

Special Issue

Mathematics of Digital Signal Processing: Algorithms, Techniques, and Practical Applications

Message from the Guest Editor

Digital Signal Processing was first introduced in the seminal book *Digital Signal Processing* by A. V. Oppenheim in 1978, and since then, it has evolved with the field of Applied Mathematics. A. V. Oppenheim and R. W. Schafer published *Discrete-Time Signal Processing* in 1989, and this jumpstarted a fast and comprehensive evolution, with the application of Cooley and Tukey's *An Algorithm for the Machine Computation of Complex Fourier Series* in 1965. Consequently, this evolution made possible the design of complex and sophisticated digital signal equipment, such as radars, radio transmitters/receivers, and so on, and gave way to the calculation basis of artificial intelligence. This Special Issue focuses on advances in the following areas:

- Fractional Fourier Transforms and Applications;
- Algorithms for Post-quantum Cryptography;
- Advances in digital transforms: Fourier, Wavelets, Winograd;
- Mathematical Models for Machine Learning;
- Low-latency and ultra-reliable processing and communication;
- Artificial Intelligence and Machine Learning Embedded in Microelectronic Circuits

Guest Editor

Prof. Dr. Osamu Saotome

ITA Technological Institute of Aeronautics, Electronic and Computer Engineering, São José dos Campos 12228-900, SP, Brazil

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

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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.

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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