



## Recent Advances in Digital Twins and Cognitive Twins

Guest Editor:

**Dr. Jalil Boudjadar**

Department of Electrical and  
Computer Engineering, Aarhus  
University Denmark, 8000 Aarhus  
C, Denmark

Deadline for manuscript  
submissions:

**closed (31 December 2023)**

### Message from the Guest Editor

Dear Colleagues,

In recent years, digital twin technology has been widely adopted as a sophisticated and flexible methodology to design high-fidelity models of cyber-physical systems for simulation, optimization, verification and validation purposes. This has led to a considerable impact in industry in terms of reduction of testing and feasibility cost, time to market and quality improvement of the products and services.

A digital twin is a model replica of a cyber-physical system (known as a physical twin) calibrated using actual data from the physical twin. Such a high-fidelity digital twin model can then be used to conduct different experiments such as functionality assessments under uncertainties, behaviour customization using machine learning techniques, performance analysis through optimization, etc.

This Special Issue aims to cover recent advancements in the design, engineering and utilization of digital twins for industrial applications, with a particular interest in artificial intelligence, optimization and validation.

Dr. Jalil Boudjadar

*Guest Editor*





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Paolo Bellavista**

Department of Computer Science  
& Engineering (DISI), University of  
Bologna, 40136 Bologna, Italy

## Message from the Editor-in-Chief

You are invited to contribute a research article, a comprehensive review or a software paper for consideration and publication in *Computers* (ISSN 2073-431X). *Computers* is an international, peer-reviewed, open access journal which provides an advanced forum for computer sciences. *Computers* is published in open access format—research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

## Author Benefits

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

**High Visibility:** indexed within Scopus, ESCI (Web of Science), dblp, Inspec, and other databases.

**Journal Rank:** CiteScore - Q2 (*Computer Networks and Communications*)

## Contact Us

*Computers* 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/computers](http://mdpi.com/journal/computers)  
[computers@mdpi.com](mailto:computers@mdpi.com)  
[X@Computers\\_MDPI](https://x.com/Computers_MDPI)