

Special Session on

Chaotic Systems: Analysis, Electronic Realization and Applications

Over the last two decades, chaotic systems have attracted more and more the interest of the research community in various fields of specialization, namely: physics, economics, mathematics, electronics, and so on. Due to the nature and rapid growth that has occurred in this area, engineering applications are emerging areas for future research. For instance, the simulation of chaotic phenomena and their realization with electronic devices makes possible the development of applications in robotics, random number generators, noise generators, cryptography, neuronal networks, chaotic secure communications and other complex systems. However, recent advances in circuits' theory and computational methodologies have provided new ways of understanding many complex phenomena, via novel computer tools for nonlinear dynamics, and novel realizations with new devices. That way, this Special Session aims at presenting the latest achievements, trends, research solutions and applications of chaotic systems.

Topics of interests include, but are not limited to:

- Nonlinear circuit's theory
- Chaotic models and attractors
- Novel computation algorithms for studying nonlinear circuits
- Experimental study of nonlinear circuits
- Nonlinear circuit simulation
- Modelling of chaotic phenomena with nonlinear circuits
- Bifurcation and chaos in nonlinear circuits
- Control of oscillations and chaos
- Chaotic synchronization
- Memristors
- Estimation of chaos in signals
- Chaotic secure communication systems
- Chaos and multi channel communication
- Chaotic cryptosystems
- Chaotic neural networks
- Applications of nonlinear circuits
- Chaotic power electronics
- Any other topic related to the title