SPECIAL ISSUE ON
CHAOS-BASED ENCRYPTION AND SECURE COMMUNICATIONS

CALL FOR PAPERS

Over the last decade the use of chaos theory has been expanding to a plethora of applications related to engineering, physics, economics, lasers and communications. From the above, chaos based encryption and secure communications are among the most prominent ones. In these fields, chaotic systems are used as a deterministic source of entropy, in order to mask an information signal and safely transmit it through a channel. Due to the system's inherent determinism, the process can be reversed at the receiver end, thus reconstructing the original information signal. In such designs, the topics that are taken into consideration is the overall computational load, the security of the used chaotic system against identification attacks, the security of the resulting ciphertext against statistical analysis, and the security of the overall design against a collection of attacks, like brute force, and differential.

This special issue aims to bring together novel techniques for chaos based encryption, and relevant security related applications. Authors are welcome to submit their original and review works on the following topics:

➢ Continuous, discrete, fractional order, or quantum systems can be considered,
➢ Chaotification techniques for enhancing the security and complexity of existing systems,
➢ Pseudo and True Random Bit Generators,
➢ Chaos encryption techniques for all types of plaintext data, like text, image, sound, 3D objects etc.,
➢ Secure communications through chaos control and synchronization,
➢ Watermarking, steganography, authentication, and relevant security applications,
➢ Techniques for unmasking chaos encryption and communication,
➢ Physical implementations of the above.

Authors are kindly requested to submit their manuscripts through the Manuscript Tracking System at https://dergipark.org.tr/en/pub/chaos

Papers are published upon acceptance following the reviewing processes, regardless of the Special Issue publication date.

Important deadlines for submission:
Closing date for initial submission: August 31, 2023
Deadline for final decision notification: September 30, 2023
Publication Date: October, 2023.

Scopus

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