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Bifurcation, Chaos, and Fractals in Fractional-Order Electrical and Electronic Systems

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Message from the Guest Editors

Fractional-order model and the design of the fractionalorder controller have become a current hot topic. However, fractional-order electrical and electronic systems have complex dynamical properties, among them, bifurcation, chaos, and fractals are typical nonlinear phenomena and will have an important effect on the system's performance. Thus, it is necessary to reveal the underlying mechanism of the occurrence of these typical nonlinear phenomena and design a controller to make these typical nonlinear phenomena disappear.

This Special Issue aims to focus on bifurcation, chaos, and fractals in fractional-order electrical and electronic systems and their control; continuous/discrete modeling and stability analysis of fractional-order electrical and electronic systems; multi-timescale and entropy analysis of fractional-order electrical and electronic systems; and optimization of the control accuracy for fractional-order electrical and electronic systems. Improvements and applications of fractional calculus in electrical and electronic systems are also required.



