Best presentations in session        ACC 2012        Friday, June 29

11:00-11:20        FrA02.4
Projection-Based Switched System Optimization (I).
  Caldwell, Timothy        Northwestern Univ.
  Murphey, Todd           Northwestern Univ.

10:20-10:40        FrA03.2
Robust Predictive Control Design for Optimal Wet-Clutch Engagement.
  Dutta, Abhishek        Ghent Univ.
  De Keyser, Robin M.C.  Univ. of Gent
  Ionescu, Clara        Ghent Univ.
  Stoev, Julian         Flanders’ MECHATRONICS Tech. Centre
  Pinte, Gregory        Flanders’ Mechatronics Tech. Centre
  Symens, Wim           FMTC

10:40-11:00        FrA04.3
Intercepting Maneuvering Target with Specified Impact Angle by Modified SDRE Technique.
  Bardhan, Rajarshi      IISc
  Ghose, Debasish        Indian Inst. of Science

10:40-11:00        FrA05.3
Nonlinear Robust Tracking Control of a Quadrotor UAV on SE(3).
  Lee, Taeyoung          George Washington Univ.
  Leok, Melvin          Univ. of California, San Diego
  McClamroch, N. Harris  Univ. of Michigan

11:20-11:40        FrA06.5
Further Results on Delay Robustness of Interconnected Passive Systems.
  Summers, Erin         UC Berkeley
  Arcak, Murat          Univ. of California, Berkeley
  Packard, Andrew K.    Univ. of California at Berkeley

11:00-11:20        FrA07.4
Application of the Extended High Gain Observer to Underactuated Mechanical Systems.
  Bou Serhal, Rachel E.  Michigan State Univ.
  Khalil, Hassan K.      Michigan State Univ.

10:40-11:00        FrA08.3
Optimal Disturbance Accommodation with Limited Model Information.
  Farokhi, Farhad        KTH - Royal Inst. of Tech.
  Langbort, Cedric       Univ. of Illinois, Urbana-Champaign
  Johansson, Karl H.     Royal Inst. of Tech.

10:40-11:00        FrA09.3
Stability Analysis and Application of Kalman Filtering with Irregularly Sampled Measurements.
  Fang, Huazhen          Univ. of California, San Diego
  de Callafon, Raymond A. Univ. of California, San Diego

11:20-11:40        FrA10.4
Whole-Body Trajectory Optimization for Humanoid Falling.
  Wang, Jiuguang        Carnegie Mellon Univ.
  Stilman, Mike         Georgia Tech.

11:40-12:00        FrA11.6
  Kelly, Scott          Univ. of North Carolina at Charlotte
  Fairchild, Michael    UNC Charlotte
  Hassing, Peter        Univ. of North Carolina at Charlotte
  Tallapragada, Phanindra Univ. of North Carolina, Charlotte

11:20-11:40        FrA12.5
### 11:00-11:20

**Atenuation of Heave-Induced Pressure Oscillations in Offshore Drilling Systems.**

Mahdianfar, Hessam  
Aamo, Ole Morten  
Pavlov, Alexey  
Norwegian Univ. of Science and Tech. (NTNU)  
NTNU  
Statoil R&D Center

**Experimental Validation of a New Moving Horizon Estimator Approach for Networked Control Systems with Unsynchronized Clocks.**

Philipp, Peter  
Altmannshofer, Simon  
Tech. Univ. München  
Tech. Univ. München

### 10:20-10:40

**Oxygen Fraction Estimation for Diesel Engines Utilizing Variable Intake Valve Actuation (I).**

Kocher, Lyle  
Stricker, Karla  
Van Alstine, Dan  
Koeberlein, Edward  
Shaver, Gregory M.  
Purdue Univ.  
Purdue Univ.  
Purdue Univ. School of Mechanical Engineering  
Purdue Univ. School of Mechanical Engineering  
Purdue Univ.

### 11:00-11:20

**Robust Controller for Wheeled Mobile Robots.**

Chalhoub, Nabil G.  
Matta, Sherif  
Wayne State Univ.  
Wayne State Univ.

### 10:00-10:20

**Robust Adaptive Control of the Sawtooth Instability in Nuclear Fusion (I).**

Bolder, Joost  
Witvoet, Gert  
De Baar, Marco  
Van De Wouw, Nathan  
Doelman, Niek  
Steinbuch, Maarten  
Eindhoven Univ. of Tech.  
Eindhoven Univ. of Tech.  
Eindhoven Univ. of Tech.  
Norwegian Univ. of Science and Tech.  
TNO Science and Industry  
Eindhoven Univ. of Tech.

### 11:20-11:40

**Design and Stability of Discrete-Time Quantum Filters with Measurement Imperfections (I).**

Somaraju, Ram Abhinav  
Dotsenko, Igor  
Sayrin, Clément  
Rouchon, Pierre  
Vrije Univ. Brussel  
Ec. Normale Superieure  
Lab. Kastler Brossel, Ec. Normale Supérieure, UPMC, CNR  
Mines ParisTech

### 10:40-11:00

**Optimal Placement of Bearing-Only Sensors for Target Localization.**

Zhao, Shiyu  
Chen, Ben M.  
Lee, Tong Heng  
National Univ. of Singapore  
National Univ. of Singapore  
National Univ. of Singapore

### 10:00-10:20

**Symbolic Transient Time-Series Analysis for Fault Detection in Aircraft Gas Turbine Engines.**

Sarkar, Soumalya  
Mukherjee, Kushal  
Sarkar, Soumik  
Ray, Asok  
Pennsylvania State Univ.  
Pennsylvania State Univ.  
United Tech. Res. Center  
Pennsylvania State Univ.

### 11:40-12:00

**Robust Pole Placement for Plants with Semialgebraic Parametric Uncertainty.**

Cerone, Vito  
Pol. di Torino
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:40-11:00</td>
<td>FrA22.3</td>
<td>Automatic Generation of High-Speed Solvers: CVXGEN (I)</td>
<td>Piga, Dario&lt;br&gt;Regruto, Diego&lt;br&gt;Mattingley, Jacob&lt;br&gt;Wang, Yang&lt;br&gt;Boyd, Stephen P.</td>
</tr>
<tr>
<td>15:10-15:30</td>
<td>FrB01.6</td>
<td>Distributed Decision Propagation in Mobile Agent Networks</td>
<td>Sarkar, Soumik&lt;br&gt;Mukherjee, Kushal&lt;br&gt;Ray, Asok&lt;br&gt;Mattingley, Jacob&lt;br&gt;Wang, Yang&lt;br&gt;Boyd, Stephen P.</td>
</tr>
<tr>
<td>14:10-14:30</td>
<td>FrB02.3</td>
<td>The Motion Grammar Calculus for Context-Free Hybrid Systems</td>
<td>Dantam, Neil&lt;br&gt;Stilman, Mike&lt;br&gt;Dantam, Neil&lt;br&gt;Stilman, Mike</td>
</tr>
<tr>
<td>13:30-13:50</td>
<td>FrB03.1</td>
<td>Model-Based Feedforward for Inferential Motion Systems, with Application to a Prototype Lightweight Motion System</td>
<td>Ronde, Michael&lt;br&gt;Molengraft, René van de&lt;br&gt;Steinbuch, Maarten</td>
</tr>
<tr>
<td>13:50-14:10</td>
<td>FrB04.2</td>
<td>Average Dwell Time Condition of Unknown Switched Linear Systems with Variable Structure Adaptive Backstepping Control</td>
<td>Chiang, Ming-Li&lt;br&gt;Fu, Li-Chen&lt;br&gt;Chiang, Ming-Li&lt;br&gt;Fu, Li-Chen</td>
</tr>
<tr>
<td>13:50-14:10</td>
<td>FrB05.2</td>
<td>A Topological Map Based Approach to Long Range Operation of an Unmanned Surface Vehicle</td>
<td>Gadre, Aditya&lt;br&gt;Du, Shu&lt;br&gt;Stilwell, Daniel J.</td>
</tr>
<tr>
<td>15:10-15:30</td>
<td>FrB06.6</td>
<td>Stability Criteria for Uncertain Piecewise Affine Time-Delay Systems</td>
<td>Duan, Shiming&lt;br&gt;Ni, Jun&lt;br&gt;Ulsoy, A. Galip</td>
</tr>
<tr>
<td>13:30-13:50</td>
<td>FrB07.1</td>
<td>Smooth and Time-Optimal Trajectory Planning for Robot Manipulators</td>
<td>Müller, Peter&lt;br&gt;Boucherit, Ryad&lt;br&gt;Liu, Steven</td>
</tr>
<tr>
<td>13:30-13:50</td>
<td>FrB08.1</td>
<td>A Frequency Domain Method for Optimal Periodic Control</td>
<td>Epperlein, Jonathan P&lt;br&gt;Bamieh, Bassam&lt;br&gt;Epperlein, Jonathan P&lt;br&gt;Bamieh, Bassam</td>
</tr>
<tr>
<td>14:10-14:30</td>
<td>FrB09.3</td>
<td>Scaling Parameter in Unscented Transform: Analysis and Specification</td>
<td>Straka, Ondrej&lt;br&gt;Dunik, Jindrich&lt;br&gt;Simandl, Miroslav</td>
</tr>
<tr>
<td>15:10-15:30</td>
<td>FrB11.6</td>
<td>Fuzzy Opinion Dynamics</td>
<td>Straka, Ondrej&lt;br&gt;Dunik, Jindrich&lt;br&gt;Simandl, Miroslav</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Corbett, Brandon</td>
<td>McMaster Univ.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mhaskar, Prashant</td>
<td>McMaster Univ.</td>
</tr>
<tr>
<td>14:50-15:10</td>
<td>FrB13.5</td>
<td>Decentralized Static Output-Feedback Control Via Networked Communication.</td>
<td>Bauer, Nicolas William</td>
<td>Univ. of Tech. Eindhoven</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Donkers, M.C.F.</td>
<td>Eindhoven Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Van De Wouw, Nathan</td>
<td>Eindhoven Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heemels, W.P.M.H.</td>
<td>Eindhoven Univ. of Tech.</td>
</tr>
<tr>
<td>13:30-13:50</td>
<td>FrB14.1</td>
<td>Prioritization-Based Constrained Trajectory Planning for a Nonlinear Turbocharged Air System with EGR.</td>
<td>Kotman, Philipp</td>
<td>Robert Bosch GmbH; Vienna Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bitzer, Matthias</td>
<td>Bosch Company</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kugi, Andreas</td>
<td>Vienna Univ. of Tech.</td>
</tr>
<tr>
<td>14:50-15:10</td>
<td>FrB15.5</td>
<td>Service Level-Oriented Route Guidance for Overlapping Routes in Road Networks: A Comparison with MPC (I).</td>
<td>Landman, Ramon Leonardus</td>
<td>Delft Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hegyi, Andreas</td>
<td>Delft Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hoogendoorn, Serge</td>
<td>Delft Univ. of Tech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grunnagle, Jerome</td>
<td>Univ. of Michigan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kolmanovsky, Ilya V.</td>
<td>The Univ. of Michigan</td>
</tr>
<tr>
<td>14:30-14:50</td>
<td>FrB17.4</td>
<td>Sampled-Data LQG Control for a Class of Linear Quantum Systems.</td>
<td>Maalouf, Aline I.</td>
<td>Univ. of New South Wales at ADFA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Petersen, Ian</td>
<td>Univ. of New South Wales at the Australian Defence Force Acad.</td>
</tr>
<tr>
<td>14:50-15:10</td>
<td>FrB18.5</td>
<td>Distributed Convergence to Nash Equilibria by Adversarial Networks with Undirected Topologies.</td>
<td>Gharesifard, Bahman</td>
<td>Univ. of California San Diego</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cortes, Jorge</td>
<td>Univ. of California, San Diego</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shen, Jui-Fu</td>
<td>New Materials Res. &amp; Development Department, ChinaSteel Corp.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chen, Ding-Sou</td>
<td>New Materials Res. &amp; Development Department, China Steel Cor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lee, Ming-Wei</td>
<td>New Materials Res. &amp; Development Department, China Steel Cor</td>
</tr>
<tr>
<td>14:50-15:10</td>
<td>FrB20.5</td>
<td>An Exact Convex Solution to Receding Horizon Control.</td>
<td>Essick, Ray</td>
<td>Univ. of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lee, Ji-Woong</td>
<td>Pennsylvania State Univ.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dullerud, Geir E.</td>
<td>Univ. of Illinois, Urbana-Champaign</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gentilini, Iacopo</td>
<td>Carnegie Mellon Univ.</td>
</tr>
<tr>
<td>14:10-14:30</td>
<td>FrB22.3</td>
<td>Distributed Synthesis and Control of Constrained Linear Systems.</td>
<td>Conte, Christian</td>
<td>ETH Zurich</td>
</tr>
</tbody>
</table>
Voellmy, Niklaus Roman  
Zeilinger, Melanie N.  
Morari, Manfred  
Jones, Colin Neil  

ETH Zürich  
École Pol. Fédérale de Lausanne (EPFL)  
ETH Zurich  
École Pol. Fédérale de Lausanne (EPFL)

16:40-17:00  
FrC01.3

Leader Selection Via the Manipulability of Leader-Follower Networks.
Kawashima, Hiroaki  
Egerstedt, Magnus

Kyoto Univ. / Georgia Inst. of Tech.  
Georgia Inst. of Tech.

17:20-17:40  
FrC02.5

Bisimilarity Enforcing Supervisory Control of Nondeterministic Discrete Event Systems.
Sun, Yajuan  
Lin, Hai

National Univ. of Singapore  
Univ. of Notre Dame

17:00-17:20  
FrC03.4

Hybrid RNC-Isolation of Structures under Near-Fault Earthquakes.
Ismail, Mohammed  
Pozo, Francesc  
Rodellar, Jose

Zagazig Univ.  
Univ. Pol. de Catalunya  
Tech. Univ. of Catalonia

17:00-17:20  
FrC04.4

Output Feedback Adaptive Twist Control: A Lyapunov Design.
Kochalummoottil, Jose  
Shtessel, Yuri B.  
Moreno, Jaime A.  
Fridman, Leonid M.

Univ. of Alabama, Huntsville  
Univ. of Alabama at Huntsville  
Univ. Nacional Autonoma de Mexico-UNAM  
National Autonomous Univ. of Mexico

17:40-18:00  
FrC05.6

Multiple Model Adaptive Wave Filtering for Dynamic Positioning of Marine Vessels.
Hassani, Vahid  
Sorensen, Asgeir Johan  
Pascoal, Antonio Manuel  
Aguiar, A. Pedro

Tech. Univ. of Lisbon  
Norwegian Univ. of Sci and Tech.  
Inst. Superior Tecnico  
Inst. Superior Tecnico, Tech. Univ. of Lisbon

17:20-17:40  
FrC06.5

Network Realizability for Interconnected Systems Over Arbitrary One-Step Delay Networks.
Andalam, Satya Mohan Vamsi  
Elia, Nicola

Iowa State Univ.  
Iowa State Univ.

16:40-17:00  
FrC07.3

Initial Investigations of Hand-Motion Crane Control with Double-Pendulum Payloads.
Peng, Kelvin Chen Chih  
Singhose, William  
Gurleyuk, Sirri Sunay

Georgia Inst. of Tech.  
Georgia Inst. of Tech.  
Zonguldak Karaelmas Univ.

17:00-17:20  
FrC08.4

Optimal Controller Synthesis for the Decentralized Two-Player Problem with Output Feedback.
Lessard, Laurent  
Lall, Sanjay

Lund Univ.  
Stanford Univ.

16:40-17:00  
FrC10.3

Extending Small Gain and Passivity Theory for Large-Scale System Interconnections.
Griggs, Wynita M.  
Sajja, Surya Shravan Kumar  
Anderson, Brian D.O.  
Shorten, Robert

National Univ. of Ireland, Maynooth  
NUJ Maynooth  
Australian National Univ.  
Nat. Univ. of Ireland

17:00-17:20  
FrC11.4

Dynamic Neural Network-Based Global Output Feedback Tracking Control for Uncertain Second-Order Nonlinear Systems.
Dinh, Huyen T.  
Bhasin, Shubhendu  
Kim, Dohee  
Dixon, Warren E.

Univ. of Florida  
Indian Inst. of Tech.  
Univ. of Florida  
Univ. of Florida
Steady-State and Stability Analysis of a Population Balance Based Nonlinear Ice Cream Crystallization Model.

Casenave, Céline
INRA-INRIA MODEMIC Res. Team

Dochain, Denis
Univ. Catholique de Louvain

Alvarez, Graciela
CEMAGREF, 1 rue Pierre-Gilles de Gennes, Antony, 92160, France

Benkhelifa, Hayat
AgroParisTech, UMR n°1145 Ingenierie-Procedes-Aliments,

Flick, Denis
AgroParisTech, UMR n°1145 Ingenierie-Procedes-Aliments, 16 rue

Leducq, Denis
CEMAGREF, 1 rue Pierre-Gilles de Gennes, Antony, 92160, France

Decentralized Model-Based Event-Triggered Control of Networked Systems.

Garcia, Eloy
Univ. of Notre Dame

Antsaklis, Panos J.
Univ. of Notre Dame


Attia, Rachid
Univ. de Haute-Alsace

Orjuela, Rodolfo
Univ. Haute-Alsace, UHA

Basset, Michel
Univ. de Haute-Alsace


Mahler, Grant
Clemson Univ.

Vahidi, Ardalan
Clemson Univ.

Anti-Windup Scheme for Current Control of Shunt Active Filters.

Tilli, Andrea
Univ. of Bologna

Conficoni, Christian
Alma Mater Studiorum, Univ. of Bologna

Undamped Nonlinear Consensus Using Integral Lyapunov Functions.

Andreasson, Martin
KTH Royal Inst. of Tech.

Dimarogonas, Dimos V.
Royal Inst. of Tech.

Johansson, Karl H.
Royal Inst. of Tech.

Active Fault Isolation of Nonlinear Systems.

Du, Miao
McMaster Univ.

Mhaskar, Prashant
McMaster Univ.

Forward-Integration Riccati-Based Output-Feedback Control of Linear Time-Varying Systems.

Weiss, Avishai
Univ. of Michigan

Kolmanovsky, Ilya V.
The Univ. of Michigan

Bernstein, Dennis S.
Univ. of Michigan

Robust Nonlinear Generalised Minimum Variance Control.

Hur, Sung-ho
Univ. of Strathclyde

Grimble, Michael John
Univ. of Strathclyde

An Augmented Observer for the Distributed Estimation Problem for LTI Systems.

Park, Shinkyu
Univ. of Maryland Coll. Park

Martins, Nuno C.
Univ. of Maryland