



## Advances in Mathematical Cryptography and Information Security toward Industry 5.0

Guest Editors:

**Prof. Dr. Cheng-Chi Lee**

Department of Library and  
Information Science, Fu Jen  
Catholic University, New Taipei  
City 24205, Taiwan

**Dr. Dinh-Thuan Do**

School of Engineering, University  
of Mount Union, Alliance, OH  
44601-3993, USA

Deadline for manuscript  
submissions:

**1 November 2024**

### Message from the Guest Editors

This Special Issue calls for original contributions to designing and developing advanced mathematical cryptographic schemes for information security toward Industry 5.0. The topics include but are not limited to:

- Advanced mathematical cryptography in the Industry 5.0 era.
- Information security in Industry 5.0.
- Sustainable cryptographic models for secured systems.
- Secured digital twins enabling smart systems.
- Novel security architectures for smart systems.
- Lightweight authentication schemes based on extended Chebyshev chaotic maps.
- Machine learning-aided design and development of cryptographic schemes for information security.
- Blockchain technology-enabled design of novel cryptographic schemes and information security.
- Challenges for designing and developing advanced cryptographic schemes for information security toward Industry 5.0.
- Experimentation and deployment of advanced cryptographic schemes for information security.
- Case studies and recommendations for advanced cryptographic schemes for information security.





## Editor-in-Chief

### **Prof. Dr. Francisco Chiclana**

School of Computer Science and  
Informatics, De Montfort  
University, The Gateway,  
Leicester LE1 9BH, UK

## 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.

## 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), RePEc, and other databases.

**Journal Rank:** JCR - Q1 (*Mathematics*) / CiteScore - Q1 (*General Mathematics*)

## Contact Us

---

*Mathematics* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/mathematics](http://mdpi.com/journal/mathematics)  
[mathematics@mdpi.com](mailto:mathematics@mdpi.com)  
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)