

Complex Adaptive Systems Conference

November 3-5, 2014 | Philadelphia, PA

Schedule of Events

Monday, November 3, 2014

8:00 am	5:00 pm	Registration Desk Open - Prefunction Foyer
8:00 am	9:00 am	Continental Breakfast – Prefunction Foyer
9:00 a.m.	10:00 a.m.	Opening Session and Plenary – Adams Room <i>Chris Paredis, PhD</i> Program Director CMMI/ESD & SYS National Science Foundation, USA Title: “Fundamental Research in Systems Engineering”
10:00 am	10:30 am	MORNING BREAK - Prefunction Foyer
10:30 am	12:00 pm	Concurrent Technical Sessions
<p><i>Session 1</i></p> <p>Room: Adams System of Systems: System Behavior Modeling <i>Session Chair: Charles O. Adler</i> <i>Missouri University of Science and Technology</i></p> <p>65-On the Flexibility of Systems in System of Systems Architecting Dincer Konur, Hadi Farhangi, Cihan H. Dagli; <i>Missouri University of Science and Technology, USA</i></p> <p>57-A Hybrid Genetic Algorithm and Particle Swarm Optimization with Type-2 Fuzzy Sets for Generating Systems of Systems Architectures Siddhartha Agarwal, Louis E. Pape, Cihan H. Dagli; <i>Missouri University of Science and Technology, USA</i></p> <p>49-Study of the Use of a Genetic Algorithm to Improve Networked System-of-Systems Resilience Charles O. Adler, Cihan H. Dagli; <i>Missouri University of Science and Technology, USA</i></p> <p>41-Quantitative SoS Architecture Modeling Joseph W. Marvin, Robert K. Garrett, Jr.; <i>Prime Solutions Group, Inc., USA</i></p>	<p><i>Session 2</i></p> <p>Room: Hamilton Data Science and Analytics: Clustering <i>Session Chair: Mika Sato-Ilic</i> <i>University of Tsukuba, Japan</i></p> <p>278-On a Multidimensional Cluster Scaling Mika Sato-Ilic; <i>University of Tsukuba, Japan</i>, Peter Ilic, <i>University of Toyo, Japan</i></p> <p>409-Applying Moving Average Filtering for Non-Interactive Differential Privacy Settings Kato Mivule, Claude Turner; <i>Bowie State University, USA</i></p> <p>285-Adaptive Learning Model for Predicting Negotiation Behaviors Through Hybrid K-means Clustering, Linear Vector Quantization and 2-Tuple Fuzzy Linguistic Model Siddhartha Agarwal; Hamid R. Safarpour; Cihan H. Dagli, <i>Missouri University of Science and Technology, USA</i></p> <p>293-Cluster Analysis of North Atlantic Tropical Cyclones Irene L. Corporal-Lodangco, Peter J. Lamb; <i>Cooperative Institute for Mesoscale Meteorological Studies, USA</i>; Michael B. Richman, Lance M. Leslie, <i>University of Oklahoma, USA</i></p>	<p><i>Session 3</i></p> <p>Room: Jefferson A Cyber Physical Systems: Energy Infrastructure <i>Session Chair: Stephen H. Anderson</i> <i>University of Missouri, USA</i></p> <p>649-Tomography-Measured Macropore Parameters to Estimate Hydraulic Properties of Porous Media S. H. Anderson, <i>University of Missouri, USA</i></p> <p>655-Organizing Patterns and Evolution of Indian Movie Industry Srinivasan Radhakrishnan, Rohit Jacob; <i>Symbiosis Institute of Management Studies, India</i>; Sagar Kamarthi, <i>Northeastern University, USA</i>; Arjun Duvvuru, <i>JDA Software Inc., India</i></p> <p>643-Computed Tomography-Estimated Transport Velocity and Chemical Dispersivity in Undisturbed Geomedia S. H. Anderson, <i>University of Missouri, USA</i>; D. J. Heinze, <i>Environ, USA</i>; R. L. Peyton, <i>University of Missouri, USA</i></p> <p>124-Data Infrastructures for Asset Management Viewed as Complex Adaptive Systems Paul Brous, Irene Overtoom, Paulien Herder, Marijn Janssen; <i>Delft University of Technology, The Netherlands</i>; Arie Versluis, <i>Rijkswaterstaat, The Netherlands</i></p>
12:00 pm	1:30 pm	Luncheon & Afternoon Plenary - Franklin Room Robie Samanta-Roy, PhD Vice President for Technology Lockheed Martin, USA Title: Leveraging Technology to Address the Challenges of Complex Adaptive Systems
1:30 pm	3:00 pm	Concurrent Technical Sessions
<p><i>Session 4</i></p> <p>Room: Adams System of Systems: System Modeling and Design <i>Session Chair: Nil Ergin</i> <i>Penn State University, USA</i></p> <p>13-Improving Collaboration in Search and Rescue System of Systems Nil Kilicay-Ergin; <i>Penn State University, USA</i></p> <p>21-Context-Aware Systems: A More Appropriate Response System to Hurricanes and Other Natural Disasters R. Millham; <i>Durban University of Technology, South Africa</i></p> <p>27-Assessing Water Sustainability Related to Hospitals Using System Dynamics Modeling Misagh Faezipour, Susan Ferreira; <i>The University of Texas at Arlington, USA</i></p> <p>33-Designing Future Processing, Exploitation, and Dissemination Support Systems Using Simulation Corey Lofdahl, Martin Voshell, Samuel Mahoney; <i>Charles River Analytics, USA</i></p>	<p><i>Session 5</i></p> <p>Room: Hamilton Data Science and Analytics: Knowledge Extraction <i>Session Chair: Iveta Mrázová</i> <i>Charles University, Czech Republic</i></p> <p>308-Mining the Czech Insolvency Proceedings Data Iveta Mrázová, Peter Zvirinský; <i>Charles University, Czech Republic</i></p> <p>328-AHP Based Classification Algorithm Selection for Clinical Decision Support System Development Sina Khanmohammadi, Mandana Rezaeiahari; <i>Binghamton University, USA</i></p> <p>564-Computer Assisted System to Help in Developing Capacitive Touch Sensing Applications Mohamed M. El Rayes, <i>Fayoum University, Egypt</i>; Tamer M. Nassef, <i>Misr University for Science and Technology, Egypt</i></p> <p>322-A Novel Text Analysis Platform for Pharmacovigilance of Clinical Drugs Anutosh Maitra, K. M. Annervaz, Tom Geo Jain, Madhura Shivaram, Shubhashis Sengupta, <i>Accenture Technology Labs, India</i></p>	<p><i>Session 6</i></p> <p>Room: Jefferson A Intelligent and Adaptive Systems: Computational Learning <i>Session Chair: Natacha Gueorguieva</i> <i>City University of New York, USA</i></p> <p>535-Evolving Vacation Packages: Genetic Algorithms for Entertainment Iren Valova, Andrew Embry, MacKinley Trudeau, <i>University of Massachusetts Dartmouth, USA</i>; George Georgiev, <i>University of Wisconsin, USA</i></p> <p>529-Optimizations of the Gravitationally Organized Related Mapping ANN Through Genetic Algorithms Iren Valova, Chris Gorman, <i>University of Massachusetts Dartmouth, USA</i></p> <p>523-Harnessing Mother Nature: Optimizing Genetic Algorithms for Adaptive Systems Justin Lovinger, Iren Valova, MacKenzie Rogers, Ryan Nadeau, <i>University of Massachusetts Dartmouth, USA</i>; Natacha Gueorguieva, <i>City University of New York, USA</i></p> <p>541-Simulated Annealing Approach to Solve Nonogram Puzzles with Multiple Solutions Wen Li Wang, <i>Penn State University, USA</i>; Mei-Huei Tang, <i>Gannon University, USA</i></p>
3:00 pm	3:30 pm	AFTERNOON BREAK - Prefunction Foyer
3:30 pm	5:00 pm	Concurrent Technical Sessions
<p><i>Session 7</i></p> <p>Room: Adams System of Systems: Computational Complexity <i>Session Chair: David Curry</i> <i>Missouri University of Science and Technology</i></p> <p>192-Complexity Analysis of Multilayer Perceptron Neural Network Embedded Into a Wireless Sensor Network Gursel Serpen, Zhenning Gao, <i>University of Toledo, USA</i></p> <p>185-Computational Complexity Measures for Many-Objective Optimization Problems David M. Curry, Cihan H. Dagli, <i>Missouri University of Science and Technology, USA</i></p> <p>210-Approach to Manage Complexity in Internet of Things Angel Hernandez-Bravo, <i>IBM, Spain</i>; Jesus Carretero, <i>Universidad Carlos III de Madrid, Spain</i></p> <p>401-Network Traffic Anomalies, Natural Language Processing, and Random Matrix Theory Pedro N. Safier, <i>S & J Solutions, LLC, USA</i>; Ira S. Moskowitz, <i>Naval Research Laboratory, USA</i></p>	<p><i>Session 8</i></p> <p>Room: Hamilton Data Science and Analytics: Knowledge Discovery <i>Session Chair: Phillip H. Griffin</i> <i>Griffin Information Security Consulting, USA</i></p> <p>314-Towards an Ontology-Based Persona-Driven Requirements and Knowledge Engineering Wee Wee Sim, Peggy Brouse; <i>George Mason University, USA</i></p> <p>335-The Role of Search Engine Optimization on Keeping the User on the Site Gokhan Egri, <i>Istanbul Kultur University, Turkey</i>; Coskun Bayrak, <i>University of Arkansas at Little Rock, USA</i></p> <p>393-Telebiometric Authentication Objects Phillip H. Griffin; <i>Griffin Information Security Consulting, USA</i></p>	<p><i>Session 9</i></p> <p>Room: Jefferson A Intelligent and Adaptive Systems: Biologically Inspired Models <i>Session Chair: Issam Abu-Mahfouz</i> <i>Penn State University, USA</i></p> <p>464-Simulating Influence of Channel Kinetics and Temperature on Hodgkin-Huxley Threshold Dynamics George Georgiev, <i>University of Wisconsin, USA</i>; Iren Valova, <i>University of Massachusetts Dartmouth, USA</i>; Natacha Gueorguieva, David Brady, <i>City University of New York, USA</i></p> <p>490-Assessment of Disc Damage Likelihood Scale(DDLs) for Automated Glaucoma Diagnosis Rana Uday Singh, Shruti Gujral, <i>Chandigarh University, India</i></p> <p>556-Drill Wear Feature Identification Under Varying Cutting Conditions Using Vibration and Cutting Force Signals and Data Mining Techniques Issam Abu Mahfouz, Amit Banerjee, <i>Penn State University, USA</i></p> <p>220-Application of Gaussian Process to Locational Marginal Pricing Forecasting Hiroyuki Mori, Kaoru Nakano; <i>Meiji University, Japan</i></p>

Tuesday, November 4, 2014		
8:00 am	5:00 pm	Registration Desk Open - Prefunction Foyer
8:00 am	9:00 am	Continental Breakfast - Prefunction Foyer
9:00 am	10:00 am	Opening Announcements and Plenary - Adams Room Jose C. Principe, PhD <i>Distinguished Professor ECE, BellSouth Professor and Director Computational NeuroEngineering Lab, University of Florida, USA</i> Title: "A Cognitive Architecture for Object Recognition in Video"
10:00 am	10:30 am	MORNING BREAK - Prefunction Foyer
10:30 am	12:00 pm	Concurrent Technical Sessions
<p>Session 10</p> <p>Room: Adams System of Systems: Socio-Technical Systems <i>Session Chair: Douglas A. Bodner</i> <i>Georgia Institute of Technology, USA</i></p> <p>425-Enterprise Modeling Framework for Counterfeit Parts in Defense Systems Douglas A. Bodner, <i>Georgia Institute of Technology, USA</i></p> <p>418-Location Intelligence Application in Digital Data Activity Dimensioning in Smart Cities Michael Jensen, Jose M. Gutierrez, Jens Pedersen; <i>Aalborg University, Denmark</i></p> <p>440-Holistic Study of Liquefied Natural Gas Carrier Systems M. R. Zoolfakar, W. M. Dahalan, M. K. Puteri Zarina; <i>Universiti Kuala Lumpur, Malaysia</i>; R. Norman, E. Mesbahi, <i>Newcastle University, UK</i></p> <p>432-Achieving a Decision Paradigm for Distributed Warfare Resource Management Bonnie W. Young, John M. Green; <i>Naval Postgraduate School, USA</i></p>	<p>Session 11</p> <p>Room: Hamilton Business and Financial Analytics: Financial Analytics <i>Session Chair: David Enke</i> <i>Missouri University of Science & Technology, USA</i></p> <p>234-Nonlinear Modeling Using Neural Networks for Trading the Soybean Complex David Enke, Phoebe S. Wiles; <i>Missouri University of Science and Technology, USA</i></p> <p>254-A Hybrid Neuro-Fuzzy Model to Forecast Inflation David Enke, Nijat Mehdiyev ; <i>Missouri University of Science and Technology, USA</i></p> <p>240-TN-RSI: Trend Normalized RSI Indicator for Stock Trading Systems with Evolutionary Computation Ugur Sahin, A. Murat Ozbayoglu; <i>TOBB University of Economics and Technology, Turkey</i></p> <p>246-Volatility Forecasting Using a Hybrid GJR-GARCH Neural Network Model David Enke, Soheil Almasi Monfared; <i>Missouri University of Science and Technology, USA</i></p>	<p>Session 12</p> <p>Room: Jefferson A Intelligent and Adaptive Systems: Reinforcement Learning as Adaptive Control <i>Session Chair: Abhijit Gosavi</i> <i>Missouri University of Science & Technology, USA</i></p> <p>500-How to Rein in the Volatile Actor: A New Bounded Perspective Abhijit Gosavi; <i>Missouri University of Science and Technology, USA</i></p> <p>549-Direct Adaptive Control for Infinite-Dimensional Symmetric Hyperbolic Systems Mark J. Balas, <i>Embry-Riddle Aeronautical University, USA</i>; Susan A. Frost, <i>NASA Ames Research Center,</i></p> <p>470-A Latent Space Support Vector Machine (LSSVM) Model for Cancer Prognosis William Ford, Walker Land; <i>Binghamton University, USA</i></p> <p>484-Interictal Epileptic Activity Rate in Relation with Seizure Occurrence and Sleep Stages: A Stereo-EEG Study Mamadou L. Ndiaye, Idu Diop, Abdoul K. Mbodji , <i>Polytechnic High Institute (ESP), Sénégal</i></p>
12:00 pm	1:30 pm	Luncheon & Afternoon Plenary - Franklin Room Mika Sato-Ilic, PhD <i>Professor of Engineering, Information Systems University of Tsukuba, Japan</i> Title: Clustering Innovations in Data Science
1:30 pm	3:00 pm	Concurrent Technical Sessions
<p>Session 13</p> <p>Room: Adams Systems of Systems: Multi-Scale Modeling <i>Session Chair: Mike Mekkanen</i> <i>University of Vaasa Finland, Finland</i></p> <p>93-Modeling of Intelligent System Thinking in Complex Adaptive Systems Ben Khayut, Lina Fabri, Maya Avikhana; <i>Intelligence Decisions Technologies System, Israel</i></p> <p>87-Executable Architecture Based on System Dynamics: An Integrated Methodology Composed by Standard System Dynamics Modeling and DoDAF Operational View Models Andrés Bueno, Luz Torres Carreño, Dario J. Delgado, Ricardo Llamasa-Villalba; <i>Universidad Industrial de Santander, Colombia</i></p> <p>72-Using OPNET to Model and Evaluate the MU Performance Based on IEC61850-9-2LE Mike Mekkanen; Reino Virrankoski; Mohammed Elmusrati; Erkki Antila; <i>University of Vaasa, Finland</i></p> <p>80-Develop an Executable Architecture for a System of Systems: A Teaching Management Model Darío J. Delgado, Rodrigo Torres-Sáez, Ricardo Llamasa-Villalba, <i>Universidad Industrial de Santander, Colombia</i></p>	<p>Session 14</p> <p>Room: Hamilton Emerging Technologies and Complexity <i>Session Chair: Corey B. Hart</i> <i>Lockheed Martin IS&GS, USA</i></p> <p>177-Synchronicity Among Biological and Computational Levels of an Organism: Quantum Biology and Complexity Carlos E. Maldonado, Nelson A. Gómez-Cruz; <i>Universidad del Rosario, Colombia</i></p> <p>381-A Trusted Third-Party (TTP) Based Encryption Scheme for Ensuring Data Confidentiality in Cloud Environment Syed Rizvi, Katie Cover, Christopher Gates; <i>Penn State University, USA</i> (Need a registration)</p> <p>515-An Associative Memorization Architecture of Extracted Musical Features From Audio Signals by Deep Learning Architecture Tadaaki Niwa, <i>Hokkaido University of Science, Japan</i>; Keitaro Naruse, <i>University of Aizu, Japan</i>; Ryosuke Ooe, Masahiro Kinoshita, Tamotsu Mitamura, Takashi Kawakami, <i>Hokkaido University of Science, Japan</i></p> <p>387-Towards a Compiler for a Polychronous Wavefront Computer: Programming by Optimization Corey B. Hart, Lockheed Martin IS&GS, USA</p>	<p>Session 15</p> <p>Room: Jefferson A Intelligent and Adaptive Systems Decision Making Analytics <i>Session Chair: Mitsuo Gen</i> <i>Fuzzy Logic Systems Institute, Japan</i></p> <p>587-Hybrid Multiobjective Evolutionary Algorithm for Assembly Line Balancing Problem with Stochastic Processing Time Wenqiang Zhang, Weitao Xu, <i>Henan University of Technology, P.R. China</i>; Mitsuo Gen, <i>Fuzzy Logic Systems Institute, Japan</i></p> <p>579-Utilization of Robust Video Processing Techniques to Aid Efficient Object Detection and Tracking Anand Balasubramanian, Shreyamsh Kamate, Nuri Yilmazer; <i>Texas A&M University-Kingsville, USA</i></p> <p>571-An Effective Multi-Objective EDA for Robust Resource Constrained Project Scheduling with Uncertain Durations Xinchang Hao, <i>Waseda University, Japan</i>; Lin Lin, <i>Dalian University of Technology, China</i>; Mitsuo Gen, <i>Fuzzy Logic Systems Institute, Japan</i></p> <p>446-An Efficient Multi-Objective Meta-Heuristic Method for Probabilistic Transmission Network Planning Kakuta Hiroki, Hiroyuki Mori; <i>Meiji University, Japan</i></p>
3:00 pm	3:30 pm	AFTERNOON BREAK – Prefunction Foyer
3:30 pm	5:00 pm	Concurrent Technical Sessions
<p>Session 16</p> <p>Room: Adams System of Systems: Distributed Systems <i>Session Chair: Bilal Khan</i> <i>City University of New York, USA</i></p> <p>345-A Study of the Effect of Basic Network Characteristics on System-of-System Failure Propagation Charles O. Adler, Cihan H. Dagli; <i>Missouri University of Science & Technology</i></p> <p>476-Towards a Formal Understanding of Bateson's Rule: Chromatic Symmetry in Cyclic Boolean Networks and its Relationship to Organism Growth and Cell Differentiation Yuri Cantor, Bilal Khan, <i>City University of New York, USA</i>; Kirk Dombrowski, <i>University of Nebraska-Lincoln, USA</i></p> <p>353-Empirical Model Development for Message Delay and Drop in Wireless Sensor Networks Gursel Serpen, Zhenning Gao; <i>University of Toledo, USA</i></p> <p>359-Cloud Computing as a Debug Tool Chandru Mirchandani; <i>George Washington University, USA</i></p>	<p>Session 17</p> <p>Room: Hamilton Data Science and Analytics Prediction <i>Session Chair: David Curry</i> <i>Missouri University of Science & Technology, USA</i></p> <p>637-The Assessment of Machine Learning Model Performance for Predicting Alluvial Deposits Distribution Adamu M. Ibrahim, Brandon Bennett; <i>University of Leeds, UK</i></p> <p>629-An Algorithm for Clustering Animals by Species Based Upon Daily Movement David M. Curry; <i>Missouri University of Science & Technology, USA</i></p> <p>623-Predicting Solar Irradiance Using Time Series Neural Networks A. Alzahrani, J. W. Kimball, C. Dagli; <i>Missouri University of Science & Technology, USA</i></p> <p>618 -Assessing the Auto Associative Network Approach for Prediction in Civil Engineering Databases Hakan Yasarer, Yacoub Najjar; <i>University of Mississippi, USA</i></p>	<p>Session 18</p> <p>Room: Jefferson A Intelligent and Adaptive Systems Social Media Analytics <i>Session Chair: Babak Heydari</i> <i>Stevens Institute of Technology, USA</i></p> <p>145-The Scalpel or the Shotgun? A Study of Strategies for Boosting New Technology Adoption in Social Network Environments Peter Ludlow, Babak Heydari; <i>Stevens Institute of Technology, USA</i></p> <p>168-Enhancing a Rule-Based Event Coder with Semantic Vectors Jinhong K. Guo, David Van Brackle, Martin O. Hofmann; <i>Lockheed Martin Advanced Technology Laboratories, USA</i></p> <p>152-Measuring the Influence of Mass Media on Opinion Segregation Through Twitter Omar ElTayeby, Peter Molnar, Roy George; <i>Clark Atlanta University, USA</i></p> <p>160-Controversial Topic Discovery on Members of Congress with Twitter Aleksey Panasyuk, Edmund Szu-Li Yu, Kishan G. Mehrotra; <i>Syracuse University, USA</i></p>
6:30 pm	7:00 pm	Cash Bar – Prefunction Foyer
7:00 pm	9:30 pm	Best Paper Awards Banquet – Adams Room Cheryl McIntyre <i>Director of Complex Systems Lockheed Martin, USA</i> Title: Embracing Complexity and Advancing the Craft of Engineering

Wednesday, November 5, 2014

8:00 am	5:00 pm	Registration Desk Open - Prefunction Foyer
8:00 am	9:00 am	Continental Breakfast - Prefunction Foyer
9:00 am	10:00 am	Opening Announcements and Plenary – Adams Room <i>Dave Welsh</i> <i>Senior Standards Manager</i> <i>Microsoft Corporation, USA</i> <i>Title: Conquering Complexity in the New World of Smart Cities and Internet of Things</i>
10:00 am	10:30 am	MORNING BREAK - Prefunction Foyer
10:30 am	12:00 pm	Concurrent Technical Sessions
<p><i>Session 19</i></p> <p>Room: Adams System of Systems: Complex Analytics <i>Session Chair: Fred Highland</i> <i>Lockheed Martin, USA</i></p> <p>110-SoS Benefiting from Complex Systems Research Vernon Ireland; <i>The University of Adelaide, Australia</i></p> <p>198-Modeling Complexity in Multi-modal Adaptive Survey Systems Fred Highland; <i>Lockheed Martin, USA</i></p> <p>131-Challenges of Governance in Complex Adaptive Systems: A Case Study of U.S. Public Education Sibel McGee, Robert Edson; <i>Analytic Services Inc., USA</i></p> <p>140-Applying Advanced 21st Century Systems Engineering and Integration (SEI) Methods to Address and Manage Risks Within a CAS Environment Gennaro J. Avvento, <i>Lockheed Martin, USA</i></p>		
<p><i>Session 20</i></p> <p>Hamilton Intelligent and Adaptive Systems: Machine Learning <i>Session Chair: Michael B. Richman</i> <i>University of Oklahoma, USA</i></p> <p>593-A New Scheme for Daily Peak Wind Gust Prediction Using Machine Learning Andrew Mercer, Jamie Dyer; <i>Mississippi State University, USA</i></p> <p>599-A Machine Learning Framework for Predicting Purchase by Online Customers Based on Dynamic Pricing Rajan Gupta, <i>University of Delhi, India</i>; Chaitanya Pathak, <i>Ask-me-Bazaar Online Marketplace, India</i></p> <p>606-A Fuzzy-Neuro Based Weather Prediction System for Bangladesh Tamjid Rahman, Abul L. Haque; <i>North South University, Bangladesh</i></p> <p>612-Attribution and Prediction of Maximum Temperature Extremes in SE Australia Michael B. Richman, Lance M. Leslie; <i>University of Oklahoma, USA</i></p>		
<p><i>Session 21</i></p> <p>Room: Jefferson A Biomimicry and Cognitive Agents <i>Session Chair: Ahmet Ozbayoglu</i> <i>TOBB University of Economics and Technology, Turkey</i></p> <p>367-A Multi-Agent System Model for Partner Selection Process in Virtual Enterprise B. Lotfi Sadigh, <i>Middle East Technical University, Turkey</i>; F. Arikan, A. M. Ozbayoglu, H. O. Unver, <i>TOBB University of Economics and Technology, Turkey</i>; S. E. Kilic, <i>Atilim University, Turkey</i></p> <p>373-Self-Managed Networks with Fault Management Hierarchy Mehmet Toy; <i>Comcast Cable, LLC, USA</i></p> <p>301-Data Mining Based Hybridization of Meta-RaPS Fatemah Al-Duoli, Ghaith Rabadi; <i>Old Dominion University, USA</i></p> <p>508-Biomimicry Based Learning Outcomes of Simple Cognitive Agents Anna T. Lawniczak, Jason B. Ernst, <i>University of Guelph, Canada</i>; Bruno N. Di Stefano, <i>Nuptek Systems Ltd, Canada</i></p>		
12:00 pm	1:30 pm	Luncheon & Afternoon Plenary - Franklin Room <i>Yew-Soon Ong, PhD</i> <i>Director, Centre for Computational Intelligence</i> <i>Director, SIMTECH-NTU Joint Lab on Complex Systems</i> <i>Program Principal Investigator, Rolls-Royce@NTU Corporate Lab</i> <i>Nanyang Technological University, Singapore</i> <i>Title: The Emerging “Big Dimensionality”</i>
1:30 pm	3:00 pm	Concurrent Technical Sessions
<p><i>Session 22</i></p> <p>Adams System of Systems: Emergent System Behavior <i>Session Chair: TBA</i></p> <p>104-Systems Thinking: An Analysis of Key Factors and Relationships Divya Vohra Behl, Susan Ferreira; <i>The University of Texas at Arlington, USA</i></p> <p>118-Verification Points for Self-Adaptive Systems Brian Phillips, Mark Blackburn; <i>Stevens Institute of Technology, USA</i></p> <p>204-Controlling Design Complexity with the Monterey Phoenix Approach Kristin Giammarco, Mikhail Auguston, Monica Farah-Stapleton, <i>Naval Postgraduate School, USA</i>; W. Clifton Baldwin, Ji'on Crump, <i>Stevens Institute of Technology, USA</i></p> <p>454-Operation Optimal Dynamics of a Hybrid Electrical System: Multi-Agent Approach Abdoul K. Mbodji, Mamadou L. Ndiaye, Papa A. Ndiaye, <i>University Cheikh Anta DIOP, Senegal</i>; Mounirou Ndiaye, <i>University THIES, Senegal</i></p>		
<p><i>Session 23</i></p> <p>Jefferson A Business and Financial Analytics Business Analytics <i>Session Chair: Anthony Joseph</i> <i>Pace University, USA</i></p> <p>227-The Treasury Bill Rate, the Great Recession, and Neural Networks Estimates of Real Business Sales Anthony Joseph, Maurice Larrain, Pace University, USA; Claude Turner, <i>Bowie State University, USA</i></p> <p>261-Demand Forecasting Based on Pairwise Item Associations Ayhan Demiriz; <i>Sakarya University, Turkey</i></p> <p>269-Neural Network Modeling, Simulation and Prediction of Innovation Growth in United Arab Emirates (UAE) Harish Nair, <i>Siemens Building Technologies, UAE</i>; Anand Kumar, <i>Birla Institute of Technology and Science, UAE</i>; Osman Ahmed, <i>Siemens Building Technologies, USA</i></p>		