Special Issue

Digital Twins Enabled Smart Control Engineering

Message from the Guest Editor

The main goal of this Special Issue is to demonstrate how digital twins are integrated into control theory to create smart control systems. Topics of interest include, but are not limited to, the following:

- Using digital twins to design data-driven or model-based control systems;
- Leveraging digital twins as a tool to enable parallel computing capabilities to accelerate AI training and deployment;
- Self-optimizing control methods supported by digital twins that enable the systematic self-awareness of process changes, alarms, and uncertainties;
- Integrating predictive maintenance and remaining useful life analysis into digital twins to create RUL-informed feedback control systems;
- Practical implementation of digital twins in monitoring physical assets based on embedded, edge, or cloud architectures;
- Design of robust/optimal/adaptive control systems using digital twins for uncertainty quantification;
- Digital twins in the design of fault-tolerant controllers and expert systems

Guest Editor

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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