### **Special Issue**

### Real, Complex and Hypercomplex Number Systems in Data Processing and Representation

### Message from the Guest Editors

This Special Issue is aimed at a wide coverage of various aspects of data processing and presentation using both familiar number systems and non-traditional ones, including exotic ones.

- Residue number system;
- Multiple-base number systems;
- Logarithmic number system;
- Redundant binary number system;
- Decimal floating point number system;
- Fuzzy number system.

Topics include but are not limited to:

- Numbers in data processing and representation;
- Numerical algorithms for digital signal and image processing using various number systems;
- Various number systems in pattern recognition and representation;
- Circuits and systems for processing 1D, 2D, and 3D arrays, using data processing algorithms in various number systems;
- Real-, complex- and hypercomplex-valued deep learning techniques.

We invite researchers and investigators to contribute their original research or review articles to this Special Issue.

### Guest Editors

#### Prof. Dr. Aleksandr Cariow

Faculty of Computer Science and Information Technology, West Pomeranian University of Technology, Szczecin Żołnierska 52, 71-210 Szczecin, Poland

#### Prof. Dr. Oleg Finko

Institute of Mathematics and Information Technologies (named after Prof. Nikolay Chervyakov), North-Caucasus Federal University, Postal address: 1, Pushkin Street, 355017 Stavropol, Russia

### Deadline for manuscript submissions

closed (20 January 2023)



## Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/96140

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

mdpi.com/journal/ applsci





# Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



<u>applsci</u>



### 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)