

IEEE Journal on Emerging and Selected Topics in Circuits and Systems

Special Issue: FRACTIONAL-ORDER CIRCUITS AND SYSTEMS

Fractional-order circuits and system design is an emerging field incorporating concepts from fractional calculus into electrical circuits and systems; showing diverse applications and immense potential in control systems, signal processing, biomedical instrumentation, and many more. As far as circuit design is concerned, there is a tremendous need to continue to generalize circuit design and analysis techniques from the narrow integer-order subset to the more general fractional-order domain and explore the unique properties of these circuits and systems.

The aim of this special issue is to expand on the analysis and design of circuits and systems approached from a fractional-order perspective. Original research papers are solicited, but not restricted to, the following areas:

- Circuit Theory of fractional-order systems
- Systematic design and realization processes of fractional-order circuits
- Analog and Digital approximation techniques of fractional systems
- Fractional-order modeling and applications (e.g. in biochemistry, biomedicine, and hybrid power systems)
- CAD tools and algorithms for simulations of fractional-order circuits
- Signal Processing based on fractional-order models
- System/sub-system level applications

Authors are invited to submit to JETCAS via the JETCAS website and according to JETCAS policies and procedures. For details see <http://jetcas.polito.it/index.html>.

Timeline:

Paper submission - February 15th, 2013
First round of reviews completed - April 15th, 2013
Revised manuscripts due - May 15th, 2013
Notification of acceptance - June 1st, 2013
Final manuscripts due date - July 1st, 2013
Targeted Issue date-September, 2013

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