Machine Learning and Cybernetics*, **6** (2015), 479-485. (Springer)

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50. **S.P. Tiwari**, V.K. Yadav and A.K. Singh, Construction of a minimal realization and monoid for a fuzzy language: a categorical approach, *Journal of Applied Mathematics and Computing*, **47** (2015), 401-416. (Springer)

51. **S.P. Tiwari** and S. Sharan, Products of rough finite state machines, *Journal of Multiple-Valued Logic and Soft Computing*, **25** (2014) 339-356.

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53. **S.P. Tiwari** and A.K. Singh, On minimal realization of fuzzy behaviour and associated categories, *Journal of Applied Mathematics and Computing*, **45** (2014) 223-234 (Springer)

54. **S.P. Tiwari**, A.K. Singh and S. Sharan, Fuzzy subsystems of fuzzy automata based on lattice-ordered monoid, *Annals of Fuzzy Mathematics and Informatics*, **7** (2014), 437-445.

55. **S.P. Tiwari** and A.K. Srivastava, Fuzzy rough sets, fuzzy preorders and fuzzy topologies, *Fuzzy Sets and Systems*, **210** (2013), 63-68 [**This research paper was in Science Direct Top 25 Hottest Articles during July 2012-March 2013**]. (Elsevier)

56. **S.P. Tiwari** and S. Sharan, On coverings of products of rough transformation semigroups, *International Journal of Foundations of Computer Science*, **24** (2013) 375-391. (World Scientific)

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67. A.K. Srivastava and **S.P. Tiwari**, On relationship among fuzzy approximation operators, fuzzy topology, and fuzzy automata, *Fuzzy Sets and Systems*, **138** (2003), 197-204. (Elsevier)

B. Publications in Proceedings

1. P. Pal and **S.P. Tiwari**, On a category of deterministic fuzzy automata, in: Proc. EUSFLAT 2019, 205-211.

2. S. Singh and **S.P. Tiwari**, On L-fuzzy partitioned automata, in: Proc. EUSFLAT 2019, 212-219.

3. A. Tripathi, **S.P. Tiwari** and A.P. Singh, On L^M-valued F-transforms and L^M-valued fuzzy rough sets, in: Proc. EUSFLAT 2019, 220-226.

4. S. Mahato and **S.P. Tiwari**, On fuzzy approximation operators and fuzzy transformation systems, in: Proc. EUSFLAT 2019, 274-280.

5. M.K. Dubey, V.K. Yadav and S.P. Tiwari, On the category of quantale-semimodules, *Advances in Intelligent Systems and Computing*, **714** (2018), 595-605.

6. I. Perfilieva, **S.P. Tiwari** and A.P. Singh, Lattice-valued F-transforms as interior operators of L-fuzzy pretopological spaces, in: Proc. IPMU 2018,Communications in Computer and Information Science, **854** (2018) 163-174.

7. I. Perfilieva, A.P. Singh and **S.P. Tiwari**, On F-transforms, L-fuzzy partitions and L-fuzzy pretopological spaces, *IEEE Xplore*, 2017, DOI: 10.1109/SSCI.2017.8285171.

8. A.P. Singh and **S.P. Tiwari**, On residuated lattice based fuzzy variable precision F-transform, *IEEE Xplore*, 2017, DOI: 10.1109/IFSA-SCIS.2017.8023235.

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