

Table of Contents

<u>Keynote Lecture 1: Ant Decision Systems for Combinatorial Optimization with Binary Constraints</u>	16
<i>Nicolas Zufferey</i>	
<u>Keynote Lecture 2: A New Framework for the Robust Design of Analog Blocks Using Conic Uncertainty Budgeting</u>	17
<i>Claudio Talarico</i>	
<u>Keynote Lecture 3: On Mutual Relations Between Bioinspired Algorithms, Deterministic Chaos and Complexity</u>	18
<i>Ivan Zelinka</i>	
<u>Zernike Polynomials and their Spectral Representation</u>	21
<i>Miroslav Vlcek, Pavel Sovka</i>	
<u>Image Registration using Local Invariant Relational Gabor Features for Automated Underwater Images Mosaicing</u>	26
<i>Wan Nural Jawahir Hj Wan Yussof, Muhammad Suzuri Hitam, Ezmahamrul Afreen Awalludin, Zainudin Bachok</i>	
<u>Hybrid Congestion Sharing and Route Repairing Protocol for Bluetooth Networks</u>	33
<i>Sabeen Tahir, Zafarullah Md Said, Sheikh Tahir Bakhsh</i>	
<u>QoS Scheduling Algorithm for Videoclips Denoising</u>	40
<i>Sorin Zoican</i>	
<u>Implementation of an LDPC decoder for IEEE 802.11n using VivadoTM High-Level Synthesis</u>	45
<i>Ernest Scheiber, Guido H. Bruck, Peter Jung</i>	
<u>A New Framework for the Robust Design of Analog Blocks using Conic Uncertainty Budgeting</u>	49
<i>Claudio Talarico, Jin Sun, Priyank Gupta, Janet Wang</i>	
<u>Integrating Emerging Network Technologies to Heart Rate Monitoring System to Investigate Transmission Stability and Accuracy : Preliminary Results</u>	57
<i>Nurul Fauzana Binti Imran Gulcharan, Muhammad Afham Bin Mohd Azhar, Hanita Daud, Nursyarizal Mohd Nor, Taib Ibrahim</i>	
<u>Fixed-Point Hestenes Algorithm for Singular Value Decomposition of Symmetric Matrices</u>	63
<i>Tapan Pradhan, Bibek Kabi, Aurobinda Routray</i>	
<u>Indoor Sensor Data Transmission for Energy-Saving Buildings</u>	71
<i>Namyong Kim, Hyung-Gi Byun</i>	

<u>Parameterized Basis Functions for Numerically Stable Behavioral Modeling of RF Power Amplifiers</u>	76
<i>Afef Harguem, Ali Gharsallah, Nouredidne Boulejfen, Fadhel Ghannouchi</i>	
<u>Characterization Of N-Type Al_xGa_{1-x}As/GaAs Heterostructures Grown ByElemental-Arsenic-Based-MOCVD</u>	82
<i>J. Martínez-Juárez, R. Castillo-Ojeda, J. E. Flores-Mena, J. Díaz-Reyes, O. Zaca-Moran, M. Galván-Arellano, E. López-Cruz</i>	
<u>Characterization of ZnS/GaAs Nanostructures Grown by RF Magnetron Sputtering</u>	88
<i>J. Diaz-Reyes, O. Zaca-Moran, J. Martinez-Juárez, R. Castillo-Ojeda, M. Galvan-Arellano, E. Lopez-Cruz, E. Flores-Mena</i>	
<u>Radio Channel Models for Wireless Sensor Networks in Smart City Applications</u>	95
<i>Andrej Hrovat, Tomaž Javornik</i>	
<u>A Useful Application of a Simulator for Leak Events in Pipelines</u>	100
<i>Luis Ángel Alarcón-Ramos, Pedro Pablo González Pérez</i>	
<u>A 2.4-GHz LNA: Design, Simulation, and Comparison in 0.2-μm GaAs p-HEMT Process and 0.35-μm SiGe BiCMOS HBT Process</u>	109
<i>Farshad Eshghabadi, Fatemeh Banitorfian, Massoud Dousti, Norlaili Mohd Noh</i>	
<u>A Novel Switched-Turn Continuously-Tunable Liquid RF MEMS Solenoid Inductor</u>	113
<i>Fatemeh Banitorfian, Farshad Eshghabadi, Asrulnizam Abd Manaf, Norlaili Mohd Noh, Mohd Tafir Mustaffa, Othman Sidek</i>	
<u>Comparison of Transient Thermography Methods for Defect Detecting in Electronic Components and Modules</u>	118
<i>Anna Andonova</i>	
<u>Image Compression Approach using Segmentation and Total Variation Regularization</u>	123
<i>Ahmad Shahin, Walid Moudani, Fadi Chakik</i>	
<u>Static Hybrid Multihop Relaying</u>	128
<i>Sami Touati, Hatem Boujemaa</i>	
<u>Interference Aware Routing Protocols for Underlay Cognitive Radio Networks</u>	133
<i>Sami Touati, Hatem Boujemaa, Nazha Abed</i>	
<u>Study of Handover Techniques for 4G Network MIMO Systems</u>	137
<i>Jian-Sing Wang, Jeng-Shin Sheu</i>	
<u>Some Implications of a Scale Invariant Model of Statistical Mechanics to Boltzmann versus Shannon Entropy in Thermodynamics and Information Theory</u>	144
<i>Siavash H. Sohrab</i>	

<u>A Segment-Based Tree Traversal Algorithm for Enhancing Data Gathering in Wireless Sensor Networks</u>	154
<i>Mohammad A. Jassim, Wesam A. Almobaideen</i>	
<u>Least Squares 3D Algorithm for the Study of Deformations with Terrestrial Laser Scanner</u>	162
<i>Vincenzo Barrile, Giuseppe M. Meduri, Giuliana Bilotta</i>	
<u>Interfacing C and TMS320C6713 Assembly Language (Part II)</u>	166
<i>Abdullah A. Wardak</i>	
<u>TTS-Driven Embodied Conversation Avatar for UMB-SmartTV</u>	174
<i>Matej Rojc, Zdravko Kačič, Marko Presker, Izidor Mlakar</i>	
<u>Performance of Beamforming for Smart Antenna using Traditional LMS Algorithm for Various Parameters</u>	181
<i>Vishal V. Sawant, Mahesh Chavan</i>	
<u>High Voltage Pulse Generator by Connecting Normal Coaxial Cable in Series and in Parallel without using Blumlein Method</u>	187
<i>Hitoshi Kijima, Koji Ochi</i>	
<u>Authors Index</u>	192

