

Special Issue

Secure and Explainable AI: Enhancing Trust, Resilience, and Efficiency in Machine Learning Models

Message from the Guest Editor

This Special Issue focuses on advancing secure and explainable AI by addressing key challenges in adversarial robustness, AI security, and computationally efficient explainability. Topics of interest include but are not limited to the following:

- **Adversarial robustness in AI:** Detection and defense strategies against adversarial attacks.
- **Explainable AI (XAI) for security:** Interpretable models using SHAP, LIME, saliency maps, and decision tree surrogates for security applications.
- **Lightweight and efficient AI security:** Optimized security techniques for reducing computational overhead while maintaining robustness.
- **Privacy-preserving AI security:** Federated learning, homomorphic encryption, differential privacy, and secure multiparty computation for AI models.
- **Trustworthy AI in smart cities and healthcare:** Securing AI-driven traffic monitoring, surveillance, and medical diagnostics against adversarial threats.
- **Hybrid defense mechanisms:** Combining traditional cybersecurity techniques with AI-based threat detection for robust defenses.
- **Real-world case studies and applications:** Practical implementations of AI security and XAI in various domains.

Guest Editor

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Deadline for manuscript submissions

closed (15 October 2025)



Algorithms

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About the Journal

Message from the Editor-in-Chief

Algorithms are the core of computational mathematics and computer science. The whole area has been considered from different perspectives, which has led to the development of several sub-communities. The aim is to bring together researchers and practitioners from different areas of computational mathematics and computer science and to offer a platform for interdisciplinary applications in different areas of science and technology. In this way, *Algorithms* may become a forum for the exchange of new stimulating ideas between the different sub-communities working in the area of algorithms and their applications and the presentation of high-quality novel algorithmic approaches.

Editor-in-Chief

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