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Advances in Fractional-Order Embedded Systems

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Message from the Guest Editors

One of the many advantages of fractional-order calculus, over its integer-order counterpart, is the possibility of more accurate mathematical modeling. This feature is essential in real-life applications.

The field of fractional-order embedded systems comprises a class of electronics that incorporate concepts from fractional calculus into their modeling and design. These concepts, which focus on non-integer-order differentiation (and/or integration) mathematical operations, are being explored across many fields of science and engineering, such as chaotic oscillators, filters, cryptography, communications, bioengineering, control systems, robotics, energy storage devices (e.g., super-capacitors, batteries), wireless power transfer, and image processing.

The present Special Issue aims to collect original research papers and surveys with meaningful contributions on topics relating to the theory, design, implementation, and application of fractional-order circuit theory in embedded systems.