CALL FOR PAPERS

IEEE Transactions on Computational Social Systems

Recent Advancements in Responsible and Ethical AI Frameworks

Rapid advancement in Deep Learning and Artificial Intelligence have disrupted the way computational social systems being designed, tested and integrated in real-world applications. Moreover, the process of creating computationally intelligent software have revolutionized all spheres of society, including science, engineering, art, social work, medicine, public health, policy making, business and the process of scientific discovery. With that, issues of trustworthy, explainable and fair decision making came to the forefront of global research community.

This Special issue on Recent Advancements in Responsible and Ethical AI Frameworks will bring together a global community of AI researchers, data scientists, computer scientists, engineers, industry innovators, academicians, policymakers, social workers, and technology leaders to exchange knowledge, foster collaboration, and advance both foundational and applied research shaping the future of trustworthy and explainable computational social systems. Moreover, it will provide a transdisciplinary platform for the exchange of pioneering ideas, discussion of real-world scientific and industrial applications, and development of impactful collaborations between academia, research institutions, and industries spanning healthcare, finance, manufacturing, smart cities, robotics, aerospace, health, social justice, pluralism, art and digital transformation.

This Special Issue invites high-quality original contributions from researchers and practitioners to advance theoretical and practical approaches in trustworthy, responsible and ethical systems, enhancing computational intelligence, cognition, ethical reasoning, behavioral prediction, trustworthy autonomous teaming, human-AI collaboration, explainability, fairness and ethical system development resilience, to push the boundaries toward trustworthy, responsible and ethical computational social systems.

Topics include but are not limited to:

Explainable, transparent, and trustworthy AI for computational social systems
Ethical AI and ethical computational social systems
Generative AI-based trustworthy modeling, simulation, and prediction
AI/ML-driven sensing and perception for robust and trustworthy CSS
Cognitive behavior modeling and trustworthy human-AI teaming
Deep multimodal fusion architectures for trustworthy and ethical computing
LLM-based semantic reasoning and authenticity for explainable and ethical CSS
Agentic AI and Autonomous Reasoning for social interaction and collective intelligence
Cognitive situation awareness and trustworthy human-AI teaming
Autonomous AI-based system design for critical decisions making
Multi-agent systems for planning and collective decision-making
Trustworthy defense and cybersecurity systems
Federated learning and privacy-preserving frameworks
Ethical Human-AI co-evolution
Safe and ethical Embodied AI and Robotics
Fair and ethical AI for precision medicine and health
Governance, policy, and law on integration of ethical AI

Important Dates:

- Paper Submission Deadline: December 1, 2026
- First Decision Deadline: March 1, 2027
- Revision Deadline: May 15, 2027
- Final Decision Deadline: June 30, 2027

Submission Guidelines:

Authors should prepare their manuscripts according to the submission guidelines of the IEEE Transactions on Computational Social Systems. Manuscripts should be submitted through the online submission system at: https://ieee.atyponrex.com/journal/tcss, and select “Special Issue” on “Recent Advancements in Responsible and Ethical AI Frameworks” under the Manuscript Category. All submissions will undergo a rigorous, single-blind peer review process.

Guest Editors:

Marina Gavrilova, University of Calgary, Canada
Zakirul Alam Bhuiyan, Fordham University, USA
Sorin Adam Matei University of Purdue, USA