

Special Issue

New Trends in Big Data, Artificial Intelligence and Data Security

Message from the Guest Editors

The explosive growth of artificial intelligence (AI), particularly deep learning (DL), presents both opportunities and challenges for cybersecurity. This Special Issue explores the intersection of AI and security: addressing vulnerabilities in AI systems and harnessing AI for stronger network defenses. We seek research on weaknesses in AI/ML models, including adversarial robustness, privacy-preserving training/inference, and backdoor detection. At the same time, we welcome applications of AI for cybersecurity, such as advanced threat detection, adaptive response systems, automated vulnerability discovery, risk assessment, and scalable solutions for cloud, IoT, and critical infrastructure. Cross-cutting themes of interest include scalability, efficiency, robustness guarantees, and ethical considerations in real-world AI security. Topics include adversarial machine learning; privacy-preserving AI; explainable AI (XAI); federated learning security; AI-enabled IDS/IPS; malware and phishing detection; network traffic analysis; AI for vulnerability management; security in large language models (LLMs); and robust, trustworthy AI deployments.

Guest Editors

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Deadline for manuscript submissions

closed (30 April 2026)



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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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