

Risk Analysis

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Call for Papers – *Risk Analysis*:

Special Issue on “Artificial Intelligence for Risk Analysis and the Risks of AI”

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Background and Focus:

The artificial intelligence-machine learning (AI-ML) revolution is affecting our society in several ways. Machine intelligence is becoming increasingly important for human activities, with new technologies automating tasks and augmenting human capabilities at a rapidly accelerating pace. While AI-ML can sometimes help in identifying and managing risks (e.g., in predictive maintenance, or in cancer diagnosis), the disruptive potential of the new technologies creates new scenarios that are poorly understood. The use of these technologies to support decision-making may lead to biased, unfair, and untrustworthy decisions and raises data, privacy, and security issues whose consequences and societal impacts may be difficult to foresee. This special issue aims to explore both the latest developments in AI-ML technologies that support risk analysis and risk-informed decision-making, as well as the risks that these technologies bring to our lives, companies, and institutions.

Topics of interest include but are not limited to:

- Trustworthiness and transparency for AI-based automation technologies
- Societal Impacts and Societal Risks of AI
- Catastrophic and existential risks of AI
- Risks of AI-generated disinformation
- Safe AI-ML for industrial process control and risk management
- AI-ML and causal AI (CAI) for epidemiology and public health risk analysis
- AI-ML in toxicology and systems biology applied to health risk assessment
- Causal AI for systems safety and reliability
- Public Risk Perceptions of AI-ML
- Legal and Ethical Implications of AI-ML
- Black Swans for AI-ML Augmented Systems

- Uncertainty quantification, Explainability, and Interpretability for risk assessment using AI-ML
- Risk-informed regulation and management of AI-ML technologies
- Human-machine interface risks with AI-augmented systems
- AI-ML prognostics and health management
- Digital twins for risk and safety assessment
- AI-ML technologies for safety-critical applications
- AI-ML for condition-based risk assessment
- AI- ML for safety measures optimization

This special issue will provide a platform for researchers, practitioners, policymakers, and industry professionals to advance our knowledge, to share findings, experiences, challenges, and opportunities on the interfaces between Risk Analysis and Artificial Intelligence.

Paper Submission:

Submitted articles must not have been previously published or currently submitted for journal publication elsewhere. Authors are responsible for understanding and adhering to the submission guidelines, which can be accessed at: <http://sra.org/sra-journal>, or <http://manuscriptcentral.com/riskanalysis>. Each paper will go through a rigorous review process. Please mention the special issue on "Artificial Intelligence for Risk Analysis and the Risks of AI" in the cover letter during the submission process.

Important Dates:

- Submission Deadline: December 15, 2023
- First-Round Reviews (target): March 31, 2024
- Special Issue Published (target): Fall/Winter 2024