

Special Issue

Advances in Technologies for Data Privacy and Security

Message from the Guest Editors

In an era of rapid data generation and expanding digital ecosystems, ensuring data privacy and security is a growing concern. The rise of artificial intelligence—especially generative AI—has amplified both opportunities and risks. While AI enables threat detection, automated security protocols, and privacy-preserving computation, it also introduces vulnerabilities like model inversion attacks, data leakage, and misuse of synthetic data. This Special Issue of *Applied Sciences* highlights cutting-edge advances at the intersection of data privacy, security, and intelligent systems. It includes theoretical innovations and practical applications across cryptographic frameworks, secure and federated learning, differential privacy, homomorphic encryption, and blockchain-based methods. Special focus is placed on privacy risks and mitigation in AI, including techniques to secure training data, interpret model behavior, and control generative content. By showcasing multidisciplinary research, this issue fosters a deeper understanding of how to build secure, transparent, and trustworthy AI technologies in a rapidly evolving digital world.

Guest Editors

Dr. Tanja Pavleska

Laboratory for Open Systems and Networks, Jozef Stefan Institute, Jamova Cesta 39, 1000 Ljubljana, Slovenia

Dr. Reiner Creutzburg

1. Technische Hochschule Brandenburg, Department of Informatics and Media, Magdeburger Str. 50, D-14770 Brandenburg, Germany
2. School of Technology and Architecture, Campus Berlin, SRH University of Applied Sciences Heidelberg, Sonnenallee 221c, D-15087 Berlin, Germany

Deadline for manuscript submissions

20 February 2026



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/249868

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
appls@mdpi.com

mdpi.com/journal/

[appls](https://appls.mdpi.com)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)