

Contents

Part I: Methodologies

1	Towards Automatic Structural Analysis of Mixed-Signal Circuits	3
	<i>Michael Eick, Helmut Graeb</i>	
2	Efficient Synthesis Methods for High-Frequency Integrated Passive Components and Amplifiers	27
	<i>Bo Liu, Georges Gielen</i>	
3	Self-Healing Circuits Using Statistical Element Selection	53
	<i>Vanessa H.-C. Chen, Gokce Keskin, Lawrence T. Pileggi</i>	
4	Improving Design Feature Reuse in Analog Circuit Design through Topological-Symbolic Comparison and Design Concept Combination	77
	<i>Cristian Ferent, Alex Doboli</i>	
5	Graph-Based Symbolic and Symbolic Sensitivity Analysis of Analog Integrated Circuits	101
	<i>S. Rodriguez-Chávez, A.A. Palma-Rodriguez, E. Tlelo-Cuautle, S.X.-D. Tan</i>	
6	A Designer-Assisted Analog Synthesis Flow	123
	<i>Farakh Javid, Stéphanie Youssef, Ramy Iskander, Marie-Minerve Louërat</i>	
7	Analog Circuit Design Based on Robust POFs Using an Enhanced MOEA with SVM Models	149
	<i>Nuno Lourenço, Ricardo Martins, Manuel Barros, Nuno Horta</i>	

Part II: Techniques

8	Applications of Symbolic Analysis in the Design of Analog Circuits	171
	<i>Francesco Grasso, Antonio Luchetta, Maria Cristina Piccirilli</i>	
9	Synthesis of Electronically-Controllable Signal Processing/Signal Generation Circuits Using Modern Active Building Blocks	195
	<i>Raj Senani, D.R. Bhaskar, A.K. Singh, V.K. Singh</i>	
10	Synthesis of Generalized Impedance Converter and Inverter Circuits Using NAM Expansion	223
	<i>Ahmed M. Soliman</i>	
11	Fractional Step Analog Filter Design	243
	<i>Todd Freeborn, Brent Maundy, Ahmed Elwakil</i>	
12	The Flipped Voltage Follower: Theory and Applications	269
	<i>Jaime Ramirez-Angulo, Maria Rodanas Valero-Bernal, Antonio Lopez-Martin, Ramon G. Carvajal, Antonio Torralba, Santiago Celma-Pueyo, Nicolás Medrano-Marqués</i>	
13	Synthesis of Analog Circuits Using Only Voltage and Current Followers as Active Elements	289
	<i>Raj Senani, D.R. Bhaskar, A.K. Singh, R.K. Sharma</i>	
14	Design of Setable Active Lossy Inductors	317
	<i>Marian Pierzchała, Mourad Fakhfakh</i>	
15	MIDAS: Microwave Inductor Design Automation on Silicon	337
	<i>Luca Aluigi, Federico Alimenti, Luca Roselli, Domenico Pepe, Domenico Zito</i>	
16	LC-VCO Design Challenges in the Nano-Era	363
	<i>Pedro Pereira, Helena Fino, Mourad Fakhfakh, Fernando Coito, Mário Ventim-Neves</i>	
	Author Index	381