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Titolo	Analog/Digital Implementation of Fractional Order Chaotic Circuits and Applications [[electronic resource] /] / by Esteban Tielo-Cuautle, Ana Dalia Pano-Azucena, Omar Guillén-Fernández, Alejandro Silva-Juárez
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Nota di contenuto	Integer and Fractional Chaotic Circuits and Systems -- Characteristics of chaotic systems -- Simulation and optimization of fractional-order chaotic systems -- Analog implementations of fractional-order chaotic systems -- Digital implementations of fractional-order chaotic systems -- Synchronization and applications of fractional-order chaotic systems -- Conclusions.
Sommario/riassunto	This book details the simulation and optimization of integer and fractional-order chaotic systems, and how they can be implemented in the analog and digital domains using FPAA's and FPGAs. Design guidelines are provided to use commercially available electronic devices, and to perform hardware descriptions of integer/fractional-order chaotic systems programming in VHDL. Finally, several engineering applications oriented to cryptography, internet of things, robotics and chaotic communications, are detailed to highlight the usefulness of FPAA/FPGA based integer/fractional-order chaotic systems. Provides guidelines to implement fractional-order derivatives

using commercially available devices; Describes details on using FPAAs to approach fractional-order chaotic systems; Includes details on using FPGAs to approach fractional-order chaotic systems, programming in VHDL and reducing hardware resources; Discusses applications to cryptography, internet of things, robotics and chaotic communications.
