

2014 Complexity in Engineering

(COMPENG 2014)

Barcelona, Spain
16-17 June 2014



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Program

Day 1 - Monday, June 16, 2014

Time	Activity
08:30 - 09:00	Registration
09:00 - 09:15	Conference Opening - Welcome Address <i>M. Rosas-Casals (Chair of COMPENG 2014)</i> <i>A. Grau (Local Organizing Committee Chair of COMPENG 2014)</i>
Session 1. Risk and critical infrastructures (Chair. H. Martínez)	
09:15 - 09:45	Talk 1. L. Buzna <i>Congestion dependencies in the European gas pipeline network during crises</i>
09:45 - 10:15	Talk 2. S. Bruno <i>Tight Unit Commitment models with Optimal Transmission Switching: Connecting the dots with Perturbed Objective Function</i>
10:15 - 10:45	Talk 3. L. Luo <i>Spatial optimality in power distribution networks</i>
10:45 - 11:15	Talk 4. E. Guerra <i>Policy-based optimization for matching validation algorithm in monocular robotics</i>
11:15 - 11:45	Coffee Break
Session 2. Laser dynamics I (Chair. H. Martínez)	
11:45 - 12:15	Talk 5. S. Donati <i>The Incipit of Complexity in Self-Coupled Lasers: from Deterministic to Periodic Oscillations to Chaos</i>
12:15 - 12:45	Talk 6. G. Aromataris <i>Secure transmission network using chaotic lasers</i>
12:45 - 13:15	Talk 7. M. Ciszak <i>Experimental characterization of the dynamics in a network of chaotic FitzHugh-Nagumo neurons</i>
13:15 - 14:30	Lunch break
Session 3. Laser dynamics II (Chair. H. Martínez)	
14:30 - 15:00	Talk 8. J. Domingo <i>Complex Parametric Filters Laboratory with a Noise Generator and Data Acquisition</i>
15:00 - 15:30	Talk 9. R. Meucci <i>Polarization dynamics in a transverse multimode class B laser: role of the optical feedback</i>
15:30 - 16:00	Talk 10. H. Al Hussein <i>Mixed Mode Oscillations and chaotic spiking in Quantum Dot Light Emitting Diode</i>
16:00 - 16:20	Wrapping Up. Chair: M. Rosas-Casals

Day 2 - Tuesday, June 17, 2014

Time	Activity
Session 4. Logistics (Chair: A. Grau)	
08:45 - 09:15	Talk 11. S. Valverde <i>Evolution of Patent Citation Networks</i>
09:15 - 09:45	Talk 12. E. Costamagna <i>A tentative effort to model hunting behaviors of some old locomotives by means of simple nonlinear circuit equations</i>
Session 5. Linear Converters (Chair: M. Rosas-Casals)	
09:45 - 10:15	Talk 13. A. Grau-Saldes <i>Complex Constant Switching Frequency Control for Linear-Assisted DC-DC Switching Converters</i>
10:15 - 10:45	Talk 14. H. Martinez-Garcia <i>Complex Current-Mode Control Used for Linear-Assisted DC/DC Converters</i>
10:45 - 11:15	Talk 15. H. Martinez-Garcia <i>Linear-Assisted DC/DC Converters with Variable Frequency: On their Complex Control Strategies</i>
11:15 - 11:45	<i>Coffee Break</i>
Session 6. Sensors and Actuators (Chair: M. Rosas-Casals)	
11:45 - 12:15	Talk 16. H. Martinez-Garcia <i>Complex Intelligent Field Transmitter (ITF) Based on Microcontroller</i>
12:15 - 12:45	Talk 17. H. Martinez-Garcia <i>Complex Chaotic Behaviour in On-Chip Automatic Tuning Loops for Continuous-Time Filters</i>
12:45 - 13:15	Talk 18. M. Manzanares <i>Complexity Reduction in an Audio Identification Model for Mobile Robots Navigation</i>
13:15 - 13:45	<i>Concluding remarks</i>
13:45 - 15:00	<i>Lunch. End of COMPENG2014</i>