

CDC-ECC'05 Technical Program Monday December 12, 2005

<p>08:20-09:30 Giralda I MoPPL Opening Ceremony and Plenary Session I <i>The Theory-Practice Gap: Where Are We ?</i> Professor Edward J. Davison University of Toronto</p>	Track 1	Giralda I	10:00-12:00 <i>MoA01</i> Confluence of Controls and Computer-Science in Discrete-Event Systems	13:30-15:30 <i>MoB01</i> Hybrid Systems Theory	16:00-18:00 <i>MoC01</i> Optimal Control of Hybrid Systems
	Track 2	Giralda IV	10:00-12:00 <i>MoA02</i> Optimization Based Nonlinear Control	13:30-15:30 <i>MoB02</i> Optimal Control and Variational Methods (SIAM)	16:00-18:00 <i>MoC02</i> Optimal Control I
	Track 3	Giralda II	10:00-12:00 <i>MoA03</i> Autonomous Systems I	13:30-15:30 <i>MoB03</i> Autonomous Systems II	16:00-18:00 <i>MoC03</i> Autonomous Systems III
	Track 4	Utrera	10:00-12:00 <i>MoA04</i> Adaptive and Learning Systems	13:30-15:30 <i>MoB04</i> Adaptive and Nonlinear Control	16:00-18:00 <i>MoC04</i> Adaptive Estimation and Control
	Track 5	Lebrija	10:00-12:00 <i>MoA05</i> Behavioral Control Theory	13:30-15:30 <i>MoB05</i> Behavioral System Theory	16:00-18:00 <i>MoC05</i> Theoretical and Computational Issues in the Behavioral Approach
	Track 6	Prado	10:00-12:00 <i>MoA06</i> Control Systems I	13:30-15:30 <i>MoB06</i> Control Systems II	16:00-18:00 <i>MoC06</i> Control Systems III
	Track 7	Estepa	10:00-12:00 <i>MoA07</i> Nonlinear Dynamics, Perception and Bio-Inspired System Control	13:30-15:30 <i>MoB07</i> Cardio Vascular and Metabolic Systems	16:00-18:00 <i>MoC07</i> Modeling and Identification of Biological Systems
	Track 8	Triana	10:00-12:00 <i>MoA08</i> New Developments and Applications in Optimal Control Theory, Part 1: State Constrained Problems	13:30-15:30 <i>MoB08</i> New Developments and Applications in Optimal Control Theory, Part 2: Geometric Methods	16:00-18:00 <i>MoC08</i> Positive Polynomials in Control
	Track 9	Nervion III	10:00-12:00 <i>MoA09</i> Model Predictive Control I	13:30-15:30 <i>MoB09</i> Model Predictive Control II	16:00-18:00 <i>MoC09</i> Model Predictive Control III
	Track 10	Arenal III	10:00-12:00 <i>MoA10</i> Statistical Approaches to System/Process Monitoring and Change/Fault/Damage Detection	13:30-15:30 <i>MoB10</i> Practical Aspects of Fault Detection and Fault-Tolerant Control	16:00-18:00 <i>MoC10</i> Markov Processes in Control
	Track 11	Carmona	10:00-12:00 <i>MoA11</i> New Developments and Applications in Filtering and Estimation	13:30-15:30 <i>MoB11</i> Recent Advances in Stochastic Systems and Control	16:00-18:00 <i>MoC11</i> Theory and Applications of Stochastic Processes
	Track 12	Nervion II	10:00-12:00 <i>MoA12</i> Control of Distributed Parameter Systems	13:30-15:30 <i>MoB12</i> Control of Partial Differential Equations and Applications	16:00-18:00 <i>MoC12</i> Control of Physical Systems
	Track 13	Ecija	10:00-12:00 <i>MoA13</i> Nonlinear Control Applications I	13:30-15:30 <i>MoB13</i> Nonlinear Control Applications II	16:00-18:00 <i>MoC13</i> Energy Management and Drivability Control of Hybrid-Electric Vehicles
	Track 14	Santa Cruz	10:00-12:00 <i>MoA14</i> Advances in the Design and Control of Wireless Networked Embedded Systems	13:30-15:30 <i>MoB14</i> Control of Networks I	16:00-18:00 <i>MoC14</i> Control of Networks II
	Track 15	Giralda V	10:00-12:00 <i>MoA15</i> Design-Oriented Modeling and Model-Based Control of Fluids	13:30-15:30 <i>MoB15</i> Micro and Nano-Positioning	16:00-18:00 <i>MoC15</i> Recent Progress in Modelling and Control of Open-Channel Irrigation Canals
	Track 16	Giralda III	10:00-12:00 <i>MoA16</i> Estimation and Filtering I	13:30-15:30 <i>MoB16</i> Estimation and Filtering II	16:00-18:00 <i>MoC16</i> Filtering
	Track 17	Arenal I	10:00-12:00 <i>MoA17</i> Sliding Mode Control I	13:30-15:30 <i>MoB17</i> Sliding Mode Control II	16:00-18:00 <i>MoC17</i> Sliding Mode Control III
	Interactive Track 18	Giralda VI	10:00-12:00 <i>MoA18</i> Computer Vision and Robotics	13:30-15:30 <i>MoB18</i> Power Systems	16:00-18:00 <i>MoC18</i> Automotive I
	Interactive Track 19	Giralda VII	10:00-12:00 <i>MoA19</i> Robust Control Applications	13:30-15:30 <i>MoB19</i> Robust Control I	16:00-18:00 <i>MoC19</i> Robot Control
	Interactive Track 20	Giralda VIII		13:30-15:30 <i>MoB20</i> Model Predictive Control	16:00-18:00 <i>MoC20</i> Process Control
	Interactive Track 21	Hall Triana		13:30-15:30 <i>MoB21</i> Time-Delay Systems	16:00-18:00 <i>MoC21</i> Flow Control and Pipelines

CDC-ECC'05 Technical Program Tuesday December 13, 2005

<p align="center">08:30-09:30 Santa Cruz TuPSP2 Semi-Plenary Session II</p> <p align="center"><i>Control Strategies in Atomic Force Microscopy</i> Professor Andreas Stemmer Swiss Federal Inst. of Tech.</p>	Track 1	Giralda I	10:00-12:00 TuA01 Petri Nets	13:30-15:30 TuB01 Discrete Event Systems	16:00-18:00 TuC01 The Supervisory Control of Discrete-Event Systems
	Track 2	Giralda IV	10:00-12:00 TuA02 Optimal Control II	13:30-15:30 TuB02 Optimal Control III	16:00-18:00 TuC02 Optimal Control IV
	Track 3	Giralda II	10:00-12:00 TuA03 Control of Cooperative Search, Surveillance, and Other Multiagent Missions	13:30-15:30 TuB03 Motion Coordination: Models, Complexity and Algorithms	16:00-18:00 TuC03 Cooperative Sensing and Control
	Track 4	Utrera	10:00-12:00 TuA04 Adaptive Control I	13:30-15:30 TuB04 Adaptive Control II	16:00-18:00 TuC04 Adaptation and Identification
	Track 5	Lebrija	10:00-12:00 TuA05 Numerical Methods for Analysis and Reduction of Large Scale Systems	13:30-15:30 TuB05 Quadratic Differential Forms and Their Applications	16:00-18:00 TuC05 Linear and Optimal Control
	Track 6	Prado	10:00-12:00 TuA06 Robust Design	13:30-15:30 TuB06 Robust Analysis	16:00-18:00 TuC06 Robust Control II
	Track 7	Estepa	10:00-12:00 TuA07 Molecular Systems Biology and Control	13:30-15:30 TuB07 Complexity in Biological Systems	16:00-18:00 TuC07 Stability and Sensitivity Analysis in Biological Systems
	Track 8	Triana	10:00-12:00 TuA08 The Joint Spectral Radius: Theory and Applications	13:30-15:30 TuB08 The Joint Spectral Radius: Computational Issues	16:00-18:00 TuC08 Computational Methods in Optimization
<p align="center">08:30-09:30 Giralda I TuPSP1 Semi-Plenary Session I</p> <p align="center"><i>Dynamic Programming and Suboptimal Control: From ADP to MPC</i> Professor Dimitri Bertsekas Massachusetts Institute of Technology</p>	Track 9	Nervion III	10:00-12:00 TuA09 Process Control I	13:30-15:30 TuB09 Process Control II	16:00-18:00 TuC09 Robust Predictive Control
	Track 10	Arenal III	10:00-12:00 TuA10 Fault Detection	13:30-15:30 TuB10 Adaptive and Fault-Tolerant Systems	16:00-18:00 TuC10 Fault Detection and Accomodation
	Track 11	Carmona	10:00-12:00 TuA11 Iterative Learning	13:30-15:30 TuB11 Stochastic Systems: Estimation, Identification and Control	16:00-18:00 TuC11 Stochastic Modeling and Statistical Methods in Fault Detection
	Track 12	Nervion II	10:00-12:00 TuA12 Distributed Parameter Systems I	13:30-15:30 TuB12 Distributed Parameter Systems II	16:00-18:00 TuC12 Modelling, Estimation and Control of Distributed Parameter Systems
	Track 13	Ecija	10:00-12:00 TuA13 Applications I	13:30-15:30 TuB13 Applications II	16:00-18:00 TuC13 Applications III
	Track 14	Santa Cruz	10:00-12:00 TuA14 Convergence of Information Transmission and Control I	13:30-15:30 TuB14 Convergence of Information Transmission and Control II	16:00-18:00 TuC14 Oscillatory Systems
	Track 15	Giralda V	10:00-12:00 TuA15 Neural Networks I	13:30-15:30 TuB15 Fuzzy Systems	16:00-18:00 TuC15 Airspace De-Confliction
	Track 16	Giralda III	10:00-12:00 TuA16 Switching Systems and Switching Control	13:30-15:30 TuB16 Stability and Stabilization of Switched Systems	16:00-18:00 TuC16 Stability of Switched Systems
	Track 17	Arenal I	10:00-12:00 TuA17 Nonlinear Output Feedback	13:30-15:30 TuB17 Output Regulation	16:00-18:00 TuC17 Tracking in Nonlinear Systems
	Interactive Track 18	Giralda VI	10:00-12:00 TuA18 Automotive	13:30-15:30 TuB18 Control of Mechanical/Autonomous Systems	16:00-18:00 TuC18 Aerospace
	Interactive Track 19	Giralda VII	10:00-12:00 TuA19 Learning	13:30-15:30 TuB19 Fuzzy Systems I	16:00-18:00 TuC19 Fuzzy Systems II
	Interactive Track 20	Giralda VIII	10:00-12:00 TuA20 Control Education I	13:30-15:30 TuB20 Control Education II	16:00-18:00 TuC20 Neural Networks II
	Interactive Track 21	Hall Triana		13:30-15:30 TuB21 Estimation and Control for Nonlinear Systems	16:00-18:00 TuC21 Modeling and Estimation

CDC-ECC'05 Technical Program Wednesday December 14, 2005

08:30-09:30 Santa Cruz WePSP2 Semi-Plenary Session IV <i>Fun-To-Drive By Feedback</i> Professor Carlos Canudas de Witt Laboratoire d'Automatique de Grenoble.	Track 1	Giralda I	10:00-12:00 Analysis and Control of Hybrid Systems	WeA01	13:30-15:30 Hybrid Control Systems	WeB01	16:00-18:00 Hybrid Control of Networked Embedded Systems	WeC01
	Track 2	Giralda IV	10:00-12:00 Geometric Methods for Nonlinear Control	WeA02	13:30-15:30 Feedback Linearization	WeB02	16:00-18:00 Nonlinear Systems and Dissipativity	WeC02
	Track 3	Giralda II	10:00-12:00 Sensor Networks and Cooperative Control	WeA03	13:30-15:30 Cooperative Control I	WeB03	16:00-18:00 Cooperative Control II	WeC03
	Track 4	Utrera	10:00-12:00 Linear Identification I	WeA04	13:30-15:30 Linear Identification II	WeB04	16:00-18:00 Identification	WeC04
	Track 5	Lebrija	10:00-12:00 Linear and Bilinear Matrix Inequalities	WeA05	13:30-15:30 LMIs in Control	WeB05	16:00-18:00 LMIs	WeC05
	Track 6	Prado	10:00-12:00 Delay Systems I	WeA06	13:30-15:30 Delay Systems II	WeB06	16:00-18:00 Delay Systems III	WeC06
	Track 7	Estepa	10:00-12:00 Control of Robot Manipulators	WeA07	13:30-15:30 Vehicle Control	WeB07	16:00-18:00 Applications of Adaptive Control	WeC07
	Track 8	Triana	10:00-12:00 Optimization I	WeA08	13:30-15:30 Optimization II	WeB08	16:00-18:00 Optimization III	WeC08
	Track 9	Nervion III	10:00-12:00 Model Predictive Control of Power Systems and Power Electronic Circuits	WeA09	13:30-15:30 MPC Applications	WeB09	16:00-18:00 Nonlinear and Uncertain Systems (SIAM)	WeC09
	Track 10	Arenal III	10:00-12:00 Sampled-Data Control I	WeA10	13:30-15:30 Sampled-Data Control II	WeB10	16:00-18:00 Model Reduction	WeC10
08:30-09:30 Giralda I WePSP1 Semi-Plenary Session III <i>Revival of Experiment Design</i> Professor Michel Gevers Université Catholique de Louvain	Track 11	Carmona	10:00-12:00 Stochastic Optimal Decision and Control	WeA11	13:30-15:30 Finance and Time Series	WeB11	16:00-18:00 Filtering and Statistical Learning	WeC11
	Track 12	Nervion II	10:00-12:00 Stability Theory (SIAM)	WeA12	13:30-15:30 Distributed Parameter Systems III	WeB12	16:00-18:00 Distributed Parameter Systems IV	WeC12
	Track 13	Ecija	10:00-12:00 Control of Mechanical Systems I	WeA13	13:30-15:30 Control of Mechanical Systems II	WeB13	16:00-18:00 Modelling of Mechanical Systems	WeC13
	Track 14	Santa Cruz	10:00-12:00 Networks I	WeA14	13:30-15:30 Networks II	WeB14	16:00-18:00 Stochastic Control in Wireless Networks	WeC14
	Track 15	Giralda V	10:00-12:00 Manufacturing Systems	WeA15	13:30-15:30 Visual Servo Control	WeB15	16:00-18:00 Computer Vision	WeC15
	Track 16	Giralda III	10:00-12:00 Analysis of Hybrid Systems	WeA16	13:30-15:30 Stability of Hybrid Systems	WeB16	16:00-18:00 Stochastic Hybrid Systems	WeC16
	Track 17	Arenal I	10:00-12:00 Stability of Nonlinear Systems I	WeA17	13:30-15:30 Stability of Nonlinear Systems II	WeB17	16:00-18:00 Nonlinear Stabilization	WeC17
	Interactive Track 18	Giralda VI	10:00-12:00 Control in Electrical and Mechanical Systems	WeA18	13:30-15:30 Aerospace and Vehicle Control	WeB18	16:00-18:00 Mechanical Systems I	WeC18
	Interactive Track 19	Giralda VII	10:00-12:00 Adaptive Control	WeA19	13:30-15:30 Nonlinear Adaptive Control	WeB19	16:00-18:00 Methods in Linear and Nonlinear Control	WeC19
	Interactive Track 20	Giralda VIII	10:00-12:00 Biological and Biomedical Systems	WeA20	13:30-15:30 Biological and Medical Systems	WeB20	16:00-18:00 Biological and Bioprocess Systems	WeC20
	Interactive Track 21	Hall Triana			13:30-15:30 Output Feedback	WeB21	16:00-18:00 Fault Tolerant Systems	WeC21

CDC-ECC'05 Technical Program Thursday December 15, 2005

Track 1	Giralda I	08:30-10:30 <i>ThA01</i> Diagnosis in Discrete-Event Systems	11:00-13:00 <i>ThB01</i> Recent Trends in Hybrid and Switched Systems	14:30-16:30 <i>ThC01</i> Timed Discrete Event Systems
Track 2	Giralda IV	08:30-10:30 <i>ThA02</i> Nonlinear Observers	11:00-13:00 <i>ThB02</i> Observers for Nonlinear Systems I	14:30-16:30 <i>ThC02</i> Observers for Nonlinear Systems II
Track 3	Giralda II	08:30-10:30 <i>ThA03</i> Cooperative Control III	11:00-13:00 <i>ThB03</i> Cooperative Control IV	14:30-16:30 <i>ThC03</i> Max-Plus Algebra and Max-Plus Systems
Track 4	Utrera	08:30-10:30 <i>ThA04</i> Identification - Nonlinear	11:00-13:00 <i>ThB04</i> Subspace Methods in Identification	14:30-16:30 <i>ThC04</i> Adaptive Neural/Fuzzy Control
Track 5	Lebrija	08:30-10:30 <i>ThA05</i> Linear Controller Design	11:00-13:00 <i>ThB05</i> Linear and Multivariable Control	14:30-16:30 <i>ThC05</i> Linear Systems
Track 6	Prado	08:30-10:30 <i>ThA06</i> Applications of Robust Control	11:00-13:00 <i>ThB06</i> Delay Systems IV	14:30-16:30 <i>ThC06</i> H-Infinity Control
Track 7	Estepa	08:30-10:30 <i>ThA07</i> Stability and Structure Assignment	11:00-13:00 <i>ThB07</i> Observers for Linear Systems	14:30-16:30 <i>ThC07</i> Linear Estimation and Filtering
Track 8	Triana	08:30-10:30 <i>ThA08</i> Computational Methods I	11:00-13:00 <i>ThB08</i> Computational Methods II	14:30-16:30 <i>ThC08</i> Computational Methods III
Track 9	Nervion III	08:30-10:30 <i>ThA09</i> Nonlinear Discrete-Time Systems	11:00-13:00 <i>ThB09</i> Nonlinear Tracking	14:30-16:30 <i>ThC09</i> Nonlinear Systems
Track 10	Arenal III	08:30-10:30 <i>ThA10</i> Stochastic and Randomized Algorithms for Optimization and Control	11:00-13:00 <i>ThB10</i> Stochastic Search and Optimization I	14:30-16:30 <i>ThC10</i> Stochastic Search and Optimization II
Track 11	Carmona	08:30-10:30 <i>ThA11</i> Stochastic Systems I (SIAM)	11:00-13:00 <i>ThB11</i> Stochastic Systems II	14:30-16:30 <i>ThC11</i> Stochastic Systems III
Track 12	Nervion II	08:30-10:30 <i>ThA12</i> Distributed Optimization for Control Over Networks	11:00-13:00 <i>ThB12</i> PDE & Process Control	14:30-16:30 <i>ThC12</i> Control of Systems with Hard Nonlinearities
Track 13	Ecija	08:30-10:30 <i>ThA13</i> Control in Automotive Applications	11:00-13:00 <i>ThB13</i> Modelling and Applications	14:30-16:30 <i>ThC13</i> Modeling
Track 14	Santa Cruz	08:30-10:30 <i>ThA14</i> Analysis and Control of Networks - Part I: Congestion Control	11:00-13:00 <i>ThB14</i> Analysis and Control of Networks - Part II: Resource Management	14:30-16:30 <i>ThC14</i> Control Over Networks
Track 15	Giralda V	08:30-10:30 <i>ThA15</i> Electromechanical and Power Systems	11:00-13:00 <i>ThB15</i> Aerospace Control	14:30-16:30 <i>ThC15</i> Emerging Control Theory and Applications
Track 16	Giralda III	08:30-10:30 <i>ThA16</i> Mechanical Systems/Robotics	11:00-13:00 <i>ThB16</i> Mechanical Systems and MEMS	14:30-16:30 <i>ThC16</i> Mechanical Systems II
Track 17	Arenal I	08:30-10:30 <i>ThA17</i> Stabilization and Control of Nonlinear Systems	11:00-13:00 <i>ThB17</i> Constrained Control I	14:30-16:30 <i>ThC17</i> Constrained Control II
Interactive Track 18	Giralda VI	08:30-10:30 <i>ThA18</i> Computational Methods for Controller Design	11:00-13:00 <i>ThB18</i> Computer-Aided Design	14:30-16:30 <i>ThC18</i> Robotic Applications
Interactive Track 19	Hall Triana	08:30-10:30 <i>ThA19</i> Hybrid Systems	11:00-13:00 <i>ThB19</i> DES and Supervisory Control	14:30-16:30 <i>ThC19</i> Logic Control
Interactive Track 20	Giralda VII	08:30-10:30 <i>ThA20</i> Methods in Remote and Network Control	11:00-13:00 <i>ThB20</i> Supervisory and Fault-Tolerant Control	
Interactive Track 21	Giralda VIII		11:00-13:00 <i>ThB21</i> New Trends in Control	

17:00-18:15 Giralda I ThPPL
Plenary Session II and Closing Ceremony
Bode Lecture: Reducing Highway Congestion: An Empirical Approach
Professor Pravin P. Varaiya
 University of California at Berkeley