
SSE Oral Sessions:

October 6 **8:00 – 9:40** **6KC305m**
SSE 1 **Fault Monitoring and Power System**

Session Chairs:

Maria Pia Fanti, Polytechnic University of Bari

Mario Santillo, Ford Motor Company

#189 Model-Based Fault Detection for a Gasoline Engine Three-Way Catalyst
Mario Santillo*, Mrdjan Jankovic, Steve Magner (USA)

#216 Investigations of Distribution System Scheduling with Photovoltaic Power and Load Variations
Shichao Liu*, Peter X. Liu, Haikuo Shen, Huanqing Wang (China)

#768 An Approach to Determine a Sequence of Adjustments to Eliminate Voltage Magnitude Violations in Transmission Power Systems
Sampaio Ferreira Enza Rafaela de, Thiago Ribeiro da Silva, Ricardo Rabelo*, Guilherme Lage (Brazil)

#545 Performance comparison between Empirical Mode Decomposition and Wavelets on Support Vector Machine based prediction models
Caio Bezerra Souto Maior*, Isis Didier Lins, Márcio José das Chagas Moura, Enrique Lopez Droguett (Brazil)

#168 Augmented Mahalanobis Distance for Incipient Fault Detection of Industrial Processes
Hongquan Ji*, Xiao He, Donghua Zhou (China)

October 6 **13:20 – 17:00**
SSE 2 **Robotics and Navigation**

6KC305f

Session Chairs:

Ferat Sahin, Rochester Institute of Technology

Qijun Chen, Tongji University

#478 Dynamic Path Planning and Replanning for Mobile Robots Using RRT*

Devin Connell, Hung La (USA)

#972 Locomotion and Transitional Procedures for a Hexapod-Quadcopter Robot

Mark Pitonyak, Ferat Sahin (USA)

#565 Gait Generation and Control of Biped Robot with Moving Torso Based on Virtual Constraint

Helin Wang, Hao Zhang, Qijun Chen (China)

#779 Vehicle Model Based Visual-Tag Monocular ORB-SLAM

Wenhao Zong, Longquan Chen, Changzhu Zhang, Zhuping Wang, Qijun Chen (China)

#422 Semantic Mapping and Semantics-boosted Navigation through Path Creation on a Mobile Robot

Hao Sun, Zehui Meng, Marcelo H Ang Jr (Singapore)

#762 A Graph Based Formation Control of Nonholonomic Wheeled Robots Using a Novel Edge-Weight Function

Zhuping Wang, Lei Wang, Hao Zhang, Qijun Chen (China)

#345 Body-Swapping Experiment with an Android Robot - Investigation of the Relationship between Agency and a Sense of Ownership Toward a Different Body

Masa Jazbec, Shuichi Nishio, Hiroshi Ishiguro, Hideaki Kuzuoka, Masataka Okubo, Christian Penaloza (Japan)

#975 An Optimal Task Decision Method for a Warehouse Robot with Multiple Tasks Based on Linear Temporal Logic

Shuai Hao, Zhiwu Huang, Lulu Wang, Rui Zhang, Xiaoyong Zhang, Jun Peng (China)

#951 Conflict-free Route Planning of Automated Guided Vehicles Based on Conflict Classification

Qing Guo, Zheng Zhang (China)

#152 Optimal Path Planning for Vehicles under Navigation Relayed by Multiple Stations

Mingfeng Qi, Lihua Dou, Bin Xin, Jie Chen (China)

October 6 13:20 – 17:00

6KC205f

SSE 3

Decision Support Systems

Session Chairs:

Fei-Yue Wang, Chinese Academy of Sciences

Francisco Javier Cabrerizo, University of Granada

#172 A Fuzzy AHP and GIS-Based Approach to Prioritize Utility-Scale Solar PV Sites in Saudi Arabia

Hassan Al Garni, Anjali Awasthi (Canada)

#1199 An Algorithm to Optimise the Load Distribution of Fog Environments

Euclides Carlos Pinto Neto, Gustavo Callou, Fernando Antonio Aires Lins (Brazil)

#614 The Impact of Reserve Price on Publisher Revenue in Real-Time Bidding Advertising Markets

Juanjuan Li, Xiaochun Ni, Yong Yuan, Fei-Yue Wang (China)

#1183 Integration of Multi-Discipline Attributes for Decision Making in Design of a Future Marine Integrated Power System

Raymond Klaas Jonkers (Canada)

#712 An Extended Evidential Reasoning Algorithm for Multiple Attribute Decision Analysis with Uncertainty

Lianmeng Jiao, Quan Pan, Xiaojiao Geng (China)

#621 An Improvement of Multiplicative Consistency of Reciprocal Preference Relations: A Framework of Granular Computing

Francisco Javier Cabrerizo, Ignacio Javier Perez, Witold Pedrycz, Enrique Herrera Viedma (Spain)

#429 Synchronization Server Infrastructure: A Relationship between System Downtime and Deployment Cost

Carlos Melo, Jamilson Dantas, Rubens Matos, Andre Oliveira, Iure Fé, Paulo Maciel (Brazil)

#176 Improving Business Decision Making Based on KPI Management System

Paulo Roberto Martins de Andrade, Samira Sadaoui (Canada)

#734 A Game Theory-Based Development Planning Approach for Weapon System-of-Systems

Weitao Xiong, Bingfeng Ge, Qingsong Zhao, Kewei Yang (China)

October 6 13:20 – 17:00

6MB251f

SSE 4 System Modeling and Control II

Session Chairs:

Li-Chen Fu, National Taiwan University

Shin-Dug Kim, Yonsei University

#468 The Functional Regions in Structural Controllability of Human Functional Brain Networks
Peng Yao, Xiang Li, Cong Li (China)

#1227 Demand-Side Management in Residential Community Realizing Sharing Economy with Bidirectional PEV
Pei-Hsuan Cheng, Tzu-Han Huang, Yi-Wei Chien, Chao-Lin Wu, Li-Chen Fu (Taiwan)

#1161 Hot-Cold Data Filtering and Management for PRAM Based Memory-Storage Unified System
Su-Kyung Yoon, Kwang-Su Jung, Xian-Shu Li, Shin-Dug Kim (Korea, South)

#538 An Investigation into the Dependence of Energy Efficiency on CNC Process Parameters with a Sustainable Consideration of Electricity and Materials
Qinge Xiao, Congbo Li, Ying Tang, Xingzheng Chen (USA)

#947 Identification of Nonlinear Systems with Rate Saturation
Shuang Hu, Jihong Zhu, Yang He (China)

#556 Aerodynamic Modeling for Hypersonic Flight Vehicles with Account of Scramjet Effects
Shuang Hu, Jihong Zhu (China)

#334 NDI Based Envelope Protection in Icing Encounters
Binbin Pei, Haojun Xu, Yuan Xue, Zhe Li, Hanyang Lv (China)

#816 Probability Based Fuzzy Modeling
Erick de la Rosa, Wen Yu, Xiaoou Li (Mexico)

#290 A Correlation-Based Bi-Partition Hierarchical Clustering Method for Mode Identification of Multimode Processes
Yilin Wang, Tongshuai Zhang, Hao Ye (China)

#794 Modeling Smart Cities with Hetero-Functional Graph Theory
Wester Cornelis Hendrikus Schoonenberg, Amro Farid (USA)

October 7 8:00 – 10:20

7KC305m

SSE 5 Control of Uncertain Systems II

Session Chairs:

Chris Macnab, University Calgary

Mingcong Deng, Tokyo University of Agriculture and Technology

#1189 A Control Method for MIMO Systems with Multiple Time Delays

Bufan Tong, Juan Chen, Hang Wang, Yakun Yu (China)

#131 Giving CMAC Basis Functions a Tail in Order to Achieve Stable Neural-Adaptive Control of a Quadrotor

Chris Macnab (Canada)

#281 Tracking Operator-Based Optimal Load Control for Loosely Coupled Wireless Power Transfer Systems

Xudong Gao, Mingcong Deng, Kodai Masaki (Japan)

#460 Formation Control of Underactuated Autonomous Vehicles Based on Constraint Forces

György Max, Béla Lantos (Hungary)

#784 Adaptive Control for Position and Velocity Synchronization in Bilateral Teleoperation in Presence of Stochastic Disturbances in Control Inputs

Masoud Seyed Sakha, Farzad Hashemzadeh, Mahdi Tavakoli (Iran)

#266 Gain Margin Technique Based Continuous Sliding-Mode Control of Induction Motors

Minghao Zhou, Yong Feng, Fengling Han (China)

#988 Distributed Robust Adaptive Finite Time Voltage Control for AC Microgrids with Uncertainty

Shafiqul Islam (Canada)

#1206 DICE: A Dual Integrity Convergent Encryption Protocol for Client Side Secure Data Deduplication

Ashish Agarwala, Priyanka Singh, Pradeep Atrey (USA)

October 7

8:00 – 10:20

7KC205m

SSE 6

System Modeling and Control I

Session Chairs:

Mengchu Zhou, New Jersey Institute of Technology

Joseph D'Ambrosio, General Motors

#1079 Analyzing Temporal-Spatial Evolution of Rare Events by Using Social Media Data

Xiaoyu Sean Lu, Mengchu Zhou, Liang Qi (USA)

#1008 Systems Engineering Challenges and MBSE Opportunities for Automotive System Design

Joseph D'Ambrosio, Grant Soremekun (USA)

#694 The Common-Source Digital Upsets Analysis by MDHMM for Control System Performance

Rui Wang, Yanxiao Li, Hui Sun, Youmin Zhang (China)

#622 Stochastic Model of Performance and Cost for Auto-Scaling Planning in Public Cloud

Iure Fé, Rubens Matos, Jamilson Dantas, Carlos Melo, Paulo Maciel (Brazil)

848 Minimum Variance Unbiased Observer of a Continuous LPV System with Unknown Input

Luc Meyer, Dalil Ichalal, Vincent Vigneron, Claire Vasiljevic, Jean Oswald (France)

#99 Neural Sliding Mode Field Oriented Control for DFIG Based Wind Turbine

Larbi Djilali, Edgar Nelson Sánchez Camperos, Mohamed Belkheiri (Mexico)

#1190 Control for Nonlinear System with Non-Gaussian Noise

Shuang Zhang, Juan Chen, Yakun Yu (China)

October 7 8:00 – 10:20

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SSE 7 Control of Uncertain Systems I

Session Chairs:

Zhiwu Li, Xidian University

Dave Kaber, North Carolina State University

#490 Game Theoretical Modeling of Information Supervisory Control

Yasuo Sasaki, Naoshi Uchihira (Japan)

#135 Maximum Sensitivity Based Fractional-Order Controller for Permanent Magnet Synchronous Motor System with Time Delay

Xiaozhong Liao, Yanan Wang, Lei Dong (China)

#155 Adaptive Control of an Uncertain Hammerstein Actuator Model in a Variable Cam Timing System

Dogan Sumer, Yan Wang, Mohammad Farid, Dimitar Filev (USA)

#453 Stochastic Optimal Control of Systems for Which Control Variation Increases Uncertainty: A Contribution to the Discrete Time Case

Filipe C. Pedrosa, João C. Nereu, Joao B. R. do Val (Brazil)

#318 A Hybrid Estimation Algorithm for Tracking an Adversarial Team

Michael McCourt, Juan Pablo Ramirez Paredes, Emily Doucette, J. Willard Curtis (USA)

#935 Visual Servoing with Time-Delay Compensation for Humanoid Mobile Manipulator

Jiangyuan Zhang, Pei-Hwai Ciou, Shih-Hsi Hsu, Shih-Huan Tseng, Li-Chen Fu (Taiwan)

#1158 Hybrid Multiparametric Model Predictive Control with Application to the Neuromuscular Blockade

Ioana Nascu, Efstratios Pistikopoulos, Ioan Nascu (USA)

October 7 13:20 – 17:00

7KC305f

SSE 8 Industrial Systems and Service Systems

Session Chair:

Hossam Gabbar, UOIT Honghai Liu, Portsmouth University

#627 An Algorithm Based on Ant Colony Optimization for Provisioning Virtual Sensor in Sensor Cloud

Marcus Vinicius De Sousa Lemos, Carlos Giovanni Carvalho, Douglas Mendes, Ricardo Rabelo, Raimir Holanda Filho (Brazil)

#1154 A Demand Response Optimization Model for Home Appliances Load Scheduling

Jaclason Veras, Igor Silva, Ricardo Rabelo, Placido Pinheiro (Brazil)

#1086 RGB-D Human Posture Analysis for Ergonomic Studies Using Deep Convolutional Neural Network

Ahmed Abobakr, Darius Nahavandi, Julie Iskander, Mo Hossny, Saeid Nahavandi, Marty Smets (Australia)

#698 Game Theoretical Analysis of Leadership Structure for Supply Chains Involving Risky Supplier

Tatsushi Nishi, Takuya Tsuboi (Japan)

#1104 Embedded Vision Based Automotive Interior Intrusion Detection System

Haibin Cai, Donghee Lee, Hwang Joonkoo, Yinfeng Fang, Song Li, Honghai Liu (United Kingdom)

#402 QoS-Aware Service Composition for Service-Based Systems Using Multi-Round Vickery Auction

Puwei Wang (China)

#428 Markdown and Bundling Pricing Decisions for Complementary Supply Chain with Strategic Consumers

Sijie Li, Lingzhi Shao, Haiyan You, Yong He (China)

#184 Scheduling Jobs with Multitasking and Asymmetric Switching Costs

Kevin Ho, John Sum (Taiwan)

#92 A Review of Broad Technology Assessment: Citation-Based Analysis

Louis Y. Y. Lu, John S. Liu (Taiwan)

#1215 Invasive Technique for Measuring the Energy Consumption of Mobile Devices Applications in Mobile Cloud Environments

Josival S. Silva, Fernando Antonio Aires Lins, Erica Sousa, Henning Summer, Carlos Marques Fernandes (Brazil)

#200 Adaptive Two-Stage Feature Selection for Sentiment Classification

Chi Xu (Singapore)

October 7 13:20 – 17:00

7KC205f

SSE 9 Communication Technology and System Prediction

Session Chairs:

Clarence de Silva, University of British Columbia

Junichi Murata, Kyushu University

#97 Dynamic Extended Access Barring for Improved M2M Communication in LTE-A Networks

Hyun Dong Kim, Seung-Seob Lee, Sukyoung Lee (Korea, South)

#1124 A Cluster-Based Routing Method for D2D Communication Oriented to Vehicular Networks

Yuhong Li, Haoyue Xue, Zhihui Gai, Xirong Que, Xiang Su, Jukka Riekkı (China)

#1109 TrapFetch: A Breakpoint-Based Prefetcher for Both Launch and Run-Time

Jiwoong Won, Oseok Kwon, Junhee Ryu, Junbeom Hur, Insup Lee, Kyungtae Kang (Korea, South)

#805 Design of Incentive-Based Demand Response Programs Using Inverse Optimization

Masaru Murakami, Ryohei Funaki, Junichi Murata (Japan)

#494 Securing a UAV Using Individual Characteristics from an EEG Signal

Ashutosh Singandhupe, Hung La, David Feil-Seifer, Pei Huang, Linke Guo, Ming Li (USA)

#1006 Neighbor-Aware Distance Estimated MAC Protocol for Multichannel Cognitive Radio Ad Hoc Networks

Chien-Min Wu, Chih-Pin Lo, Yi-Sheng Huang (Taiwan)

#1210 Remaining Useful Life Prediction of Rotating Machinery Using Hierarchical Deep Neural Network

Min Xia, Teng Li, Lizhi Liu, Lin Xu, Clarence de Silva (Canada)

#279 Next-Transmission Backoff Reservation Scheme for Wireless Sensor Networks

Hae Yeon Shin, Yena Kim, SuKyoung Lee (Korea, South)

#529 A Method of Ship Scheduling and Inventory Management Problem for Reducing Demurrage and Freight

Hirokazu Kobayashi, Hisashi Tamaki (Japan)

October 7 13:20 – 17:00

7KC201f

SSE 10 Cooperative Systems and Control

Session Chairs:

Haibin Zhu, Nipissing University

Peter X. Liu, Carleton University

#801 Consensus Based Distributed Cooperative Control for Multiple Miniature Aerial Vehicles with Uncertainty

Shafiqul Islam, Abdulmotaleb El Saddik, Peter X. Liu (Canada)

#963 Consensus Control for State-Of-Energy Balancing between the Supercapacitor Modules in Cyber-Physical Energy System

Chengzhang Lv, Zhiwu Huang, Heng Li, Yanhui Zhou, Jun Peng (China)

#174 Multi-Robot Task Allocation for Real-Time Hospital Logistics

Jeon Seohyun, Jaeyeon Lee (Korea, South)

#340 Model-Free Optimal Consensus Control for Multi-Agent Systems Using Kernel-Based ADP Method

Wei Wang, Xin Chen (China)

#534 Intelligent Clustering Guided Adaptive Prefetching and Buffer Management for Stream Processing

Sung-Min Lee, Young-Sun Youn, Su-Kyung Yoon, Shin-Dug Kim (Korea, South)

#328 Solving the Voltage Regulation Problem with Output Feedback

Mutlu Yilmaz (Canada)

#444 Decentralized Connective Stabilization of Complex Large-Scale Systems with Expanding Construction Employing Reduced-Order Observers

Yang Liu, Yuanwei Jing, Georgi Dimirovski, Xiaohua Li, Xiaoping Liu (Turkey)

#562 Driver Internal State Estimative Model for Distracted State Detection

Masafumi Sawataishi*, Ksato Sato Kazuhito, Momo Ito Momoyo, Mado Madokoro Hirokazu, Saku Kadowaki Sakura (Japan)

#1042 Systematic Platform Design of a Real Time Healthcare Management System: Minimizing Overall Patient Waiting Time

Faisal Alkhalidi*, Ali Alouani (USA)

October 8 13:20 – 15:00

8MB159f

SSE 11 Intelligent System and Transportation Systems

Session Chairs:

Petr Musilek, University of Alberta

Vladik Kreinovich, University of Texas at El Paso

#1223 Approach for Minimal-Siphon Computation in S4PR

Dan You, Shouguang Wang*, Wenzhan Dai, Wenhui Wu (China)

#89 Near-Optimal and Minimal PN Supervisors of FMS with Uncontrollability and Unobservability

Bo Huang*, Yandong Pei, Mengchu Zhou, Jianqiang Li (China)

#786 LP-Based Predictive Energy Management System for Residential PV/HESS

Rodrigo Martins*, Petr Musilek, Pavel Kromer (Canada)

#979 Attack-Aware Multi-Sensor Integration Algorithm for Autonomous Vehicle Navigation Systems

Sangjun Lee*, Yongbum Cho, Byung-Cheol Min (USA)

#298 Performance and Availability Modeling of Hybrid Storage Systems

Eric Borba*, Jonas Pontes, Eduardo Tavares (Brazil)