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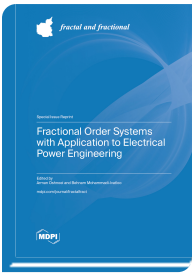
Special Issue Reprint

Fractional Order Systems with Application to Electrical Power Engineering



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This Special Issue of *Fractal and Fractional* entitled "Fractional Order Systems with Application to Electrical Power Engineering" showcases the latest research in fractional-order system applications for power engineering. Highlighting fractional calculus's role in modeling, design, analysis, and control, this Special Issue focuses on power electronics, electric motor drives, power systems, and more. Fractional calculus, known for modeling complex dynamic behaviors with higher precision than traditional methods, introduces memory properties and historical dependence, enhancing design flexibility. Covering a range of topics from modeling and simulation to robust control strategies and energy efficiency, this Special Issue places a special emphasis on frequency and voltage control, along with stability in fractional-order energy systems. It addresses the integration of power converters, power quality, and reliability, offering insights into improving performance and resilience in energy systems. Targeted at professionals in electrical and power engineering, this collection enriches the academic and practical discourse, providing solutions to contemporary challenges in system design and optimization. It stands as a significant contribution to advancing fractional-order systems, underscoring their importance in energy system efficiency and stability.

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