Special Issue

Digital Twinning and Causality Analysis for Optimizing the Design and Operation of Electronic Systems

Message from the Guest Editors

Digital twinning is transforming the way electronic systems are designed, operated, and optimized by creating dynamic virtual models that replicate their real-world counterparts in real time. This Special Issue of *Electronics* focuses on leveraging digital twins to enhance the design, operation, and performance of electronic systems across various applications. By integrating real-time data, simulation, and artificial intelligence (AI)-driven models, digital twins enable deeper insights into system behavior, facilitating optimization throughout the lifecycle of electronic systems. A key aspect of this Special Issue is the inclusion of causality analysis, which enhances digital twins by identifying cause-and-effect relationships within complex systems. This allows for better fault diagnosis, root cause analysis, design, and more precise system adjustments.

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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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