

2008 IEEE International Conference on Automation Science and Engineering

**Arlington, VA
23-26 August 2008**

Pages 1-515



IEEE Catalog Number:
ISBN 13:

CFP08ASE-PRT
978-1-4244-2022-3

**IEEE CASE 2008
TECHNICAL PROGRAM**

Sunday, August 24, 2008

SuSe1T2 Jackson

Hybrid and Discrete Event Systems I (Regular Session)

Chair: Ferrarini, Luca Pol. di Milano
Co-Chair: Tilbury, Dawn Univ. of Michigan

10:00-10:20 SuSe1T2.1

Verification of ECA Rule Based Management and Control Systems, pp. 1-7.

Zhang, Jing Univ. of Michigan
Tilbury, Dawn Univ. of Michigan
Moyné, James Univ. of Michigan

10:20-10:40 SuSe1T2.2

Optimization of Inventory Levels and Production Effort in Hybrid Inventory-Production (HIP) Systems, pp. 8-15.

Giglio, Davide Univ. of Genova
Minciardi, Riccardo Univ. of Genova
Sacone, Simona Univ. of Genova
Siri, Silvia Univ. of Genova

10:40-11:00 SuSe1T2.3

A Factory Health Monitor: System Identification, Process Monitoring, and Control, pp. 16-22.

Schroeder, Kyle Univ. of Michigan
Moyné, James Univ. of Michigan
Tilbury, Dawn Univ. of Michigan

11:00-11:20 SuSe1T2.4

Stochastic Optimal Control for Hybrid Systems with Uncertain Discrete Dynamics, pp. 23-28.

Becker, Franziska Tech. Univ. Muenchen
Sobotka, Marion Tech. Univ. München
Stursberg, Olaf Tech. Univ. of Munich

11:20-11:40 SuSe1T2.5

A Pragmatic Approach to Fault Diagnosis in Hydraulic Circuits for Automated Machining: A Case Study, pp. 29-34.

Ferrarini, Luca Pol. di Milano
Brusa, Roberto Pol. di Milano
Veber, Carlo Pol. di Milano

11:40-12:00 SuSe1T2.6

Development of Electronic Controls for Refrigerators Based on the Supervisory Control Theory, pp. 35-40.

Teixeira, Carlos Alberto Santa Catarina State Univ. – UDESC
Leal, André Bittencourt Santa Catarina State Univ. – UDESC

SuSe1T3 Jefferson

Algorithmic Automation (Regular Session)

Chair: Goldberg, Ken UC Berkeley
Co-Chair: Hoover, Randy Colorado State Univ.

10:00-10:20 SuSe1T3.1

Motion Planning for Steerable Needles in 3D Environments with Obstacles Using Rapidly-Exploring Random Trees and Backchaining (I), pp. 41-46.

Xu, Jijie Automation Sciences Lab.
Duindam, Vincent Univ. of California, Berkeley
Alterovitz, Ron Univ. of California, Berkeley
Goldberg, Ken UC Berkeley

10:20-10:40 SuSe1T3.2

Pose Detection of 3-D Objects Using Images Sampled on SO(3), Spherical Harmonics, and Wigner-D Matrices, pp. 47-52.

Hoover, Randy Colorado State Univ.
Maciejewski, Anthony A. Colorado State Univ.
Roberts, Rodney Florida State Univ.

10:40-11:00 SuSe1T3.3

Actuator Networks for Navigating an Unmonitored Mobile Robot, pp. 53-60.

Schiff, Jeremy UC Berkeley
Kulkarni, Anand P. Univ. of California, Berkeley
Bazo, Danny UC Berkeley
Duindam, Vincent Univ. of California, Berkeley
Alterovitz, Ron Univ. of California, Berkeley
Song, Dezhen Texas A&M Univ.
Goldberg, Ken UC Berkeley

11:00-11:20 SuSe1T3.4

Hydra: A Framework and Algorithms for Mixed-Initiative UAV-Assisted Search and Rescue, pp. 61-66.

Bitton, Ephrat Univ. of California, Berkeley
Goldberg, Ken UC Berkeley

11:20-11:40 SuSe1T3.5

An Adaptive and Optimal Setup Planning System (I), pp. 67-72.

Wang, Lihui National Res. Council of Canada
Ma, Ji The Univ. of Western Ontario
Feng, Hsi-Yung The Univ. of British Columbia

11:40-12:00 SuSe1T3.6

Towards Output-Sensitive Computation of Two-Finger Caging Grasps, pp. 73-78.

Vahedi, Mostafa Utrecht Univ.
van der Stappen, Frank Utrecht Univ.

SuSe1T4 Madison

Semiconductor Manufacturing I (Regular Session)

Chair: Qiao, Fei Tongji Univ.
Co-Chair: Lee, Tae-Eog KAIST

10:00-10:20 SuSe1T4.1

An Efficient Scheduling Method Based on an Assignment Model for Robotized Cluster Tools, pp. 79-84.

Jung, Chihyun Korea Advanced Inst. of Science and Tech.
Lee, Tae-Eog KAIST

10:20-10:40 SuSe1T4.2

ACO-Based Scheduling for a Single Batch Processing Machine in Semiconductor Manufacturing, pp. 85-90.

Li, Li Tongji Univ.
Qiao, Fei Tongji Univ.

10:40-11:00 SuSe1T4.3

A Swarm-Dynamic Scheduling Method for the Semiconductor Assembly Production Line, pp. 91-96.

Kang, Qi Tongji Univ.
Xiao, Hui Tongji Univ.
Wang, Lei control department of tongji Univ.
Wu, Qidi Tongji Univ.

11:00-11:20 SuSe1T4.4

Stable Schedule for a Single-Armed Cluster Tool with Time Constraints, pp. 97-102.

Kim, Ja-Hee Seoul National Univ. of Tech.

11:20-11:40 SuSe1T4.5

Optimal Scheduling of Dual-Armed Cluster Tools without Swap Restriction, pp. 103-108.

Lee, Tae-Eog KAIST
Paek, Jin-Heum KAIST

11:40-12:00 SuSe1T4.6

Petri Net Modeling and Real-Time Control of Dual-Arm Cluster Tools with Residency Time Constraint and Activity Time Variations, pp. 109-114.

Wu, Naiqi Guangdong Univ. of Tech.
Zhou, MengChu New Jersey Inst. of Tech.
Peng, ShihSen Diwan Univ. Tainan, Taiwan
CHU Feng, Chu Univ. de Tech. de Troyes
Chu Chengbin, Chu Univ. de Tech. de Troyes

SuSe1T5 Monroe

Distributed Control and Sensing (Regular Session)

Chair: Liu, Lichuan Northern Illinois Univ.
Co-Chair: Reveliotis, Spiridon Georgia Inst. of Tech.

10:00-10:20 SuSe1T5.1

Conflict Resolution in Multi-Vehicle Systems: A Resource Allocation

<i>Paradigm</i> , pp. 115-121. Reveliotis, Spiridon Roszkowska, Elzbieta	Georgia Inst. of Tech. Wroclaw Univ. of Tech.	Dotoli, Mariagrazia Fanti, Maria Pia Mangini, Agostino Marcello	Pol. di Bari Pol. di Bari Pol. di Bari
10:20-10:40 <i>Rational Coordination under Risk: Coherence and the Nash Bargain</i> , pp. 122-127. Stirling, Wynn Nokleby, Matthew	SuSe1T5.2 Brigham Young Univ. Brigham Young Univ.	13:40-14:00 <i>Multi-Decision C&PvD&A Architecture for the Decentralized Control of Discrete Event Systems</i> , pp. 187-193. Chakib, Hicham Khoumsi, Ahmed	SuSe2T2.3 Sherbrooke Univ. Univ. of Sherbrooke
10:40-11:00 <i>Cooperative Multipath Routing and Relay Based on Noncoherent Detection in Wireless Sensor Networks (I)</i> , pp. 128-132. Liu, Lichuan Wang, Zhigang Zhou, MengChu	SuSe1T5.3 Northern Illinois Univ. Mississippi State Univ. New Jersey Inst. of Tech.	14:00-14:20 <i>A Siphon-Based Deadlock Prevention Policy for a Class of Petri Nets - S3PMR*</i> . Yan, Mingming Zhu, Rongming Wang, Anrong Li, Zhiwu	SuSe2T2.4 Xidian Univ. Xidian Univ. Xidian Univ. Xidian Univ.
11:00-11:20 <i>Low-Complexity Channel-Aware Scheduling for Multichannel Wireless Local Area Networks (I)</i> , pp. 133-138. Li, Yihan Mao, Shiwen Agrawal, Prathima Midkiff, Scott F.	SuSe1T5.4 Auburn Univ. Auburn Univ. Auburn Univ. Virginia Tech.	SuSe2T3 Machine Vision in Automation (Regular Session) Chair: Lee, Dah-Jye Co-Chair: Song, Dezhen	Jefferson Brigham Young Univ. Texas A&M Univ.
11:20-11:40 <i>Compressive Mobile Sensing for Robotic Mapping (I)</i> , pp. 139-144. Tan, Jindong Hu, Sheng	SuSe1T5.5 Michigan Tech. Univ. Michigan Tech. Univ.	13:00-13:20 <i>Color Quantization and Image Analysis for Automated Fruit Quality Evaluation</i> , pp. 194-199. Lee, Dah-Jye Chang, Yuchou Archibald, James Greco, Christopher R.	SuSe2T3.1 Brigham Young Univ. Brigham Young Univ. Brigham Young Univ. Brigham Young Univ.
SuSe1T6 Automation in Unstructured Environments (Invited Session) Chair: Liu, Guangjun Co-Chair: Liu, Peter X.	Washington Ryerson Univ. Carleton Univ.	13:20-13:40 <i>System and Algorithms for an Autonomous Observatory Assisting the Search for the Ivory-Billed Woodpecker</i> , pp. 200-205. Song, Dezhen Qin, Ni Xu, Yiliang Kim, Chang Young Luneau, David Goldberg, Ken	SuSe2T3.2 Texas A&M Univ. Texas A&M Univ. Texas A&M Univ. Texas A&M Univ. Univ. of Arkansas at Little Rock UC Berkeley
10:00-10:20 <i>Decentralized Control of Vehicles in Platoons with Robust Nonlinear State Estimation (I)</i> , pp. 145-150. Pan, Ya-Jun	SuSe1T6.1 Dalhousie Univ.	13:40-14:00 <i>High-Speed Video Analysis of Laboratory Rats Behaviors in Forced Swim Test</i> , pp. 206-211. Yuman, Nie Ishii, Idaku Yamamoto, Kenkichi Takaki, Takeshi Orito, Kensuke Matsuda, Hiroshi	SuSe2T3.3 Hiroshima Univ. Hiroshima Univ. Hiroshima Univ. Hiroshima Univ. Azabu Univ. Tokyo Univ. of Agriculture and Tech.
10:20-10:40 <i>Electrostatic Torsional Micromirror: Its Active Control and Applications in Optical Network (I)</i> , pp. 151-156. Pan, Ya-Jun Ma, Yuan Islam, Shariful	SuSe1T6.2 Dalhousie Univ. Dalhousie Univ. Dalhousie Univ.	14:00-14:20 <i>Multiple Self-Organizing Maps for Control of a Redundant Manipulator in an Environment with Obstacles</i> , pp. 212-217. Okada, Nobuhiro Qiu, Jinjun Han, Min Uehara, Ryunosuke	SuSe2T3.4 Kyushu Univ. Kyushu Univ. TOYOTA AUTO BODY CO., LTD Panasonic Electronic Device Co., Ltd. Kyushu Univ.
10:40-11:00 <i>Track-Stair and Vehicle-Manipulator Interaction Analysis for Tracked Mobile Manipulators Climbing Stairs (I)</i> , pp. 157-162. Liu, Yugang Liu, Guangjun	SuSe1T6.3 Ryerson Univ. Ryerson Univ.	14:20-14:40 <i>Automatic Tracing of Blood Flow Velocity in Pulsed Doppler Images</i> , pp. 218-222. Wang, Zhe Slabaugh, Greg Zhou, MengChu Fang, Tong	SuSe2T3.5 New Jersey Inst. of Tech. Siemens New Jersey Inst. of Tech. Siemens
11:00-11:20 <i>Neural Network Based Path Planning for a Multi-Robot System with Moving Obstacles (I)</i> , pp. 163-168. Li, Howard Yang, Simon X.	SuSe1T6.4 Univ. of New Brunswick Univ. of Guelph	SuSe2T4 Semiconductor Manufacturing II (Regular Session) Chair: Morrison, James Co-Chair: Zhang, Mike Tao	Madison KAIST Spansion Inc.
11:20-11:40 <i>Robot Tracking Using Vision and Laser Sensors (I)</i> , pp. 169-174. Liu, Peter X. Cuhadar, Aysegul	SuSe1T6.5 Carleton Univ. Carleton Univ.	13:00-13:20 <i>Automatic Virtual Metrology System Design and Implementation</i> , pp. 223-229.	SuSe2T4.1
SuSe2T2 Hybrid and Discrete Event Systems II (Regular Session) Chair: Fanti, Maria Pia Co-Chair: Nishi, Tatsushi	Jackson Pol. di Bari Osaka Univ.		
13:00-13:20 <i>Petri Net Decomposition Approach for the Simultaneous Optimization of Task Assignment and Routing with Automated Guided Vehicles</i> , pp. 175-180. Nishi, Tatsushi Tanaka, Yuki Inuiguchi, Masahiro	SuSe2T2.1 Osaka Univ. Osaka Univ. Osaka Univ.		
13:20-13:40 <i>Fault Monitoring of Automated Manufacturing Systems by First Order Hybrid Petri Nets</i> , pp. 181-186.	SuSe2T2.2		

Huang, Yi-Ting	National Cheng Kung Univ.	Patil, Lalit	Univ. of Michigan
Huang, Hsien-Cheng	National Cheng Kung Univ.	Saitou, Kazuhiro	Univ. of Michigan
Cheng, Fan-Tien	National Cheng Kung Univ.	13:40-14:00	SuSe2T6.3
Liao, Tai-Siang	National Cheng Kung Univ.	<i>Analysis of a Simple CONWIP System with Impatient Customers</i> , pp. 291-296.	
Fu-Chien, Chang	National Cheng Kung Univ.	Oikonomopoulos, Angelos	Tech. Univ. of Crete
13:20-13:40	SuSe2T4.2	Kouikoglou, Vassilis	Tech. Univ. of Crete
<i>Developing a Selection Scheme for Dual Virtual-Metrology Outputs</i> , pp. 230-235.		14:00-14:20	SuSe2T6.4
Wu, Wei-Ming	National Cheng Kung Univ.	<i>Procurement of Global Logistics Services Using Combinatorial Auctions</i> , pp. 297-302.	
Cheng, Fan-Tien	National Cheng Kung Univ.	Srivastava, Nikesh	Indian School of Business
Zeng, Deng-Lin	National Cheng Kung Univ.	Viswanadham, Nukula	Indian School of Business
Lin, Tung-Ho	National Cheng Kung Univ.	Kameshwaran, S	Indian School of Business
Chen, Jyun-fang	National Cheng Kung Univ.	14:20-14:40	SuSe2T6.5
13:40-14:00	SuSe2T4.3	<i>An O(T3) Polynomial Algorithm for Crude Oil Transportation</i> , pp. 303-308.	
<i>Method for Proposing Sort Screen Thresholds Based on Modeling Etest/Sort-Class to Improve Class Yield in Semiconductor Manufacturing</i> , pp. 236-241.		Chu, Feng	Univ. de Tech. de Troyes
Yip, Wai-Kuan	Intel Tech. Sdn Bhd	Chu, Chengbin	Univ. de Tech. de Troyes
Lim, Chun-Chew	Intel Tech. Sdn Bhd	Shen, Qingning	Univ. de Tech. de Troyes
Lee, Wen Jau	Intel Tech. Sdn Bhd	Chen, Haoxun	Univ. of Tech. of Troyes
14:00-14:20	SuSe2T4.4	14:40-15:00	SuSe2T6.6
<i>The Impact of the Qual-Run Requirements of APC on the Scheduling Performance in Semiconductor Manufacturing</i> , pp. 242-246.		<i>An Or-Opt NSGA-II Algorithm for Multi-Objective Vehicle Routing Problem with Time Windows</i> , pp. 309-314.	
Li, Li	Tongji Univ.	Xu, Huayu	Tsinghua Univ.
Qiao, Fei	Tongji Univ.	Fan, Wenhui	Tsinghua Univ.
14:20-14:40	SuSe2T4.5	Wei, Tian	Univ. of Cambridge
<i>Flow Lines with Regular Service Times: Evolution of Delay, State Dependent Failures and Semiconductor Wafer Fabrication</i> , pp. 247-252.		Yu, Lijun	Tsinghua Univ.
Morrison, James	KAIST		

Monday, August 25, 2008

SuSe2T5 Monroe

Sensors, Instrumentation, and Measurement (Regular Session)

Chair: Wong, Ys National Univ. of Singapore
Co-Chair: Yang, Kathy SAIC

13:00-13:20 SuSe2T5.1
Human Intention Recognition in Smart Assisted Living Systems Using a Hierarchical Hidden Markov Model, pp. 253-258.

Zhu, Chun Oklahoma State Univ.

Cheng, Qi Oklahoma State Univ.

Sheng, Weihua Oklahoma State Univ.

13:20-13:40 SuSe2T5.2

Enabling Autonomous Systems to Perceptually Detect Human Performance Improvements and Their Applications, pp. 259-264.

Solis, Jorge Waseda Univ.

Takanishi, Atsuo Waseda Univ.

13:40-14:00 SuSe2T5.3

Coulomb Friction Identification for Mechatronic Servo Systems with Limited Strokes Using Two Reference Inputs, pp. 265-272.

Andoh, Fukashi YASKAWA Electric Corp.

14:00-14:20 SuSe2T5.4

Identification of Feature Set for Effective Tool Condition Monitoring – a Case Study in Titanium Machining, pp. 273-278.

Sun, Jie National Univ. of Singapore

Wong, Yoke San National Univ. of Singapore

SuSe2T6 Washington

Supply Chain, Logistics, and Transportation (Regular Session)

Chair: Shen, Qingning Univ. de Tech. de Troyes

Co-Chair: Xu, Huayu Tsinghua Univ.

13:00-13:20 SuSe2T6.1

Towards Modeling of Resilience Dynamics in Manufacturing Enterprises: Literature Review and Problem Formulation, pp. 279-284.

Hu, Yao Univ. of Kentucky

Li, Jingshan Univ. of Kentucky

Holloway, Larry Univ. of Kentucky

13:20-13:40 SuSe2T6.2

Adapting Product and Supply Chain Systems under Severe Uncertainty, pp. 285-290.

MoBeT7 Georgetown Ballroom

Best Conference and Application Paper Session (Regular Session)

Chair: Johansson, Karl H. Royal Inst. of Tech.

Co-Chair: Tang, Gina Rowan Univ.

10:00-10:20 MoBeT7.1

Automated Vision-Based Selection and Placement of Single Cells in Microwell Array Formats, pp. 315-320.

Anis, Yasser H Arizona State Univ.

Holl, Mark R. The Biodesign Inst.

Meldrum, Deirdre Arizona State Univ.

10:20-10:40 MoBeT7.2

Cooperative Movements of Binocular Motor System, pp. 321-327.

Zhang, Xiaolin Tokyo Inst. of Tech.

Sato, Yugo Tokyo Inst. of Tech.

10:40-11:00 MoBeT7.3

Modeling and Optimization of Crowd Guidance for Building Emergency Evacuation, pp. 328-334.

Wang, Peng Univ. of Connecticut, Storrs

Luh, Peter Univ. of Connecticut

Chang, Shi-Chung National Taiwan Univ.

Sun, Jin Tsinghua Univ.

11:00-11:20 MoBeT7.4

Optimal Scheduling of K-Unit Production of Cluster Tools with Single-Blade Robots, pp. 335-340.

Chan, Wai Kin Victor Rensselaer Pol. Inst.

Yi, Jingang San Diego State Univ.

Ding, Shengwei Univ. of California at Berkeley

Song, Dezhen Texas A&M Univ.

11:20-11:40 MoBeT7.5

Flexible Automation for Automotive Body Assembly (I), pp. 341-346.

Soetebier, Sven ABB AG Corp. Res. Germany

Mueller, Christian ABB AG Corp. Res. Germany

Mauser, Nicolas ABB AG Corp. Res. Germany

Kock, Sonke ABB Corp. Res.

Legeleux, Fabrice ABB France SAS

11:40-12:00 MoBeT7.6

A Geographic Source Routing Protocol for Traffic Sensing in Urban Environment (I), pp. 347-352.

Liu, Lichuan Northern Illinois Univ.
Wang, Zhigang Mississippi State Univ.
Jehng, Wern-Kueir National Kaohsiung Univ. of Applied Sciences

MoSe1T1 Jackson
Planning, Scheduling and Coordination I (Regular Session)

Chair: Luh, Peter Univ. of Connecticut
Co-Chair: Darabi, Houshang Univ. of Illinois at Chicago

13:00-13:20 MoSe1T1.1
A Variant of Examination Timetabling Problem, pp. 353-358.

Chen, Weiwei Univ. of Wisconsin-Madison
Shi, Leyuan Univ. of Wisconsin-Madison

13:20-13:40 MoSe1T1.2
An Improved Lagrangian Relaxation Method for Discrete Optimization Applications, pp. 359-364.

Wang, Weihua Univ. of Connecticut
Luh, Peter Univ. of Connecticut
Yan, Joseph Southern California Edison
Stern, Gary Southern California Edison

13:40-14:00 MoSe1T1.3
An Improved Multi-Mode Resource Allocation and Project Scheduling Model, pp. 365-370.

Haji, Maryam Univ. of Illinois at Chicago
Agostoni, Luca Pol. di Milano, Italy
Gullo, Paolo Pol. di Milano
Darabi, Houshang Univ. of Illinois at Chicago
Mancini, Mauro Pol. di Milano

14:00-14:20 MoSe1T1.4
An Efficient Exact Algorithm for General Single-Machine Scheduling with Machine Idle Time, pp. 371-376.

Tanaka, Shunji Kyoto Univ.
Fujikuma, Shuji Kyoto Univ.

14:20-14:40 MoSe1T1.5
An Enhanced Nested Partitions Method, pp. 377-382.

Sun, Jin Tsinghua Univ.
Zhao, Qianchuan Tsinghua Univ.
Luh, Peter Univ. of Connecticut

14:40-15:00 MoSe1T1.6
A Unified Optimization Framework for Population-Based Methods, pp. 383-387.

Sun, Jin Tsinghua Univ.
Zhao, Qianchuan Tsinghua Univ.
Luh, Peter Univ. of Connecticut

MoSe1T2 Jefferson
System Modeling and Simulation I (Regular Session)

Chair: Peng, ShihSen Diwan Univ. Tainan, Taiwan
Co-Chair: Liu, Jing General Motors

13:00-13:20 MoSe1T2.1
Optimal Sampling in Design of Experiment for Simulation-Based Stochastic Optimization, pp. 388-393.

Brantley, Mark George Mason Univ.
Lee, Loo National Univ. of Singapore
Chen, Chun-Hung George Mason Univ.
Chen, Argon National Taiwan Univ.

13:20-13:40 MoSe1T2.2
Progressive Simulation-Based Design: A Case Study Example on Software Defined Radio, pp. 394-399.

Azarnasab, Ehsan Univ. of Utah
Hu, Xiaolin Georgia State Univ.
Amini, Peiman Univ. of Utah
Farhang-Boroujeny, Behrouz Univ. of Utah

13:40-14:00 MoSe1T2.3
Process Capability Sensitivity Analysis for Design Evaluation of Multi-Station Assembly Systems, pp. 400-405.

Huang, Wenzhen Univ. of Massachusetts Dartmouth
Kong, Zhenyu Oklahoma State Univ.

14:00-14:20 MoSe1T2.4
Efficient Simulation for Serial Production Lines Based on Aggregated Event-Scheduling, pp. 406-411.

Zhao, Yanjia Tsinghua Univ.
Yan, Chaobo Tsinghua Univ.
Zhao, Qianchuan Tsinghua Univ.
Huang, Ningjian General Motors R & D Center
Li, Jingshan Univ. of Kentucky
Guan, Xiaohong Tsinghua Univ.

14:20-14:40 MoSe1T2.5
Functional Safety Certification: Practice and Issues, pp. 412-417.

Liu, Jing General Motors
Yuan, Chengyin General Motors Res. & Development Center
Gu, Fangming General Motors
Billir, Stephan General Motors Corp.

14:40-15:00 MoSe1T2.6
Modeling and Response Time Evaluation of Ethernet-Based Control Architectures Using Timed Event Graphs and Max-Plus Algebra, pp. 418-423.

Boussad/Addad, Boussad Lurpa, ENS Cachan/61av du Président Wilson, 94235 cachan cedex Fr
Amari, Sadd LURPA

MoSe1T3 Madison
Best Student Paper Session (Regular Session)

Chair: Saitou, Kazuhiro Univ. of Michigan
Co-Chair: Wang, Jiacun Monmouth Univ.

13:00-13:20 MoSe1T3.1
A Flexible Framework for Automation of Single Cell and Cell-To-Cell Interaction Analyses, pp. 424-430.

Nandakumar, Vivek Arizona State Univ.
Holl, Mark R. The Biodesign Inst.
Meldrum, Deirdre Arizona State Univ.

13:20-13:40 MoSe1T3.2
Partial Differential Equation-Based GPR Signature Discrimination for Automatic Detection of Bridge Deck Delamination, pp. 431-435.

Wang, Zhe New Jersey Inst. of Tech.
Slabaugh, Greg Siemens
Fang, Tong Siemens

13:40-14:00 MoSe1T3.3
Exploiting Passive UHF RFID in Paper Industry – Case Study: End User, pp. 436-441.

Nummela, Jussi Tampere Univ. of Tech.
Ukkonen, Leena Tampere Univ. of Tech.
Sydanheimo, Lauri Tampere Univ. of Tech.
Kivikoski, Markku Tampere Univ. of Tech.

14:00-14:20 MoSe1T3.4
Collaborative Data Reduction for Energy Efficient Sensor Networks, pp. 442-447.

Park, Chiwoo Texas A&M Univ.
Ding, Yu Texas A&M Univ.
Byon, Eunshin TAMU

14:20-14:40 MoSe1T3.5
Nonlinear Systems Identification Using Dynamic Multi-Time Scales Neural Networks (I), pp. 448-453.

Han, Xuan Concordia Univ.
Xie, Wenfang Concordia Univ.

14:40-15:00 MoSe1T3.6
Analyzing Human Skill through Control Trajectories and Motion Capture Data, pp. 454-459.

Duan, Feng The Univ. of Tokyo
Zhang, Ye ARAI Lab. Department of Precision Engineering, School of Engineeri
Pongthanya, Nuttapol ARAI Lab. Department of Precision Engineering, School of Engineeri
Watanabe, Kei ARAI Lab. Department of

Yokoi, Hiroshi Arai, Tamio	Precision Engineering, School of Engineeri The Univ. of Tokyo Univ. of Tokyo		
MoSe1T4		Monroe	
Manufacturing Systems I (Regular Session)			
Chair: Li, Jingshan Co-Chair: Fang, Tong	Univ. of Kentucky Siemens		
13:00-13:20		MoSe1T4.1	
<i>Quality Analysis in Flexible Manufacturing Systems with Batch Productions</i> , pp. 460-465.			
Wang, Junwen Li, Jingshan Arinez, Jorge	Univ. of Kentucky Univ. of Kentucky General Motors Res. & Development Center		
Biller, Stephan Huang, Ningjian	General Motors Corp. General Motors R & D Center		
13:20-13:40		MoSe1T4.2	
<i>Closed Production Lines with Arbitrary Models of Machine Reliability</i> , pp. 466-471.			
Biller, Stephan Marin, Samuel P. Meerkov, Semyon M. Zhang, Liang	General Motors Corp. General Motors R & D Center Univ. of Michigan Univ. of Michigan		
13:40-14:00		MoSe1T4.3	
<i>An Implementation of Iterative Learning Control in Industrial Production Machines</i> , pp. 472-477.			
Wei, Dong Panaitescu, Razvan	Siemens Corp. Res. Inc Siemens Energy and Automation		
14:00-14:20		MoSe1T4.4	
<i>Robot Control Cell Production System of Senju (thousand-Handed) Kannon Model That Demonstrated Optimality to the Multi-Product Production in Varying Volumes for Eight Years</i> , pp. 478-485.			
Fujita, Toshihiro Higuchi, Nobuo Sugano, Yoshihito Hayashi, Hiroyuki Ida, Katsuhisa Takagi, Toshikazu Nishino, Masatoshi Tokumoto, Wataru Yonezawa, Hiroshi Nishiki, Tomonori	IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp. IDEC Corp.		
14:20-14:40		MoSe1T4.5	
<i>Model-Based Control of a High-Temperature Crystal Growth Process</i> , pp. 486-491.			
Wason, John Gressick, William Wen, John	Rensselaer Pol. Inst. Rensselaer Pol. Inst. Rensselaer Pol. Inst.		
14:40-15:00		MoSe1T4.6	
<i>Optimal Model Predictive Control of Plasma Pipe Welding Process</i> , pp. 492-497.			
Qian, Kun Zhang, Yuming	Univ. of Kentucky Univ. of Kentucky		
MoSe1T5		Washington	
Advancement in Industrial Robotics and Manufacturing Automation (Invited Session)			
Chair: Fuhlbrigge, Thomas Co-Chair: Sheng, Weihua	ABB Inc. Oklahoma State Univ.		
13:00-13:20		MoSe1T5.1	
<i>Dynamics and Performance Modeling of Multi-Stage Manufacturing Systems Using Nonlinear Stochastic Differential Equations (I)</i> , pp. 498-503.			
Mittal, Utkarsh Yang, Hui Barajas, Leandro Bukkapatnam, Satish	Oklahoma State Univ. Oklahoma State Univ. General Motor Oklahoma State Univ.		
13:20-13:40		MoSe1T5.2	
<i>Distributed Multi-Robot Work Load Partition in Manufacturing Automation (I)</i> , pp. 504-509.			
Tewolde, Girma Wu, Changhua Wang, Yu			Kettering Univ. Kettering Univ. Univ. of North Carolina at Charlotte Oklahoma State Univ.
Sheng, Weihua			
13:40-14:00		MoSe1T5.3	
<i>Rapid Robot/Workcell Calibration Using Line-Based Approach (I)</i> , pp. 510-515.			
Liu, Yong Shen, Yantao Xi, Ning Yang, Ruiguo Li, Xiongzi Zhang, George Fuhlbrigge, Thomas			Michigan State Univ. Univ. of Nevada, Reno Michigan State Univ. Michigan State Univ. ABB Inc. ABB Corp. Res. Center ABB Inc.
14:00-14:20		MoSe1T5.4	
<i>Practical Industrial Robot Zero Offset Calibration (I)</i> , pp. 516-521.			
Chen, Heping Fuhlbrigge, Thomas Choi, Sang Wang, Jianjun Li, Xiongzi			ABB Inc. ABB Inc. ABB, Inc ABB Inc ABB Inc.
14:20-14:40		MoSe1T5.5	
<i>Automated Industrial Robot Path Planning for Spray Painting Process: A Review (I)</i> , pp. 522-527.			
Chen, Heping Fuhlbrigge, Thomas Li, Xiongzi			ABB Inc. ABB Inc. ABB Inc.
14:40-15:00		MoSe1T5.6	
<i>A Force Control Assisted Robot Path Generation System (I)</i> , pp. 528-533.			
Wang, Jianjun Zhang, Hui Zhang, George			ABB Inc ABB ABB Corp. Res. Center
MoSe1T6		Adams	
Wireless and Networked Industrial Automation (Regular Session)			
Chair: Nixon, Mark Co-Chair: Obradovic, Dragan	Emerson Process Management Siemens AG		
13:00-13:20		MoSe1T6.1	
<i>Adaptive Jitter Margin PID Controller</i> , pp. 534-539.			
Pohjola, Mikael			Helsinki Univ. of Tech.
13:20-13:40		MoSe1T6.2	
<i>Meeting Control Performance Over a Wireless Mesh Network</i> , pp. 540-547.			
Nixon, Mark Chen, Deji Blevins, Terry Mok, Aloysius			Emerson Process Management Emerson Process Management Emerson Process Management The Univ. of Texas at Austin
13:40-14:00		MoSe1T6.3	
<i>Simulation of Process Control with WirelessHART Networks Subject to Packet Losses</i> , pp. 548-553.			
De Biasi, Mauro Snickers, Carlo Landernas, Krister Isaksson, Alf J.			Univ. of Siena Univ. of Siena ABB Corp. Res. ABB Corp. Res.
14:00-14:20		MoSe1T6.4	
<i>Synchronization Performance of the Precision Time Protocol in the Face of Slave Clock Frequency Drift</i> , pp. 554-559.			
Scheiterer, Ruxandra Lupas Na, Chongning Obradovic, Dragan Steindl, Günter Goetz, Franz-Josef			Siemens AG Siemens AG Siemens AG Siemens AG Siemens AG
14:20-14:40		MoSe1T6.5	
<i>Interference Aware Self-Organization for Wireless Sensor Networks: A Reinforcement Learning Approach</i> , pp. 560-565.			
Stabellini, Luca			The Royal Inst. of Tech. (KTH)

MoSe2T4 Monroe
Collaborations towards Web-Based Manufacturing (Invited Session)

Chair: Wang, Lihui National Res. Council of Canada
 Co-Chair: Tang, Gina Rowan Univ.

15:30-15:50 MoSe2T4.1
Unified Colored Timed Petri Net Models for the Adaptive Control of Disassembly Systems (I), pp. 638-643.
 Tang, Gina Rowan Univ.

15:50-16:10 MoSe2T4.2
A Model-Driven Approach for Remote Machine Control (I), pp. 644-649.
 Wang, Lihui National Res. Council of Canada

16:10-16:30 MoSe2T4.3
A Service Oriented Architecture for CAX Concurrent Collaboration (I), pp. 650-655.
 Ma, Yongsheng Univ. of Alberta
 Khaled, Adel Univ. of Alberta
 Miller, James Univ. of Alberta

16:30-16:50 MoSe2T4.4
Integrated Fixture Design and Analysis System Based on Service-Oriented Architecture (I), pp. 656-661.
 Fan, Liqing National Univ. of Singapore
 Senthil Kumar, A. National Univ. of Singapore
 Jagdish, Bhat Nikhil National Univ. of Singapore
 Anbuselvan, Subramanian National Univ. of Singapore
 Bok, Shung-Hwee National Univ. of Singapore

16:50-17:10 MoSe2T4.5
A Web-Based Integrated Process Planning and Scheduling System (I), pp. 662-667.
 Wang, Yifa National Univ. of Singapore
 Zhang, Yunfeng National Univ. of Singapore
 Fuh, Jerry National Univ. of Singapore
 Zhou, Zude Wuhan Univ. of Tech.
 Xue, Ligong Wuhan Univ. of Tech.
 Lou, Ping Wuhan Univ. of Tech.

17:10-17:30 MoSe2T4.6
A Methodology for Web-Based Manufacturing Management and Control (I), pp. 668-673.
 Álvares, Alberto José Univ. de Brasília
 de Souza Jr., José Leonardo Univ. de Brasília
 N.
 Teixeira, Evandro Leonardo Autotrac Comércio e
 Silva Telecomunicações S/A
 Ferreira, João Carlos Univ. Federal de Santa Catarina
 Espíndola

MoSe2T5 Washington
Service and Home Automation (Regular Session)

Chair: Nugent, Chris Univ. of Ulster
 Co-Chair: Mainardi, Elena Univ. of Ferrara

15:30-15:50 MoSe2T5.1
Service Robot Anthropomorphism and Interface Design for Emotion in Human-Robot Interaction, pp. 674-679.
 Zhang, Tao North Carolina State Univ.
 Zhu, Biwen North Carolina State Univ.
 Lee, Lashanda North Carolina State Univ.
 Kaber, David North Carolina State Univ.

15:50-16:10 MoSe2T5.2
Design of a Portable Touchscreen Interface for Powerline Domotic Systems, pp. 680-684.
 Mainardi, Elena Univ. of Ferrara

16:10-16:30 MoSe2T5.3
Assessing the Impact of Individual Sensor Reliability within Smart Living Environments, pp. 685-690.
 Nugent, Chris Univ. of Ulster
 Hong, Xin Univ. of Ulster
 Hallberg, Josef Luleå Univ. of Tech.
 Finlay, Dewar Univ. of Ulster
 Synnes, Klre Luleå Univ. of Tech.

16:30-16:50 MoSe2T5.4
*Grasping Unknown Objects Based on 2-1/2D Range Data**, pp. 691-696.
 Richtsfeld, Mario Vienna Univ. of Tech.
 Zillich, Michael Vienna Univ. of Tech.

16:50-17:10 MoSe2T5.5
Flexible Docking Mechanism Using Combination of Magnetic Force with Error-Compensation Capability, pp. 697-702.
 Roh, Se-gon Sungkyunkwan Univ.
 Choi, Hyouk Ryeol Sungkyunkwan Univ.
 Park, Jae Hoon SKKU
 Kim, Hong-Seok Korea Inst. of Industrial Tech.
 Hogil, Lee Korea Inst. of Industrial Tech.
 Yang, KwangWoong KITECH
 Choi, Moosung Korea Inst. of Industrial Tech.
 Song, Young Kouk Sungkyunkwan Univ.

MoSe2T6 Adams
RFID Application (Regular Session)

Chair: Chong, Nak Young Japan Advanced Inst. of Sci. and Tech.
 Co-Chair: Bai, Li Temple Univ.

15:30-15:50 MoSe2T6.1
Design of RFID System with DS-CDMA Transmission, pp. 703-708.
 Mazurek, Gustaw Warsaw Univ. of Tech.

15:50-16:10 MoSe2T6.2
Fusion of Direction Sensing RFID and Sonar for Mobile Robot Docking, pp. 709-714.
 Kim, Myungsik Ubiquitous Gwangyang & Global IT Inst.
 Chong, Nak Young Japan Advanced Inst. of Sci. and Tech.
 Yu, Wonpil ETRI

16:10-16:30 MoSe2T6.3
*Open Architecture for Contactless Smartcard-Based Portable Electronic Payment Systems * (I)*, pp. 715-719.
 Bai, Li Temple Univ.
 Kane, Jerry Southeastern Pennsylvania Transportation Authority (SEPTA)
 Lyons, Pat Temple Univ.

Tuesday, August 26, 2008

TuPoT1 Capital View Ballroom
Poster Session (Poster Session)

Chair: Darabi, Houshang Univ. of Illinois at Chicago
 09:00-10:00 TuPoT1.1
Analysis of Contact between Feeder Surface and Microparts Based on Measurements for Microparts Feeder Using an Asymmetric Surface, pp. 720-725.
 Mitani, Atsushi Sapporo City Univ.
 Hirai, Shinichi Ritsumeikan Univ.

09:00-10:00 TuPoT1.2
Heavy-Ion Radiotherapy Treatment Planning System and Medical Image Processing Algorithm Used in It, pp. 726-731.
 Dang, Jianwu Lanzhou Jiaotong Univ.
 Wang, Yangping Lanzhou Jiaotong Univ.
 Li, Sha Lanzhou Generation Hospital of Lanzhou Command Lanzhou City Univ.

09:00-10:00 TuPoT1.3
Image-Based Robust Control of Robot Manipulators with Image Jacobian and Dynamics Uncertainties, pp. 732-737.
 Kim, Chin Su Korea Aerospace Univ.
 Mo, Eun Jong Korea Aerospace Univ.
 Han, Sung Min Korea Aerospace Univ.
 Jie, Min Seok Hanseo Univ.
 Lee, Kang Woong Korea Aerospace Univ.

09:00-10:00 TuPoT1.4
Matching Book-Spine Images for Library Shelf-Reading Process
 Zhu, Zhengping

<i>Automation</i> , pp. 738-743.		Brigham Young Univ.	Michalczyk, Stephen	Bristol-Myers Squibb, Pharmaceutical Res. Inst.
Lee, Dah-Jye		Brigham Young Univ.	Cahn, Matthew	Bristol Myers-Squibb, Pharmaceutical Res. Inst.
Chang, Yuchou		Brigham Young Univ.	Klei, Herbert	Bristol-Myers Squibb, Pharmaceutical Res. Inst.
Archibald, James		Brigham Young Univ.		
Pitzak, Clint		Brigham Young Univ.		
09:00-10:00		TuPoT1.5		
<i>Full-View Car Navigator</i> , pp. 744-749.		Tottori Univ.	09:00-10:00	TuPoT1.16
Li, Shigang			<i>Two-Stage Robotic Crystal Mounting of Protein Crystals for X-Ray Data Collection*</i> .	
09:00-10:00		TuPoT1.6	Georgiev, Atanas	Columbia Univ.
<i>KNX - ZigBee Gateway for Home Automation</i> , pp. 750-755.		Hanyang Univ.	Allen, Peter	Columbia Univ.
Lee, Woo Suk		Hanyang Univ.	09:00-10:00	TuPoT1.17
Hong, Seung Ho			<i>Automated Vision-Based Selection and Placement of Single Cells in Microwell Array Formats*</i> .	
09:00-10:00		TuPoT1.7	Anis, Yasser H	Arizona State Univ.
<i>Particle Filter Positioning and Tracking Based on Dynamic Model (I)</i> , pp. 756-759.		Chongqing Univ. of Posts and Telecommunications	Holl, Mark R.	The Biodesign Inst.
Tian, Zengshan		Chongqing Univ. of Posts and Telecommunications	Meldrum, Deirdre	Arizona State Univ.
Luo, Lei			09:00-10:00	TuPoT1.18
09:00-10:00		TuPoT1.8	<i>Cooperative Movements of Binocular Motor System*</i> .	
<i>Supply Chain Performance with Various Price-Dependent Demand Functions and Component Commonality in One Product Family</i> , pp. 760-765.		Tokyo Inst. of Tech. kyo Inst. of Tech.	Zhang, Xiaolin	
Qian, Li		South Dakota State Univ.	Sato, Yugo	
Kong, Zhenyu		Oklahoma State Univ.	09:00-10:00	TuPoT1.19
09:00-10:00		TuPoT1.9	<i>A Flexible Framework for Automation of Single Cell and Cell-To-Cell Interaction Analyses*</i> .	
<i>Dynamics and Performance Modeling of Multi-Stage Manufacturing Systems Using Nonlinear Stochastic Differential Equations (I)*</i> .		Oklahoma State Univ.	Nandakumar, Vivek	Arizona State Univ.
Mittal, Utkarsh		Oklahoma State Univ.	Holl, Mark R.	The Biodesign Inst.
Yang, Hui		General Motor	Meldrum, Deirdre	Arizona State Univ.
Barajas, Leandro		Oklahoma State Univ.	09:00-10:00	TuPoT1.20
Bukkapatnam, Satish			<i>Petri Net Decomposition Approach for the Simultaneous Optimization of Task Assignment and Routing with Automated Guided Vehicles*</i> .	
09:00-10:00		TuPoT1.10	Nishi, Tatsushi	Osaka Univ.
<i>Rapid Robot/Workcell Calibration Using Line-Based Approach (I)*</i> .		Michigan State Univ.	Tanaka, Yuki	Osaka Univ.
Liu, Yong		Univ. of Nevada, Reno	Inuiguchi, Masahiro	Osaka Univ.
Shen, Yantao		Michigan State Univ.	09:00-10:00	TuPoT1.21
Xi, Ning		ABB Inc.	<i>High-Speed Video Analysis of Laboratory Rats Behaviors in Forced Swim Test*</i> .	
Yang, Ruiguo		ABB Corp. Res. Center	Yuman, Nie	Hiroshima Univ.
Li, Xiongzi		ABB Inc.	Ishii, Idaku	Hiroshima Univ.
Zhang, George			Yamamoto, Kenkichi	Hiroshima Univ.
Fuhlbrigge, Thomas			Takaki, Takeshi	Hiroshima Univ.
09:00-10:00		TuPoT1.11	Orito, Kensuke	Azabu Univ.
<i>Pose Detection of 3-D Objects Using Images Sampled on SO(3), Spherical Harmonics, and Wigner-D Matrices*</i> .		Colorado State Univ.	Matsuda, Hiroshi	Tokyo Univ. of Agriculture and Tech.
Hoover, Randy		Colorado State Univ.	09:00-10:00	TuPoT1.22
Maciejewski, Anthony A.		Florida State Univ.	<i>Design of the End-Effector Tool Attachment for Robot Arm with Multiple Reconfigurable Goals*</i> .	
Roberts, Rodney			Gueta, Lounell B.	Univ. of Tokyo
09:00-10:00		TuPoT1.12	Chiba, Ryosuke	Univ. of Tokyo
<i>On the Precision Alignment and Hybrid Assembly Aspects in Manufacturing of a Microspectrometer*</i> .		Univ. OF TEXAS AT ARLINGTON	Arai, Tamio	Univ. of Tokyo
Das, Aditya		The Univ. of Texas at Arlington	Ueyama, Tsuyoshi	DENSO WAVE INCORPORATED
Popa, Dan		Univ. of Texas at Arlington	Ota, Jun	The Univ. of Tokyo
Stephanou, Harry			09:00-10:00	TuPoT1.23
09:00-10:00		TuPoT1.13	<i>Recycling Controllers*</i> .	
<i>Large Scale Self-Assembly of Crystalline Semiconductor Microcomponents Onto Plastic Substrates Via Microfluidic Traps*</i> .		Univ. of Pennsylvania	Kress-Gazit, Hadas	Univ. of Pennsylvania
Kim, Samuel		Univ. of Pennsylvania	Ayanian, Nora	Univ. of Pennsylvania
Saeedi, Ehsan		Univ. of Pennsylvania	Pappas, George J.	Univ. of Pennsylvania
Etzkorn, James		Univ. of Pennsylvania	Kumar, Vijay	Univ. of Pennsylvania
Parviz, Babak			09:00-10:00	TuPoT1.24
09:00-10:00		TuPoT1.14	<i>Flow Lines with Regular Service Times: Evolution of Delay, State Dependent Failures and Semiconductor Wafer Fabrication*</i> .	
<i>Automatic Mixing of Highly Viscous Bio-Samples*</i> .		The Ohio State Univ.	Morrison, James	KAIST
Yuan, Liang		The Ohio State Univ.	09:00-10:00	TuPoT1.25
Zheng, Yuan F.			<i>Adapting Product and Supply Chain Systems under Severe Uncertainty*</i> .	
09:00-10:00		TuPoT1.15	Patil, Lalit	Univ. of Michigan
<i>Petri Net Modeling and Automated System Control of Protein Crystallization Experimentation in Drug Discovery*</i> .		Bristol-Myers Squibb, Pharmaceutical Res. Inst.	Saitou, Kazuhiro	Univ. of Michigan
Russo, Mark			09:00-10:00	TuPoT1.26
			<i>Simulation of Process Control with WirelessHART Networks Subject to Packet Losses*</i> .	

De Biasi, Mauro	Univ. of Siena	Zou, An-Min	Univ. of Saskatchewan
Snickars, Carlo	Univ. of Siena	Cheng, Long	Chinese Acad. of Sciences
Landernas, Krister	ABB Corp. Res.		
Isaksson, Alf J.	ABB Corp. Res.		
TuSe1T2		TuSe1T3.5	
Planning, Scheduling and Coordination III (Regular Session)		<i>Shrinkage Compensation Along Single Direction Dixel Space for Improving Accuracy in Selective Laser Sintering</i> , pp. 827-832.	
Chair: Kumar, Vijay	Univ. of Pennsylvania	K, Senthilkumaran	Indian Inst. of Tech. Delhi
Co-Chair: Hoshino, Satoshi	Tokyo Inst. of Tech.	Pandey, Pulak Mohan	Indian Inst. of Tech. Delhi
		Rao, P.V. Madhusudan	Indian Inst. of Tech. Delhi
10:00-10:20	TuSe1T2.1	11:40-12:00	TuSe1T3.6
<i>Automatically Synthesizing a Planning and Control Subsystem for the DARPA Urban Challenge</i> , pp. 766-771.		<i>Traffic Responsive Signal Timing Plan Generation Based on Neural Network</i> , pp. 833-838.	
Kress-Gazit, Hadas	Univ. of Pennsylvania	Asar, Azzam ul	NWFP Univ. of Engineering and Tech.
Pappas, George J.	Univ. of Pennsylvania		
10:20-10:40	TuSe1T2.2	Khan, Sadeeq	Univ. of Peshawar
<i>Recycling Controllers</i> , pp. 772-777.		Ahmed, Jamal	Univ. of Peshawar
Kress-Gazit, Hadas	Univ. of Pennsylvania	Hussnain, Riaz ul	NWFP Univ. of Engineering & Tech.
Ayanian, Nora	Univ. of Pennsylvania		
Pappas, George J.	Univ. of Pennsylvania		
Kumar, Vijay	Univ. of Pennsylvania		
10:40-11:00	TuSe1T2.3	TuSe1T4	
<i>Planning Regrasp Operations for a Multifingered Robotic Hand</i> , pp. 778-783.		Validation Control in Large-Scale Systems (Invited Session)	
Xue, Zhixing	FZI	Chair: Witrant, Emmanuel	Univ. Joseph Fourier
Zöllner, Johann Marius	FZI Forschungszentrum Informatik	Co-Chair: Isaksson, Alf J.	ABB Corp. Res.
Dillmann, Rüdiger	Univ. of Karlsruhe		
11:00-11:20	TuSe1T2.4	10:00-10:20	TuSe1T4.1
<i>Integrated Scheduling for Gasoline Blending Considering Storage Tanks and Pipe Network</i> , pp. 784-789.		<i>Mining Ventilation Control: A New Industrial Case for Wireless Automation (I)*</i> .	
Hoshino, Satoshi	Tokyo Inst. of Tech.	Witrant, Emmanuel	Univ. Joseph Fourier
Furuya, Noriyoshi	Tokyo Inst. of Tech.	D'Innocenzo, Alessandro	Univ. of L'Aquila
Seki, Hiroya	Tokyo Inst. of Tech.	Isaksson, Alf J.	ABB Corp. Res.
		Di Benedetto, Maria Domenica	Univ. of L'Aquila
		Johansson, Karl H.	Royal Inst. of Tech.
		Santucci, Fortunato	Univ. of L'Aquila
		Strand, Martin	ABB Corp. Res.
11:20-11:40	TuSe1T2.5	10:20-10:40	TuSe1T4.2
<i>Self Evolution Algorithm for Common Due Date Scheduling Problem</i> , pp. 790-795.		<i>Receding Horizon Climate Control in Metal Mine Extraction Rooms (I)</i> , pp. 839-844.	
Weng, Wei	Waseda Univ.	Sandou, Guillaume	SUPELEC
Fujimura, Shigeru	Waseda Univ.	Witrant, Emmanuel	Univ. Joseph Fourier
		Olaru, Sorin	SUPELEC
		Niculescu, Silviu-Iulian	CNRS-SUPELEC
11:40-12:00	TuSe1T2.6	10:40-11:00	TuSe1T4.3
<i>Column Generation for Solving a Compressor Scheduling Problem</i> , pp. 796-801.		<i>Air Flow Modeling in Deep Wells: Application to Mining Ventilation (I)</i> , pp. 845-850.	
Camponogara, Eduardo	Federal Univ. of Santa Catarina	Witrant, Emmanuel	Univ. Joseph Fourier
Plucenio, Agustinho	Federal Univ. of Santa Catarina	Johansson, Karl H.	Royal Inst. of Tech.
TuSe1T3		11:00-11:20	TuSe1T4.4
System Modeling and Simulation II (Regular Session)		<i>Mining Ventilation Automation: Wireless Sensing, Communication Architecture and Advanced Services (I)</i> , pp. 851-857.	
Chair: Beghi, Alessandro	Univ. di Padova	Pomante, Luigi	Univ. of L'Aquila
Co-Chair: Murphey, Todd	Univ. of Colorado	Santucci, Fortunato	Univ. of L'Aquila
10:00-10:20	TuSe1T3.1	Rinaldi, Claudia	Univ. of L'Aquila
<i>Variational Integrators for Constrained Cables</i> , pp. 802-807.		Tennina, Stefano	Univ. of L'Aquila
Nichols, Kirk	Univ. of Colorado at Boulder	Fischione, Carlo	Univ. of California
Murphey, Todd	Univ. of Colorado		
10:20-10:40	TuSe1T3.2	11:20-11:40	TuSe1T4.5
<i>Simulation and Effects Evaluation of Anti-Galloping Devices for Overhead Transmission Lines</i> , pp. 808-813.		<i>Automatic Verification of Wireless Control in a Mining Ventilation System (I)</i> , pp. 858-863.	
Xiao, Xiaohui	Wuhan Univ.	Di Benedetto, Maria Domenica	Univ. of L'Aquila
Wu, Jing	Guangdong Communications Pol.	D'Innocenzo, Alessandro	Univ. of L'Aquila
		Serra, Emmanuele	Univ. of L'Aquila
10:40-11:00	TuSe1T3.3	Witrant, Emmanuel	Univ. Joseph Fourier
<i>A Simulation Environment for Dry-Expansion Evaporators with Application to the Design of Autotuning Control Algorithms for Electronic Expansion Valves</i> , pp. 814-820.			
Beghi, Alessandro	Univ. di Padova		
Bianchini, Umberto	CAREL SpA		
Cristian, Bodo	Univ. di Padova		
Cecchinato, Luca	Univ. di Padova		
11:00-11:20	TuSe1T3.4	TuSe1T5	
<i>Adaptive Dynamic Surface Control of a Class of Uncertain Nonlinear Systems in Pure-Feedback Form Using Fuzzy Backstepping Approach</i> , pp. 821-826.		Manufacturing Systems II (Regular Session)	
Hou, Zeng-Guang	Inst. of Automation, Chinese Acad. of Science	Chair: Chirikjian, Gregory	Johns Hopkins Univ.
		Co-Chair: Shibata, Mizuho	Ritsumeikan Univ.
		10:00-10:20	TuSe1T5.1
		<i>Parts Entropy and the Principal Kinematic Formula</i> , pp. 864-869.	
		Chirikjian, Gregory	Johns Hopkins Univ.
		10:20-10:40	TuSe1T5.2
		<i>Feasible Spaces in Weld Gun Selection</i> , pp. 870-875.	
		Nelaturi, Saigopal	Univ. of Wisconsin-Madison

Abhyankar, Atul Shapiro, Vadim Tilove, Robert	Univ. of Wisconsin, Madison Univ. of Wisconsin-Madison General Motors R&D Center	11:20-11:40 <i>Modeling and Dynamics of Human Arm</i> , pp. 924-928. Nagarsheth, Hemant Savsani, Poonam	TuSe1T6.5 s v national Inst. of Tech. sardar vallbhbai national Inst. of Tech. mahavir general hospitals
10:40-11:00 <i>Design of the End-Effector Tool Attachment for Robot Arm with Multiple Reconfigurable Goals</i> , pp. 876-881.	TuSe1T5.3 Univ. of Tokyo Univ. of Tokyo Univ. of Tokyo DENSO WAVE INCORPORATED The Univ. of Tokyo	Patel, Mansi	
11:00-11:20 <i>Handling of Hemmed Fabrics by a Single-Armed Robot</i> , pp. 882-887.	TuSe1T5.4 Ritsumeikan Univ. Ritsumeikan Univ. I.S.T. Co., Ltd. Ritsumeikan Univ.		
11:20-11:40 <i>A Development of Self-Clinching Standoff by Reverse Drawing Process Technology</i> , pp. 888-893.	TuSe1T5.5 Donguei Inst. of Tech.		
11:40-12:00 <i>Generation of Optimized Robotic Assembly Sequence Using Ant Colony Optimization</i> , pp. 894-899.	TuSe1T5.6 National Inst. of Tech. Rourkela National Inst. of Tech. Rourkela IACR,Rayagada National Inst. of Tech. Rourkela		
TuSe1T6 Automation in Life Sciences and Laboratory Automation I (Regular Session)	Washington		
Chair: Zheng, Yuan F. Co-Chair: Russo, Mark	The Ohio State Univ. Bristol-Myers Squibb, Pharmaceutical Res. Inst.		
10:00-10:20 <i>Automatic Mixing of Highly Viscous Bio-Samples</i> , pp. 900-905.	TuSe1T6.1 The Ohio State Univ. The Ohio State Univ.		
10:20-10:40 <i>Petri Net Modeling and Automated System Control of Protein Crystallization Experimentation in Drug Discovery</i> , pp. 906-911.	TuSe1T6.2 Bristol-Myers Squibb, Pharmaceutical Res. Inst. Bristol-Myers Squibb, Pharmaceutical Res. Inst. Bristol Myers-Squibb, Pharmaceutical Res. Inst. Bristol-Myers Squibb, Pharmaceutical Res. Inst.		
10:40-11:00 <i>Using Architectural Software Patterns in Support of Controlling Modular High Throughput Screening Automation Systems</i> , pp. 912-917.	TuSe1T6.3 Northeastern Univ. Caliper Life Sciences		
11:00-11:20 <i>Development of Flexible Laboratory Automation Platform Using Mobile Agents in the Clinical Laboratory</i> , pp. 918-923.	TuSe1T6.4 Sungkyunkwan Univ. Sungkyunkwan Univ. Sungkyunkwan Univ. Sungkyunkwan Univ. KnR System Inc. Robotous Co. Seoul National Univ. Korea Inst. of Industrial Tech. Pohang Inst. of Intelligent Robotics POSTECH Sungkyunkwan Univ.		
11:20-11:40 <i>GSP: Extending G-Code Using JSP Servlet Technologies.</i> , pp. 953-958.	TuSe1T7.5 California State Univ. Northridge California State Univ. Northridge		
11:40-12:00 <i>Ubiquitous Robot SW Platform and Its Application: AnyRobot Studio and AnyKids Service*</i> .	TuSe1T7.6 Mechatronics & Manufacturing Tech. Center		
TuSe2T2 Automation for Micro/Nano Technologies (Regular Session)	Jackson		
Chair: Parviz, Babak Co-Chair: Ahmad, Irfan	Univ. of Washington ENSIG, INPG		
13:00-13:20 <i>On the Precision Alignment and Hybrid Assembly Aspects in Manufacturing of a Microspectrometer</i> , pp. 959-966.	TuSe2T2.1 Univ. OF TEXAS AT ARLNIGTON The Univ. of Texas at Arlington The Univ. of Texas at Arlington Univ. of Texas at Arlington		
13:20-13:40 <i>Large Scale Self-Assembly of Crystalline Semiconductor Microcomponents Onto Plastic Substrates Via Microfluidic Traps</i> , pp. 967-970.	TuSe2T2.2 Univ. of Washington Univ. of Washington Univ. of Washington Univ. of Washington		
13:40-14:00 <i>Controller Design for a Closed-Loop Scanning Tunneling Microscope</i> , pp. 971-976.	TuSe2T2.3		

Ahmad, Irfan Besancon-Voda, Alina Besancon, Gildas	ENSIEG, INPG ENSIEG-INPG ENSIEG-INPG	13:40-14:00 <i>A Fuzzy System for Modeling the Structure-Activity Relationships in Presence of Uncertainties</i> , pp. 1025-1030.	TuSe2T6.3
14:00-14:20 <i>Automatic Micromanipulation Using Multiscale Visual Servoing</i> , pp. 977-982.	TuSe2T2.4	Kumar, Mohit Thurow, Kerstin Stoll, Norbert Stoll, Regina	Center for Life Science Automation Univ. Rostock Univ. of Rostock Univ. of Rostock
Tamadazte, Brahim Dembélé, Soukalo Fortier, Guillaume Lefort-Piat, Nadine	CNRS, UFC/ENSMM/UTBM Lab. d'Automatique de Besançon UFC/ENSMM/CNRS Lab. d'Automatique de Besançon		
14:20-14:40 <i>Improving Rotation Behaviour of Robotic Structures for Micro-Assembly</i> , pp. 983-988.	TuSe2T2.5		
Hériban, David Thiebault, Arnaud Gauthier, Michael Fortier, Guillaume	FEMTO-ST Inst. UMR CNRS 6174 Femto-ST Inst. FEMTO-ST Inst. UFC/ENSMM/CNRS		
TuSe2T4 Madison			
Internet Analytics and Automation (Regular Session)			
Chair: Yadati, Narahari Co-Chair: Balasundaram, Baski	Indian Inst. of Science Oklahoma State Univ.		
13:00-13:20 <i>Cohesive Subgroup Model for Graph-Based Text Mining</i> , pp. 989-994.	TuSe2T4.1		
Balasundaram, Baski	Oklahoma State Univ.		
13:20-13:40 <i>Efficient Algorithms for Combinatorial Auctions with Volume Discounts Arising in Web Service Composition</i> , pp. 995-1000.	TuSe2T4.2		
Bandaru, Prashanth Yadati, Narahari	Indian Inst. of Science Indian Inst. of Science		
13:40-14:00 <i>Cost Sharing Mechanisms for Business Clusters with Strategic Firms</i> , pp. 1001-1006.	TuSe2T4.3		
Bellur, Ashwin Yadati, Narahari Biswas, Shantanu	Indian Inst. of Science Indian Inst. of Science Motorola India Res. Lab.		
14:00-14:20 <i>A Nash Bargaining Approach to Retention Enhancing Bid Optimization in Sponsored Search Auctions with Discrete Bids</i> , pp. 1007-1012.	TuSe2T4.4		
Kannan, Ramakrishnan Garg, Dinesh Subbian, Karthik Yadati, Narahari	IBM Corp. IBM India Res. Lab. IBM Indian Inst. of Science		
TuSe2T6 Washington			
Automation in Life Sciences and Laboratory Automation II (Regular Session)			
Chair: Stoll, Norbert Co-Chair: Holl, Mark R.	Univ. of Rostock The Biodesign Inst.		
13:00-13:20 <i>Integration of User Interface, Device Control, Data Acquisition and Analysis for Automated Multi-Spectral Imaging of Single Biological Cells</i> , pp. 1013-1018.	TuSe2T6.1		
Sun, Clement Etzkorn, James Holl, Mark R. Molter, Timothy McGuire, Shawn McQuaide, Sarah Burgess, Lloyd Lidstrom, Mary Meldrum, Deirdre	Univ. of Washington Univ. of Washington The Biodesign Inst. Univ. of Washington Univ. of Washington Univ. of Washington Univ. of Washington Univ. of Washington Arizona State Univ.		
13:20-13:40 <i>Two-Stage Robotic Crystal Mounting of Protein Crystals for X-Ray Data Collection</i> , pp. 1019-1024.	TuSe2T6.2		
Georgiev, Atanas Allen, Peter	Columbia Univ. Columbia Univ.		