IEEE Transactions on Fuzzy Systems

Special Issue on

Fuzzy Data Driven approaches for Intelligent Technology Transfer

Theme and Relevance

Technology transfer (TT) is becoming increasingly important in the fast-developing field of Industry 4.0 as a means of connecting academic institutions with the industrial sector. The enormous volume and complexity of data created by modern scientific and technical research, however, pose significant hurdles for conventional TT approaches. In light of these difficulties, data-driven approaches, especially those supported by AI and ML, hold great promise for changing the TT landscape. The ambiguity, vagueness, and complexity that characterize many TT processes are best dealt with by using fuzzy AI.

Increased efficiency and versatility in TT frameworks are more important in this age of fast technological advancement. Fuzzy AI is a great fit for this problem since it allows for complex decision-making and risk assessment in TT endeavors. As a result of its strengths in uncertainty and complexity management, TT processes may be improved in terms of both efficiency and resilience.

How data-driven approaches, in particular fuzzy AI, might transform TT is the subject of a forthcoming special issue that will focus on this multidisciplinary discipline. The focus of this issue is to shed light on the revolutionary potential of these cutting-edge methods for bettering the TT ecology. This is done in an effort to optimize TT procedures for the digital era by closing the gap between conventional practices and the advanced features of data-driven methodologies. The goal is to make TT a more valuable tool in today's fast-paced technology landscape by increasing its economic impact, stimulating innovation, and reducing associated risks and uncertainties.

Specific Topics

The list of potential topics for this special issue includes, but is not limited to:

1. Fuzzy Logic-based Patent Mining
2. Knowledge Representation in TT with Fuzzy AI
3. Fuzzy Decision Making for IP Licensing
4. Fuzzy AI for TT Process Optimization
5. Intellectual Property Analytics with Fuzzy Systems
6. Fuzzy Risk Assessment in TT
7. Fuzzy Knowledge Management in TT
8. Fuzzy AI in Business Transformation
9. Economic Value Estimation using Fuzzy Models

10. TT Channels and Fuzzy Efficiency Models
11. Digital Twins and Fuzzy AI
12. Scalability of Fuzzy Systems in TT
13. Fuzzy AI in Open Innovation Models
14. Fuzzy Cognitive Maps in TT Strategy
15. Fuzzy Clustering in R&D Collaboration Networks
16. Real-world Case Studies of Fuzzy AI in TT
17. Fuzzy AI in Healthcare TT
18. Fuzzy Logic in Legal Frameworks for TT
19. Fuzzy Forecasting Models for TT
20. Ethics and Governance in Fuzzy AI-based TT
21. TT in Emerging Economies through Fuzzy AI
22. Fuzzy Systems in Governmental TT Policies
23. Trust and Security in Fuzzy AI-based TT
24. Fuzzy Decision Support Systems for TT
25. Future Trends of Fuzzy AI for TT

Important Dates (Tentative)

- Submission deadline: jan. 30, 2025
- First round decision: mar 30, 2025
- Final decision: july 15, 2025
- Publication: oct 15, 2025

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- **Mohamed Cheriet** received his M.Sc. and Ph.D. degrees in Computer Science from the University of Pierre & Marie Curie (Paris VI) in 1985 and 1988 respectively. Since 1992, he has been a professor in the Systems Engineering department at the University of Quebec - École de Technologie Supérieure (ÉTS), Montreal, and was appointed full Professor there in 1998. Prof. Cheriet was the director of LIVIA Laboratory for Imagery, Vision, and Artificial Intelligence (2000-2006), and is the founder and director of Synchromedia Laboratory for multimedia communication in telepresence applications, since 1998. Dr. Cheriet is an expert in Computational Intelligence, Pattern Recognition, Machine Learning, Artificial Intelligence and Perception. In addition, Dr. Cheriet research has extensive experience in Sustainable and Intelligent Next Generation Systems. Dr. Cheriet has published more than 500 technical papers in the field and serves on the editorial boards of several renowned journals and international conferences. He held a Tier 1 Canada Research Chair on Sustainable and Smart Eco-Cloud (2013-2000), and lead the establishment of the first smart university campus in Canada, created as a hub for innovation and productivity at Montreal. Dr. Cheriet is the General Director of the FRQNT Strategic Cluster on the Operationalization of Sustainability Development, CIRODD (2019-2026). He is the Administrative Director of the $12M CFI'2022 CEOS*Net Manufacturing Cloud Network. He is a 2016 Fellow of the International Association of Pattern Recognition (IAPR), a 2017 Fellow of the Canadian Academy of Engineering (CAE), a 2018 Fellow of the Engineering Institute of Canada (EIC), and a 2019 Fellow of Engineers Canada (EC). Dr. Cheriet is the recipient of the 2016 IEEE J.M. Ham Outstanding Engineering Educator Award, the 2013 ÉTS Research Excellence prize, for his outstanding contribution in green ICT, cloud computing, and big data analytics research areas, and the 2012 Queen Elizabeth II

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- **Giuseppe Pirlo** is full professor in Computer Science at the University of Bari and delegate to the Third Mission and Sustainability. Therefore, he is also the managing representative for Technology Transfer. He has been vice–rector of the same University. Currently he is Director of the Italian National Lab on Digital Skils of the CINI (Consorzio Nazionale dell'Informatica).
  His interests cover the areas of Artificial Intelligence, Intelligent Systems, Pattern Recognition, Biometry, Data Mining. He has developed several scientific projects and published more than four-hundred papers.
  Giuseppe Pirlo was the general co-chair of the International Conference on Frontiers in Handwriting Recognition (ICFHR 2012), of the International Workshop on Emerging Aspects in Handwriting Signature Processing (EAHSP 2013) and of the International Workshop on Image-based Smart City Applications (ISCA 2015). He was editor of the book "Advances in Digital Handwritten Signature Processing - A Human Artefact for e-Society", World Scientific, 2014 and of the e-Book "Challenges and Opportunities of the Digital Agenda", SIEL, 2014. He was editor of the Special Issue "Handwriting Recognition and Other PR Applications" of the Pattern Recognition Journal, of the Special Issue "Handwriting Biometrics" of the IET Biometrics Journal, and of the Special Issue "Drawing and Handwriting Processing for User-Centered Systems" of the IEEE Transactions on Human-Machine Systems. Giuseppe Pirlo is Senior Member IEEE and IAPR member.

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