

IEEE SSST 2012 Conference Program Schedule

Day 1	Sunday, 11 March 2012	Location
18:30 p.m. – 20:00 p.m.	Reception at Courtyard By Marriott Kendall Town 9815 Lantern Street Jacksonville, FL 32225	Courtyard By Marriott Kendall Town

Day 2	Monday, 12 March 2012	Location/ Paper
8:30 a.m. – 11:40 a.m.	Registration <i>Informal Discussions</i>	Bldg. 50, Room 1400
9:30 a.m. – 9:40 a.m.	Chairs' Welcome and Opening Remarks <i>Dr. Chiu Choi, University of North Florida</i> <i>Dr. Jeffrey Fan, Florida International University</i>	Bldg. 50, Room 1202
9:40 a.m. – 10:20 a.m.	Plenary Session - Keynote Speech Topic: <i>A Canonical Form for the Formulation and Solution of Multivariable, Optimal Energy-Harvesting Problems</i> Speaker: <i>Dr. C. D. Johnson</i> Distinguished Professor, Dept. of Electrical Engineering University of Alabama, Huntsville	Bldg. 50, Room 1202
10:20 a.m. – 10:40 a.m.	Coffee Break	
10:40 a.m. – 11:40 a.m.	SA-1 Parallel Paper Session - System Theory and Control I <i>Session chair: Dr. Ian Gravagne</i>	Bldg. 50, Room 1402
	10:40 Paper ID #43 <ul style="list-style-type: none"> • Title: <i>Application of Redundancy in Observability and Controllability towards Fault Tolerant System Design</i> • Author: <i>Benjamin Walker (Presenter) (USA)</i> 	A-1
	11:00 Paper ID #33 <ul style="list-style-type: none"> • Title: <i>Time Scale-Based Observer Design for Battery State-Of-Charge Estimation</i> • Authors: <i>Ian Gravagne (Presenter), John Davis, Dylan Poulsen (USA)</i> 	A-2
	11:20 Paper ID #28 <ul style="list-style-type: none"> • Title: <i>On the Stability of Mu-Varying Dynamic Equations on Stochastically Generated Time Scales</i> • Authors: <i>Dylan Poulsen (Presenter), John Davis, Ian Gravagne, Robert Marks (USA)</i> 	A-3

<p>SB-1 Parallel Paper Session - System Theory and Control II <i>Session chair: Dr. John Stensby</i></p> <p>10:40 Paper ID #36</p> <ul style="list-style-type: none"> • Title: Genetic Approach to Pole Placement in Linear State Space Systems • Authors: Arnold Cassell (Presenter), Chiu Choi (USA) <p>11:00 Paper ID #6</p> <ul style="list-style-type: none"> • Title: PLL Bifurcation Analysis Via Smooth Periodic Extension • Author: John Stensby (Presenter) (USA) <p>11:20 Paper ID #16</p> <ul style="list-style-type: none"> • Title: Continuation of a Catalog of Explicit, Closed-Form Symbolic Expressions for the Dual-Kernel, Matrix Convolution Integral for Some Simple Generic Examples in Discrete/Continuous Control Theory • Authors: Ashley Hunt (Presenter), C. D. Johnson (USA) 	Bldg. 50, Room 1404
	B-1
	B-2
	B-3
<p>SC-1 Parallel Paper Session - Nanotechnology Systems and Energy Systems <i>Session chair: Dr. Ron Pieper</i></p> <p>10:40 Paper ID #47</p> <ul style="list-style-type: none"> • Title: A Practical Model to Analytically Characterize the Polarization Hysteresis of Ferroelectric Capacitors • Authors: Bikash Shrestha, Ron Pieper (Presenter), Wudyalew Wondmagegn, Duo Mao, Israel Mejia, Harvey Stiegler, Bruce Gnade, Manuel Quevedo (USA) <p>11:00 Paper ID #49</p> <ul style="list-style-type: none"> • Title: Observations on Frequency Sensitivity of Memristors • Authors: Swetha Gazabare, Ron Pieper (Presenter), Wudyalew Wondmagegn (USA) <p>11:20 Paper ID #59</p> <ul style="list-style-type: none"> • Title: An Efficient Algorithm for Dual-Voltage Design without Need for Level Conversion • Authors: Mridula Allani (Presenter), Vishwani Agrawal (USA) 	Bldg. 50, Room 1406
	C-1
	C-2
	C-3

11:40 a.m. – 13:20 p.m.	Lunch at Student Union Building West University of North Florida Bldg. 58W, Room 3703	Bldg. 58W, Room 3703
13:20 p.m. – 15:00 p.m.	Registration <i>Informal Discussions</i>	Bldg. 50, Room 1400
13:20 p.m. – 14:40 p.m.	SA-2 Parallel Paper Session - Computer Engineering I <i>Session chair: Dr. Charles Castello</i>	Bldg. 50, Room 1402
	13:20 Paper ID #18 <ul style="list-style-type: none"> • Title: <i>Software-Hardware Co-Design for Video Coding Acceleration</i> • Authors: <i>Xinwei Niu, Luis Galarza (Presenter), Jeffrey Fan (USA)</i> 	A-4
	13:40 Paper ID #66 <ul style="list-style-type: none"> • Title: <i>Near-Optimal Placement of Monitoring Wells for the Detection of Potential Contaminant Arrival in a Regional Aquifer at Los Alamos National Laboratory</i> • Authors: <i>Charles Castello (Presenter), Mark Williamson, Kurt Gerdes, Dylan Harp, Velimir Vesselinov (USA)</i> 	A-5
	14:00 Paper ID #42 <ul style="list-style-type: none"> • Title: <i>Random Number Generators Using Cellular Automata Implemented on FPGAs</i> • Authors: <i>Jonathan M. Comer, Juan Cerda, Chris Martinez, David Henry Hoe (Presenter) (USA)</i> 	A-6
	14:20 Paper ID #62 <ul style="list-style-type: none"> • Title: <i>An Efficient Cluster Update Model in MANET</i> • Authors: <i>Dongsheng Chen, Alireza Babaei (Presenter), Prathima Agrawal (USA)</i> 	A-7
	SB-2 Parallel Paper Session - Signal and Image Processing I <i>Session chair: Dr. Chris Karlgaard</i>	Bldg. 50, Room 1404
	13:20 Paper ID #34 <ul style="list-style-type: none"> • Title: <i>Efficient FPGA Implementation of Steerable Gaussian Smoothers</i> • Authors: <i>Arjun Kumar Joginipelly (Presenter), Alvaro Varela, Remy Schott, Zachary Fitzsimmons, Dimitrios Charalampidis (USA)</i> 	B-4
	13:40 Paper ID #32 <ul style="list-style-type: none"> • Title: <i>Median Filter on FPGAs</i> 	B-5

	<ul style="list-style-type: none"> • Authors: Madhuri Gundam (Presenter), Dimitrios Charalampidis (USA) 	
	<p>14:00 Paper ID #64</p> <ul style="list-style-type: none"> • Title: FPGA Implementation of Graph Cut Based Image Thresholding • Authors: Dimitrios Charalampidis, Arjun Kumar Juginipelly, Joseph Anderson, Madhuri Gundam (Presenter) (USA) 	B-6
	<p>14:20 Paper ID #13</p> <ul style="list-style-type: none"> • Title: Enhancement of Stereoscopic Depth Estimation by the Use of Motion Information • Authors: Sandra Liliana Cancino-Suárez (Presenter), Krzysztof Klimaszewski, Olgierd Stankiewicz, Marek Domanski (Colombia) 	B-7
	<p>SC-2 Parallel Paper Session - Robotics I Session chair: Dr. Asad Davari</p> <p>13:20 Paper ID #29</p> <ul style="list-style-type: none"> • Title: Robot Operating Systems: Bridging the Gap between Human and Robot • Authors: John Kerr (Presenter), Kevin Nickels (USA) <p>13:40 Paper ID #44</p> <ul style="list-style-type: none"> • Title: Teleoperaton Setup for Wire-Cutting Application in the Field • Authors: Brandon Peters (Presenter), Rodney Roberts, Carl Moore (USA) <p>14:00 Paper ID #45</p> <ul style="list-style-type: none"> • Title: Modeling and Analysis of Quadrotor Using Sliding Mode Control • Authors: Ankit Patel (Presenter), Dhaval Vyas, Mahesh Patel (India) <p>14:20 Paper ID #46</p> <ul style="list-style-type: none"> • Title: Hardware Configuration of Hexapod Robot to Force Feedback Control Development • Authors: Rafael Bachega (Presenter), A. B. Campo, Ricardo Pires (Brazil) 	<p>Bldg. 50, Room 1406</p> <p>C-4</p> <p>C-5</p> <p>C-6</p> <p>C-7</p>
14:40 p.m. – 15:00 p.m.	Coffee Break	

15:00 p.m. – 16:20 p.m.	<p>SA-3 Parallel Paper Session - Computer Engineering II Session chair: <i>Dr. Vishwani Agrawal</i></p> <p>15:00 Paper ID #53</p> <ul style="list-style-type: none"> • Title: <i>A Fault Tolerant Parallel-Prefix Adder for VLSI and FPGA Design</i> • Authors: <i>Chris Martinez, L. P. Deepthi Bollepalli, David Henry Hoe (Presenter) (USA)</i> <p>15:20 Paper ID #21</p> <ul style="list-style-type: none"> • Title: <i>An Evaluation of CMOS Adders in Deep Submicron Processes</i> • Authors: <i>Rahul Jesuran Gera, David Henry Hoe (Presenter) (USA)</i> <p>15:40 Paper ID #65</p> <ul style="list-style-type: none"> • Title: <i>All-Digital Replica Techniques for Managing Random Mismatch in Time-To-Digital Converters</i> • Authors: <i>Suraj Sindia (Presenter), Foster Dai, Vishwani Agrawal (USA)</i> <p>16:00 Paper ID #12</p> <ul style="list-style-type: none"> • Title: <i>Compact Schemes in Application to Singular Reaction-Diffusion Equations</i> • Author: <i>Matthew Beauregard (Presenter) (USA)</i> 	<p>Bldg. 50, Room 1402</p> <p>A-8</p> <p>A-9</p> <p>A-10</p> <p>A-11</p>
	<p>SB-3 Parallel Paper Session - Signal and Image Processing II Session chair: <i>Dr. Ranjith Munasinghe</i></p> <p>15:00 Paper ID #54</p> <ul style="list-style-type: none"> • Title: <i>Construction of Perspective Views from Panoramic Images of a Vision System That Uses a Hyperbolic Mirror</i> • Authors: <i>Ranjith Munasinghe (Presenter), Sunil Shantha Polmottawegedara, Asad Davari (USA)</i> <p>15:20 Paper ID #17</p> <ul style="list-style-type: none"> • Title: <i>Desensitized Divided Difference Filtering for Induction Motor State Estimation</i> • Authors: <i>Chris Karlgaard (Presenter), Haijun Shen (USA)</i> <p>15:40 Paper ID #60</p> <ul style="list-style-type: none"> • Title: <i>Parallel Multitarget Tracking Particle Filters Using Graphics Processing Unit</i> 	<p>Bldg. 50, Room 1404</p> <p>B-8</p> <p>B-9</p> <p>B-10</p>

	<ul style="list-style-type: none"> • Authors: Jiande Wu (Presenter), Vesselin Jilkov (USA) 	
	<p>16:00 Paper ID #63</p> <ul style="list-style-type: none"> • Title: Dispersion-Eigenvalue Determined Order and Sampling Period • Author: Sammie Giles (Presenter) (USA) 	B-11
	<p>SC-3 Parallel Paper Session - Robotics II Session chair: Dr. Sami Khorbotly</p>	Bldg. 50, Room 1406
	<p>15:00 Paper ID #56</p> <ul style="list-style-type: none"> • Title: Coordinated Multi-Robot Exploration of a Building for Search and Rescue Situations • Authors: Steven Kibler, Dejan Raskovic (Presenter) (USA) 	C-8
	<p>15:20 Paper ID #3</p> <ul style="list-style-type: none"> • Title: A Camera-Based Target Tracking System for Football Playing Robots • Authors: Andrew Stephon, Sami Khorbotly (Presenter) (USA) 	C-9
	<p>15:40 Paper ID #30</p> <ul style="list-style-type: none"> • Title: Particle Filter Based Localization of the Nao Biped Robots • Authors: Ehsan Hashemi (Presenter), Maani Ghaffari Jadidi, Majid Lashgarian, Mohammad Shafiei Rezvani Nejad, Mostafa Yaghobi (Iran) 	C-10
	<p>16:00 Paper ID #57</p> <ul style="list-style-type: none"> • Title: Modeling Study of an Implantable Centrifugal Blood Pump Actuator with Redundant Sensorless Control • Authors: Tarcísio Leao (Presenter), Eduardo Bock, Jeison Fonseca, Aron Andrade, André Cavalheiro, Beatriz Uebelhart, José Cardoso, Ivan Chabu, A. B. Campo (Brazil) 	C-11
18:30 p.m. – 20:30 p.m.	<p>Banquet at Student Union Building West University of North Florida Bldg. 58W, Room 3703</p>	Bldg. 58W, Room 3703

Day 3	Tuesday, 13 March 2012	Location/ Paper
8:00 a.m. – 9:00 a.m.	Steering Committee Meeting (members only)	Bldg. 50, Room 3300
9:20 a.m. – 11:00 a.m.	SA-4 Parallel Paper Session – Network and Sensors <i>Session chair: Dr. Alireza Babaei</i>	Bldg. 50, Room 1402
	9:20 Paper ID #61 <ul style="list-style-type: none"> • Title: <i>SCL: A Cross-Layer Protocol for Wireless Sensor Networks</i> • Authors: <i>Min Zhang, Alireza Babaei (Presenter), Prathima Agrawal (USA)</i> 	A-12
	9:40 Paper ID #39 <ul style="list-style-type: none"> • Title: <i>An Embedded TCP/IP Hard Core for Smart Grid Information and Communication Networks</i> • Authors: <i>Rami Amiri (Presenter), Omar Elkeelany (USA)</i> 	A-13
	10:00 Paper ID #38 <ul style="list-style-type: none"> • Title: <i>Distributed Network Failure Recovery with Tie-Sets</i> • Authors: <i>Kiyoto Kadena (Presenter), Norihiko Shinomiya (Japan)</i> 	A-14
	10:20 Paper ID #68 <ul style="list-style-type: none"> • Title: <i>HTG Prediction Algorithm for SoC Design</i> • Authors: <i>Ruei-Xi Chen (Presenter), Jian-Jyh Kao, Jeffrey Fan (Taiwan)</i> 	A-15
	SB-4 Parallel Paper Session - Power Systems <i>Session chair: Dr. Chiu Choi</i>	Bldg. 50, Room 1404
	9:20 Paper ID #1 <ul style="list-style-type: none"> • Title: <i>Dynamic Simulation of Cage Rotor Induction Machine-A Simplified and Modular Approach</i> • Author: <i>Omonowo David Momoh (Presenter) (USA)</i> 	B-12
	9:40 Paper ID #2 <ul style="list-style-type: none"> • Title: <i>LabVIEW Based Automatic Paralleling of Synchronous Generator System</i> • Authors: <i>Omonowo David Momoh (Presenter), Nicholas Dykhuizen, Iskandar Hack, Gary Steffen, Samuel Loeffler (USA)</i> 	B-13

	<p>10:00 Paper ID #23</p> <ul style="list-style-type: none"> • Title: Calculation of Mutual Inductance from Magnetic Vector Potential for Wireless Power-Transfer Applications • Authors: David Beams (Presenter), Sravan Annam (USA) <p>10:20 Paper ID #50</p> <ul style="list-style-type: none"> • Title: Automated Analysis of Voltage and Current Waveforms During Faults • Authors: Wen Fan (Presenter), Yuan Liao (USA) <p>10:40 Paper ID #40</p> <ul style="list-style-type: none"> • Title: Impacts of Flickers, Harmonics and Faults on Synchronous Generator Operations • Authors: Wen Fan (Presenter), Yuan Liao (USA) 	<p>B-14</p> <p>B-15</p> <p>B-16</p>
	<p>SC-4 Parallel Paper Session – Nonlinear Systems and Control Session chair: Dr. Steven Gray</p> <p>9:20 Paper ID #7</p> <ul style="list-style-type: none"> • Title: A Hopf Algebra for Product Connections of Analytic Nonlinear Input-Output Systems • Author: Steven Gray (Presenter) (USA) <p>9:40 Paper ID #8</p> <ul style="list-style-type: none"> • Title: On the Radius of Convergence of Mixed Cascades of Analytic Nonlinear Input-Output Systems • Author: Makhin Thitsa (Presenter), W. Steven Gray (USA) <p>10:00 Paper ID #58</p> <ul style="list-style-type: none"> • Title: Performance Tests for a Micro-Integrator Algorithm Which Reduces the Numerical Butterfly Effect in Time Evolving Nonlinear Systems • Authors: Joshua Jemegbe, Ron Pieper (Presenter) (USA) <p>10:20 Paper ID #35</p> <ul style="list-style-type: none"> • Title: Multi-Sensors and Multi-Actuators Based Information Scheduling for Gas Turbine Networked Control Systems • Authors: Jianhua Gao (Presenter), Yongbao Liu, Yingyu Huang (China) 	<p>Bldg. 50, Room 1406</p> <p>C-12</p> <p>C-13</p> <p>C-14</p> <p>C-15</p>
<p>11:00 a.m.</p>	<p>End of SSST 2012 Conference</p>	