

Best presentations in session

ACC 2012

Wednesday, June 27

10:00-10:20		WeA01.1
<i>Consensus Control of Flexible Joint Robots with Uncertain Communication Delays.</i>		
Avila-Becerril, Sofia		Univ. Nacional Autonoma de Mexico
Espinosa-Perez, Gerardo		Univ. Nacional Autonoma de Mexico
10:40-11:00		WeA02.3
<i>Asymptotic Normality and Uncertainty Bounds for Reliability Estimates from Subsystem and Full System Tests.</i>		
Spall, James C.		Johns Hopkins Univ.
11:00-11:20		WeA03.4
<i>A Model-Based Approach to Multi-Modal Mass Tuning of a Micro-Scale Resonator.</i>		
Schwartz, David		Univ. of California, Los Angeles
Kim, Dennis		Univ. of California, Los Angeles
M'Closkey, Robert		Univ. of California, Los Angeles
11:00-11:20		WeA04.4
<i>Orbit Control for a Power Generating Airfoil Based on Nonlinear MPC.</i>		
Gros, Sebastien		KU Leuven
Zanon, Mario		Katholieke Univ. Leuven
Diehl, Moritz		Katholieke Univ. Leuven
11:00-11:20		WeA05.4
<i>Model Predictive Control of Three Dimensional Spacecraft Relative Motion.</i>		
Weiss, Avishai		Univ. of Michigan
Kolmanovsky, Ilya V.		The Univ. of Michigan
Baldwin, Morgan		Air Force Res. Lab.
Erwin, Richard Scott		Air Force Res. Lab.
11:40-12:00		WeA06.6
<i>Tracking Control Design for Non-Standard Nonlinear Singularly Perturbed Systems.</i>		
Siddarth, Anshu		Texas A&M Univ.
Valasek, John		Texas A&M Univ.
11:00-11:20		WeA07.4
<i>Saturated RISE Feedback Control for Euler-Lagrange Systems.</i>		
Fischer, Nicholas		Univ. of Florida
Kan, Zhen		Univ. of Florida
Dixon, Warren E.		Univ. of Florida
10:00-10:20		WeA08.1
<i>Incentive-Based Coordinated Charging Control of Plug-In Electric Vehicles at the Distribution-Transformer Level.</i>		
Hermans, R.M.		Eindhoven Univ. of Tech.
Almassalkhi, Mads		Univ. of Michigan
Hiskens, Ian A.		Univ. of Michigan
10:20-10:40		WeA09.2
<i>GPS-Free Terrain-Based Vehicle Tracking on Road Networks.</i>		
Jerath, Kshitij		The Pennsylvania State Univ.
Brennan, Sean		The Pennsylvania State Univ.
10:40-11:00		WeA10.3
<i>A Novel Functional Regression Based Estimation and Control Algorithm.</i>		
Lei, Yu		Virginia Tech.
Kurdila, Andrew J.		Virginia Tech.
10:20-10:40		WeA12.2
<i>Randomized Model Predictive Control for Stochastic Linear Systems.</i>		
Schildbach, Georg		ETH Zurich
Calafiore, Giuseppe		Pol. di Torino
Fagiano, Lorenzo		Pol. di Torino/Univ. California at Santa Barbara
Morari, Manfred		ETH Zurich

10:20-10:40	WeA13.2
<i>Combinatorial Insights and Robustness Analysis for Clustering in Dynamical Networks.</i>	
Bürger, Mathias	Univ. of Stuttgart
Zelazo, Daniel	Univ. Stuttgart
Allgower, Frank	Univ. of Stuttgart
10:40-11:00	WeA14.3
<i>Active Suspension Controller Using MPC Based on a Full-Car Model with Preview Information.</i>	
Göhrle, Christoph	Univ. of Stuttgart
Wagner, Andreas	Audi AG
Schindler, Andreas	Audi AG
Sawodny, Oliver	Univ. of Stuttgart
10:00-10:20	WeA15.1
<i>Extending Energy Management in Hybrid Electric Vehicles with Explicit Control of Gear Shifting and Start-Stop.</i>	
van Reeve, Vital	Eindhoven Univ. of Tech.
Hofman, Theo	Tech. Univ. Eindhoven
Steinbuch, Maarten	Eindhoven Univ. of Tech.
Huisman, Rudolf	DAF Trucks N.V.
10:20-10:40	WeA16.2
<i>PDE Estimation Techniques for Advanced Battery Management Systems - Part II: SOH Identification (I).</i>	
Moura, Scott	Univ. of California, San Diego
Chaturvedi, Nalin A.	Robert Bosch LLC
Krstic, Miroslav	Univ. of California, San Diego
10:40-11:00	WeA17.3
<i>Initialization of ILC Based on a Previously Learned Trajectory.</i>	
Janssens, Pieter	Katholieke Univ. Leuven
Pipeleers, Goele	Katholieke Univ. Leuven
Swevers, Jan	K. U. Leuven
10:20-10:40	WeA18.2
<i>Reconstruction of Boundary Conditions from Internal Conditions Using Viability Theory (I).</i>	
Hofleitner, Aude	UC Berkeley
Claudel, Christian	UC Berkeley
Bayen, Alexandre M.	Univ. of California at Berkeley
10:20-10:40	WeA19.2
<i>Mixed-Initiative Strategies for Real-Time Scheduling of Multiple Unmanned Vehicles (I).</i>	
Clare, Andrew	MIT
Macbeth, Jamie	MIT
Cummings, Mary (Missy)	MIT
10:00-10:20	WeA20.1
<i>Safety Controller Synthesis Using Human Generated Trajectories: Nonlinear Dynamics with Feedback Linearization and Differential Flatness (I).</i>	
Julius, Agung	Rensselaer Pol. Inst.
Winn, Andrew	Rensselaer Pol. Univ.
11:00-11:20	WeA21.4
<i>Experimental Evaluation of an LPV-Gain-Scheduled Observer for Rejecting Multisine Disturbances with Time-Varying Frequencies (I).</i>	
Heins, Wiebke	Clausthal Univ. of Tech.
Ballesteros, Pablo	Clausthal Univ. of Tech.
Bohn, Christian	Tech. Univ. Clausthal
11:20-11:40	WeA22.4
<i>Cylinder Pressure Based Control and Diagnostics of Combustion Engines (I).</i>	
Tunestål, Per	Lund Univ. Faculty of Engineering
15:10-15:30	WeB01.6
<i>Joint Probabilistic Data Association-Feedback Particle Filter for Multiple Target Tracking Applications.</i>	

Yang, Tao	Univ. of Illinois at Urbana-Champaign
Huang, Geng	Univ. of Illinois Urbana Champaign
Mehta, Prashant G.	Univ. of Illinois, Urbana-Champaign
14:30-14:50	WeB02.4
<i>Consensus Over Martingale Graph Processes.</i>	
Fazeli, Arastoo	Univ. of Pennsylvania
Jadbabaie, Ali	Univ. of Pennsylvania
14:10-14:30	WeB03.3
<i>Sliding Mode Control Design of an Electrostatic Microactuator Using LPV Schemes.</i>	
Alwi, Halim	Univ. of Leicester
Zolotas, Argyrios	Loughborough Univ.
Edwards, Christopher	Univ. of Leicester
Grigoriadis, Karolos M.	Univ. of Houston
14:50-15:10	WeB04.5
<i>Glider Flight Environment Modeling for Optimal Control.</i>	
Shah, Dhaval	Univ. of Michigan
Menezes, Amor A.	Univ. of California, Berkeley
Kolmanovsky, Ilya V.	The Univ. of Michigan
14:10-14:30	WeB05.3
<i>Biased PN Based Impact Angle Constrained Guidance Using a Nonlinear Engagement Model.</i>	
G, Akhil	Indian Inst. of science, Bangalore
Ghose, Debasish	Indian Inst. of Science
14:30-14:50	WeB06.4
<i>Feedback Linearization Approach to Distributed Feedback Manipulation.</i>	
Hurak, Zdenek	Czech Tech. Univ. in Prague
Zemanek, Jiri	Czech Tech. Univ. in Prague
15:10-15:30	WeB07.6
<i>Variational Nonsmooth Mechanics Via a Projected Hamilton's Principle.</i>	
Pekarek, David	Northwestern Univ.
Murphey, Todd	Northwestern Univ.
14:30-14:50	WeB08.4
<i>Distributed Dual Averaging for Convex Optimization under Communication Delays.</i>	
Tsianos, Konstantinos	McGill Univ.
Rabbat, Michael	McGill Univ.
13:30-13:50	WeB09.1
<i>Flowfield Estimation in the Wake of a Pitching and Heaving Airfoil.</i>	
Hinson, Brian	Univ. of Washington
Morgansen, Kristi A.	Univ. of Washington
13:50-14:10	WeB10.2
<i>A Universal Extremum Seeking-Based Stabilizer for Unknown LTV Systems with Unknown Control Directions.</i>	
Scheinker, Alexander	UCSD, Los Alamos National Lab.
Krstic, Miroslav	Univ. of California, San Diego
13:30-13:50	WeB11.1
<i>Avoiding Feedback-Linearization Singularity Using a Quotient Method - the Field-Controlled DC Motor Case.</i>	
Sudarsandhari Shibani, Willson	Ec. Pol. Federale de Lausanne
Muellhaupt, Philippe	Ec. Pol. Fed. de Lausanne
Bonvin, Dominique	EPFL
14:10-14:30	WeB12.3
<i>Implementation Aspects of Model Predictive Control for Embedded Systems.</i>	
Zometa, Pablo	OvG Univ. Magdeburg
Koegel, Markus	OvG Univ. Magdeburg
Faulwasser, Timm	OvG Univ. Magdeburg

Findeisen, Rolf	OVG Univ. Magdeburg
14:50-15:10	WeB13.5
<i>Sufficient Conditions for Stabilization in Feedback Control Over Noisy Channels Using Anytime Rateless Codes.</i>	
Shirazinia, Amirpasha	KTH Royal Inst. of Tech.
Bao, Lei	Royal Inst. of Tech. (KTH)
Skoglund, Mikael	Royal Inst. of Tech.
13:50-14:10	WeB14.2
<i>Combustion Phasing Model for Control of a Gasoline-Ethanol Fueled SI Engine with Variable Valve Timing (I).</i>	
Hall, Carrie	Purdue Univ.
Shaver, Gregory M.	Purdue Univ.
Chauvin, Jonathan	IFP
Petit, Nicolas	MINES ParisTech
13:50-14:10	WeB15.2
<i>Onboard Learning-Based Fuel Consumption Optimization in Series Hybrid Electric Vehicles.</i>	
Gupta, Rohit	Univ. of Michigan
Kolmanovsky, Ilya V.	The Univ. of Michigan
Wang, Yan	Ford Res. and Advanced Engineering, Ford Motor Company
Filev, Dimitre P.	Ford Motor Company
15:10-15:30	WeB16.6
<i>Distributed Control Design to Regulate Grid Frequency and Reduce Drivetrain Stress in Wind Systems Using Battery Storage.</i>	
Baone, Chaitanya A.	Univ. of Wisconsin-Madison
DeMarco, Christopher L	Univ. of Wisconsin-Madison
14:10-14:30	WeB17.3
<i>Online Markov Decision Processes with Kullback-Leibler Control Cost.</i>	
Guan, Peng	Duke Univ.
Raginsky, Maxim	Univ. of Illinois at Urbana-Champaign
Willett, Rebecca	Duke Univ.
14:30-14:50	WeB18.4
<i>Sensor Placement for Flexible Wing Shape Control (I).</i>	
Ray, Cody W.	Oregon State Univ.
Batten, Belinda A.	Oregon State Univ.
13:30-13:50	WeB19.1
<i>Observer-Based PI Stabilization of Power Converters.</i>	
Alawieh, Aya	Lab. signaux et systemes
Jaafar, Ali	Supélec
Ortega, Romeo	LSS-SUPELEC
Godoy, Emmanuel	Supélec
Lefranc, Pierre	Supélec
14:10-14:30	WeB20.3
<i>Control Theoretic Approach to Stationary Iterative Methods for Large-Scale Toeplitz-Type Equations.</i>	
Kashima, Kenji	Osaka Univ.
Oda, Tomohoto	Tokyo Inst. of Tech.
Imura, Jun-ichi	Tokyo Inst. of Tech.
14:50-15:10	WeB21.5
<i>A Dual Method for Determining the Performance Limits of a Semiactively Constrained Control System.</i>	
Harvey, Jr., Philip Scott	Duke Univ.
Scruggs, Jeff	Univ. of Michigan
Gavin, Henri P.	Duke Univ.
13:30-14:30	WeB22.1
<i>A Tutorial on the Control of Linear Parameter-Varying Systems (I).</i>	
Scherer, Carsten W.	Univ. of Stuttgart
17:40-18:00	WeC01.6
<i>Finite-Time Consensus for Single-Integrator Kinematics with Unknown Inherent Nonlinear Dynamics under a Directed Interaction Graph.</i>	

Cao, Yongcan	Air Force Res. Lab.
Ren, Wei	Univ. of California, Riverside
17:20-17:40	WeC02.5
<i>Stochastic Optimal Control for Nonlinear Markov Jump Diffusion Processes.</i>	
Theodorou, Evangelos	Univ. of Washington
Todorov, Emanuel	Univ. of Washington
17:40-18:00	WeC03.6
<i>Stability Analysis and Controller Design for a Linear System with Duhem Hysteresis Nonlinearity.</i>	
Ouyang, Ruiyue	Univ. of Groningen
Jayawardhana, Bayu	Univ. of Groningen
17:40-18:00	WeC04.6
<i>Probabilistic Aircraft Conflict Resolution: A Stochastic Optimal Control Approach.</i>	
Liu, Weiyi	Purdue Univ.
Hwang, Inseok	Purdue Univ.
17:40-18:00	WeC05.6
<i>Tracking Expanding Star Curves Using Guidance Vector Fields.</i>	
Frew, Eric W.	Univ. of Colorado, Boulder
Lawrence, Dale A.	Univ. of Colorado
17:00-17:20	WeC06.4
<i>A Solution for a Class of Output Regulation Problems on $SO(n)$.</i>	
Schmidt, Gerd Simon	Univ. of Stuttgart
Ebenbauer, Christian	Univ. of Stuttgart
Allgower, Frank	Univ. of Stuttgart
16:40-17:00	WeC07.3
<i>Valve Flow Rate Identification and Robust Force Control for a Pneumatic Actuator Used in a Flight Simulator.</i>	
Rapp, Philipp	Univ. of Stuttgart
Weickgenannt, Martin	Univ. Stuttgart
Tarin, Cristina	Univ. of Stuttgart
Sawodny, Oliver	Univ. of Stuttgart
16:00-16:20	WeC08.1
<i>High-Order Numerical Solutions to Bellman's Equation of Optimal Control.</i>	
Aguilar, Cesar O	Naval Postgraduate School
Krener, Arthur J	Naval Postgraduate School
16:20-16:40	WeC09.2
<i>Geometric Methods for Structured Covariance Estimation.</i>	
Ning, Lipeng	Univ. of Minnesota
Jiang, Xianhua	Univ. of Minnesota
Georgiou, Tryphon T.	Univ. of Minnesota
16:00-16:20	WeC10.1
<i>Generalization of L1 Adaptive Control Architecture for Switching Estimation Laws.</i>	
Kharisov, Evgeny	Univ. of Illinois at Urbana-Champaign (UIUC)
Hovakimyan, Naira	Univ. of Illinois, Urbana-Champaign
16:00-16:20	WeC11.1
<i>Improving the Performance of a Printing System Using Model Reference Adaptive Control: An LMI Approach.</i>	
Ezzeldin Mahdy, Mohamed	Eindhoven Univ. of Tech.
Weiland, Siep	Eindhoven Univ. of Tech.
van den Bosch, P. P. J.	Eindhoven Univ. of Tech.
17:20-17:40	WeC12.5
<i>Model Predictive Control for the Dynamic Encirclement of a Target.</i>	
Marasco, Anthony	Royal Military Coll. of Canada
Givigi, Sidney	Royal Military Coll. of Canada
Rabbath, Camille Alain	Defence R&D Canada
16:40-17:00	WeC13.3

Sensor Data Scheduling for Linear Quadratic Gaussian Control with Full State Feedback.

Shi, Ling Hong Kong Univ. of Science and Tech.
Yuan, Ye Univ. of Cambridge
Zhang, Huanshui Shandong Univ.

17:00-17:20 WeC14.4

Experiments and Analysis of High Cyclic Variability at the Operational Limits of Spark-Assisted HCCI Combustion (I).

Larimore, Jacob Univ. of Michigan
Hellström, Erik Univ. of Michigan
Sterniak, Jeffrey Robert Bosch LLC
Jiang, Li Robert Bosch LLC
Stefanopoulou, Anna G. Univ. of Michigan

16:20-16:40 WeC15.2

Driving Course Prediction for Vehicle Handling Maneuvers.

Liu, Ruoqian Univ. of Michigan-Dearborn
Yu, Hai Res. and Advanced Engineering, Ford Motor Company
McGee, Ryan Ford Motor Company
Murphey, Yi Lu Univ. of Michigan-Dearborn

17:00-17:20 WeC16.4

Inventory Control of Storage in Distribution Systems.

Taylor, Joshua Univ. of California, Berkeley
Callaway, Duncan Univ. of California, Berkeley
Poola, Kameshwar Univ. of California at Berkeley

17:40-18:00 WeC17.6

Distributed Estimation of the Size of an Anonymous Network Using Bernoulli Trials.

Varagnolo, Damiano Univ. of Padova
Pillonetto, Gianluigi Univ. of Padova
Schenato, Luca Univ. of Padova

17:40-18:00 WeC18.6

Control of the Boussinesq Equations and Implications for Sensor Location in Energy Efficient Buildings (I).

Burns, John A Virginia Tech.
Hu, Weiwei Virginia Tech.
He, Xiaoming Missouri Univ. of Science and Tech.

16:20-16:40 WeC20.2

Structured Model Reduction of Power Systems.

Sturk, Christopher Royal Inst. of Tech.
Vanfretti, Luigi KTH Royal Inst. of Tech.
Milano, Federico Univ. of Castilla-La Mancha
Sandberg, Henrik KTH Royal Inst. of Tech.

16:00-16:20 WeC21.1

Switched Control of Uncertain Nonlinear Process Systems Subject to Control and Communication Constraints.

Hu, Ye Univ. of California, Davis
El-Farra, Nael H. Univ. of California, Davis