
2000 IEEE CCA/CACSD

Monday, September 25, 2000

Aleutian

CCA/CACSD Opening Remarks

7:50-8:00

General Chairs

P. Misra
A. Varga

Wright State Univ.
DLR Oberpfaffenhofen

Aleutian

CCA Plenary Presentation

8:00 - 9:00

Recent and Projected Trends in Control Applications

Mike Masten, Texas Instruments

Chair: P. Misra
Co-Chair: G. Yen

Wright State Univ.
Oklahoma State Univ.

Iliamna

CACSD-MA1

Advanced Numerical Methods in Systems and Control Theory

Chair: H. Fassbender
Co-Chair: V. Sima

Univ. of Bremen
Natl. Inst. for Informatics, Bucharest

9:30 (I)

CACSD-1

Efficient Numerical Algorithms and Software for Subspace-Based System Identification

V. Sima
S. Van Huffel

Natl. Inst. for Informatics, Bucharest
Katholieke Univ. Leuven

9:50 (I)

CACSD-7

Efficient Stabilization of Large Scale Dynamical Systems

X. Rao
K. Gallivan
P. Van Dooren

Florida State Univ.
Florida State Univ.
Univ. catholique de Louvain

10:10 (I)	CACSD-13
Robust Pole Assignment via Sylvester Equation Based State Feedback Parametrization	
A. Varga	DLR Oberpfaffenhofen
10:30 (I)	CACSD-19
Block Algorithms for State Estimation and Functional Observers	
B. Datta	Northern Illinois Univ.
D. Sarkissian	Northern Illinois Univ.
10:50 (I)	CACSD
Missing	

CACSD-MA2	King Salmon
Simulation and Validation I	
Chair: L. Glielmo	Univ. of Napoli
Co-Chair: M. Loffer	Clemson Univ.
9:30	CACSD-24
Telerobotic Decontamination and Decommissioning with QRobot, a PC-Based Robot Control System	
M. Loffler	Clemson Univ.
N. Costescu	Clemson Univ.
E. Zergeroglu	Clemson Univ.
D. Dawson	Clemson Univ.
9:50	CACSD-30
Noncollocated Passive Transfer Functions for a Flexible Link Robot	
M. Saad	Ecole Polytechnique de Montreal and Ecole de Technologie Superieure
L. Saydy	Ecole Polytechnique de Montreal
O. Akhrif	Ecole de Technologie Superieure
10:10	CACSD-35
A Framework for the Hazard Analysis of Chemical Plants	
P. Herrmann	Univ. of Dortmund
H. Krumm	Univ. of Dortmund
10:30	CACSD-42
Architecture for Electronic Control Unit Tasks in Automotive Engine Control	
L. Glielmo	Univ. of Napoli
F. Vasca	Univ. del Sannio
C. Rossi	Magneti Marelli
10:50	CCA-1
A Transmission Model for Hardware-in-the-Loop Powertrain Control System Software Development	
L. Mianzo	Adv. Energy Trans. Systems

11:10 CCA-9

A Linear Tracking-Differentiator and Application to the Online Estimation of the Frequency of a Sinusoidal Signal

B. Guo
J. Han

Beijing Inst. of Tech
Inst. of Systems Science

Katmai

CCA-MA3

Novel Control Applications in Industry and Business

Chair: S. Agrawal
Co-Chair: M. Spong

Univ. of Deleware
Univ. of Illinois at Urbana Champaign

9:30 CCA-14

On Forecast of Exchange Rate of a Foreign Currency

A. Prasolov
K. Wei

St. Petersburg State Univ.
Ford Research Lab

9:50 CCA-20

Constant Torque Walking

K. Uchida
K. Furuta

Tokyo Inst. of Tech.
Tokyo Denki Univ.

10:10 CCA-26

Dynamic Bandwidth Allocation Algorithm for a Mixed Traffic Network

T. Fry
A. Haddad
C. Lee

Northwestern Univ.
Northwestern Univ.
Northwestern Univ.

10:30 CCA-32

On the Controllability of an Air Hockey Puck

M. Spong

Univ. of Illinois at
Urbana-Champaign

10:50 CCA-38

Flat-Based Controlled Fed-Batch Fermentation of the Bacterium *Photobacterium* *Photoreducens*

P. Seydel
H. Rock

Christian-Albrechts Univ. of Kiel
Christian-Albrechts Univ. of Kiel

11:10 CCA-44

A Computational Approach for Time-Optimal Planning of High-Rise Elevators

M. Schlemmer
S. Agrawal

Mechanical Systems Lab
Mechanical Systems Lab

Dillingham

CCA-MA4

Educational and Industrial Robot

Chair: B. Potsaid

Co-Chair: P. Pagilla

Rensselaer Polytechnic Inst.
Okla. State Univ.

9:30

CCA-50

Edubot: a Reconfigurable Kit for Control Education-Part I: Mechanical Design

B. Potsaid

J. Wen

Rensselaer Polytechnic Inst.
Rensselaer Polytechnic Inst.

9:50

CCA-56

Edubot: a Reconfigurable Kit for Control Education Part II: Identification and Control

B. Potsaid

J. Wen

Rensselaer Polytechnic Inst.
Rensselaer Polytechnic Inst.

10:10

CCA-62

Application of the Interval Control Systems Parameter Synthesis Method to the Industrial Robot Parameter Design

A. Nesenchuk

G. Naidyonov

V. Nesenchuk

Belarusian Natl. Acad. of Sciences
Scientific-Production Govt. Enterprise "Granat-Automatika"
Belarusian Natl. Acad. of Sciences

10:30

CCA-68

Adaptive Control of a Robot Carrying a Time-Varying Payload

P. Pagilla

B. Yu

Oklahoma State Univ.
Oklahoma State Univ.

10:50

CCA-74

Model-Based PID Control of Constrained Robot in a Dynamic Environment with Uncertainty

Y. Li

Y. Ho

C. Chua

Nanyang Tech. Univ.
Nanyang Tech. Univ.
Nanyang Tech. Univ.

11:10

CCA-80

Time-Efficient Input Shaping Control of Container Crane Systems

B. Park

K. Hong

C. Huh

Pusan National Univ.
Pusan National Univ.
Pusan National Univ.

Susitna

CCA-MA5

Fault Detection and Diagnosis

Chair: B. Boston

Univ. of Pittsburgh

9:30

CCA-86

Robust Control and Fault Detection Synthesis with Application to Tractor-Semitrailer Automatic Steering

S. Mammar
V. Baghdassarian
D. Koenig

INRETS
INRETS
CNRS-INPG-UJF

9:50

CCA-92

Winner Take All Experts Network for Sensor Validation

G. Yen
W. Feng

Oklahoma State Univ.
Oklahoma State Univ.

10:10

CCA-98

Combination of Data Approaches to Heuristic Control and Fault Detection

J. Boston
L. Baloa
D. Liu
M. Simaan
S. Choi
J. Antaki

Univ. of Pittsburgh
Antakamatics, Inc.

10:30

CCA-104

A Combined Method Based on Neural Network for Control System Fault Detection and Diagnosis

Z. Ren
J. Chen
X. Tang
W. Yan

Univ. of California, Riverside
Univ. of California, Riverside
Northwestern Polytechnical Univ.
Northwestern Polytechnical Univ.

10:50

CCA-109

Optimal Adaptive Control of an Ash Stabilization Batch Mixing Process Using Change Detection

T. Svantesson
G. Olsson

Kalmar Univ. College
Lund Univ.

Portage

CCA-MA6

Control Fundamental

Chair: P. Hsu

Co-Chair: R. Pujara

San Jose State Univ.
Wright State Univ.

9:30

CCA-115

Stability Analysis of AC Steady-State Control for Inverters

P. Hsu

San Jose State Univ.

9:50

CCA-121

Energy Shaping Revisited

R. Ortega

A. van der Schaft

I. Mareels

B. Maschke

CNRS-SUPELEC
Univ. of Twente
Univ. of Melbourne
CNAM

10:10

CCA-988

Analysis of Control Systems with Delay Using Differential Transformations Method

O. Stoukatch

TUCSR

10:30

CCA-127

Necessary and Sufficient Conditions for a Polytope of Real Polynomials to Contain a Hurwitz Polynomial

L. Pujara

Wright State Univ.

10:50

CCA-133

Identifiability of Hybrid System Models

I. Hiskens

Univ. of Illinois at Urbana-Champaign

Ilhamna

CACSD-MM1

Computational Methods in Control Design I

Chair: M. Sebek

Co-Chair: N. Christov

Academy of Sciences of Czech Republic
Technical Univ. of Sofia

1:00

CACSD-48

Complex Stability Margin Computation Based on Computer Algebra

N. Ke

Univ. of Southern California

1:20	CACSD-54
Stabilization of Affine Polynomial Families: An LMI Approach	
D. Henrion	LAAS-CNRS and INSA
V. Kučera	Czech Technical Univ. in Prague and Academy of Sciences of Czech Republic
M. Šebek	Czech Technical Univ. in Prague and Academy of Sciences of Czech Republic
1:40	CACSD
Missing	
2:00	CACSD-60
Outline of New Algorithm for Output Feedback Pole Placement	
E. Galperin	Univ. of Québec at Montréal
<hr/>	
King Salmon	
CACSD-MM2	
Computer Automated Multi-Paradigm Modeling: Heterogeneous Modeling	
Chair: H. Vanheluwe	McGill Univ.
Co-Chair: P. Mosterman	DLR Oberpfaffenhofen
1:00 (I)	CACSD-65
Computer Automated Multi-Paradigm Modeling in Control System Design	
P. Mosterman	DLR Oberpfaffenhofen
H. Vanheluwe	McGill Univ.
1:20 (I)	CACSD-71
Zero-Latency Engineering™ for Control Design	
J. Ernst	Aviatis Corp.
S. Washburn	Aviatis Corp.
1:40 (I)	CACSD-77
Thoughts on Information Operation Detection as a Nonlinear, Mixed-Signal Identification Problem: A Control Systems View	
J. James	J. R. James Associates, Inc.
2:00 (I)	CACSD-83
Building and Rapidly Evolving Domain-Specific Tools with DOME	
E. Engstrom	Honeywell Technology Center
J. Kruger	Honeywell Technology Center
2:20 (I)	CACSD-89
Specifying Graphical Modeling Systems Using Constraint-Based Metamodels	
G. Karsai	Vanderbilt Univ.
G. Nordstrom	Vanderbilt Univ.
A. Ledeczi	Vanderbilt Univ.
J. Sztipanovits	Vanderbilt Univ.

2:40 (I) CACSD-95

Component-Based Hierarchical Modeling of Systems with Continuous and Discrete Dynamics

J. Liu
E. Lee

Univ. of California, Berkeley
Univ. of California, Berkeley

Katmai

CCA-MM3

Control Issue in Flywheel Attitude Control, Energy Transmission & Storage

Chair: Jerry L. Fausz
Co-Chair: M. Oshima

Air Force Research Lab
The Boeing Company

1:00 (I) CCA-138

Low-Bias Control of AMB's Subject to Saturation Constraints

P. Tsiotras
E. Velenis

Georgia Inst. of Tech.
Georgia Inst. of Tech.

1:20 (I) CCA-144

Effect of Sinusoidal Base Motion on a Magnetic Bearing

M. Kasarda
J. Clements
A. Wicks
C. Hall
R. Kirk

Virginia Tech.
Cummins Engines
Virginia Tech.
Virginia Tech.
Virginia Tech.

1:40 (I) CCA

Missing

2:00 (I) CCA

Missing

2:20 (I) CCA

Missing

2:40 (I) CCA-991

Flywheel Simultaneous Attitude Control and Energy Storage Using a VSCMG Configuration

J. Fausz
D. Richie

Kirtland AFB
Georgia Tech.

CCA-MM4

Motion Control

Chair: F. Khorrami

Polytechnic Univ.
Clemson Univ.

Co-Chair: M. Freemaster

1:00

CCA-150

Sensorless Rotor Velocity Tracking Control of the Permanent Magnet Stepper Motor

A. Behal

Clemson Univ.

M. Feemster

Clemson Univ.

D. Dawson

Clemson Univ.

A. Mangal

Clemson Univ.

1:20

CCA-156

Robust Two Degree of Freedom Regulators for Velocity Ripple Elimination of AC Permanent Magnet Motors

W. Gan

The Hong Kong Univ. of Science and Technology

L. Qiu

The Hong Kong Univ. of

Science and Technology

1:40

CCA-162

A Design Method of an Adaptive PI Controller for a Positioning Mechanism with Stand

K. Sato

Saga Univ.

K. Watanabe

Saga Univ.

H. Honda

Yaskawa Electric Corp.

R. Oguro

Yaskawa Electric Corp.

2:00

CCA-168

A New Approach to Biaxial Cross-Coupled Control

S. Yeh

National Chiao Tung Univ.

P. Hsu

National Chiao Tung Univ.

2:20

CCA-174

Design of an Acceleration Rate Controller for a Linear Drive of a Vertical Transportation System

M. Platen

Institut für Elektrische Maschinen

D. Brakensiek

Institut für Elektrische Maschinen

G. Henneberger

Institut für Elektrische Maschinen

2:40

CCA-178

Robust Adaptive Friction Compensation in Servo-Drives Using Position Measurement Only

Z. Wang

Polytechnic Univ.

H. Melkote

Polytechnic Univ.

F. Khorrami

Polytechnic Univ.

CCA-MM5

Neural Control

Chair: R. Rysdyk

Co-Chair: Y. Yamada

Georgia Tech.

Kure Inst. Natl. College

1:00

CCA-184

Adaptive Recurrent-Neural-Network Control for Linear Induction Motor

R. Wai

F. Lin

C. Hong

Yuan Ze Univ.

Chung Yuan Christian Univ.

Chung Yuan Christian Univ.

1:20

CCA-190

Adaptive Pole-Placement Control with Multi-Rate Type Neural Network for Pneumatic Servo System

Y. Yamada

K. Tanaka

S. Uchikado

Kure Inst. National College

Yamaguchi Univ.

Tokyo Denki Univ.

1:40

CCA-196

Synthesis of a Robust Neurocontroller in the Face of Strong External Disturbances

M. Efe

O. Kaynak

Bogazici Univ.

Bogazici Univ.

2:00

CCA-202

Temperature Control of CST Process Using Gaussian Neural Network with Adaptive Learning Rate

S. Saxena

V. Kumar

L. Waghmare

Univ. of Roorkee

Univ. of Roorkee

SGGS College of Engineering & Tech.

2:20

CCA-208

Neural Network Based Flow Controller

J. Kulkarni

R. Jamkar

KBP

SGGS College of
Engineering & Tech.

Portage

CCA-MM6

Control in Nonlinear Systems

Chair: Y. Michitsuji

Co-Chair: J. Hsu

Tokyo Inst. of Tech.
St. John's and St. Mary
Inst. of Tech.

1:00

CCA-214

Dynamic Wavelet Neural Network for Nonlinear Dynamic System Identification

Y. Tan

Guilin Inst. Electronic Tech.

X. Dang

Guilin Inst. Electronic Tech.

F. Liang

Guilin Inst. Electronic Tech.

C. Su

Concordia Univ.

1:20

CCA-220

A Composite Controller for Unknown Nonlinear Dynamical Systems Using Robust Adaptive Fuzzy-Neural Control Schemes

W. Wang

Fu-Jen Catholic Univ.

C. Hsu

St. John's & St. Mary's Inst of Tech.

Y. Leu

Hwa-Chia Inst of Tech.

1:40

CCA

Missing

2:00

CCA-226

Swing-Up Control of Inverted Pendulum Using Vibrational Input

Y. Michitsuji

Tokyo Inst. of Technology

K. Furuta

Tokyo Denki Univ.

M. Yamakita

Tokyo Inst. of Technology

2:20

CCA-232

Robust, Near Time-Optimal Control of Nonlinear Second Order System with Model Uncertainty

K. You

Univ. of Minnesota

E. Lee

Univ. of Minnesota

2:40

CCA-237

Discrete Adaptive Sliding Mode Control for Idle Speed Regulation in IC Engines

X. Li

The Ohio State Univ.

S. Yurkovich

The Ohio State Univ.

Iliamna

CACSD-MP1

Computational Methods in Control Design II

Chair: M. Lemmen
Co-Chair: N. Munro

Univ. of Duisburg
UMIST

3:20

CACSD

Missing

3:40

CACSD-101

CACSD for Hydraulic Cylinders

M. Lemmen
M. Bröcker
B. de Jager
H. van Essen

Univ. of Duisburg
Univ. of Duisburg
Eindhoven Univ. of Tech.
Eindhoven Univ. of Tech.

4:00

CACSD-107

Symbolic and Numerical Computations for Analysis of Uncertain Systems

M. Hromčík
M. Šebek

Inst. of Info. Theory & Auto. and Czech Tech. Univ.
Inst. of Info. Theory & Auto. and Czech Tech. Univ.

4:20

CACSD-112

Symbolic Computation of Hurwitz Criterion

R. Wang

Texas A&M Univ. - Kingsville

CACSD-MP2

Computer Automated Multi-Paradigm Modeling: Behavior Analysis

Chair: P. Mosterman
Co-Chair: H. Vangheluwe

King Salmon

DLR Oberpfaffenhofen
Mc Gill Univ.

3:20 (I)

CACSD-117

Modeling, Simulation and Sensitivity Analysis of Hybrid Systems

P. Barton

Massachusetts Inst. of Tech.

3:40 (I)

CACSD-123

Hybrid Automata: A Formal Paradigm for Heterogeneous Modeling

K. Johansson
J. Lygeros
J. Zhang
S. Sastry

Univ. of California, Berkeley
Univ. of California, Berkeley
Univ. of California, Berkeley
Univ. of California, Berkeley

4:00 (I)

CACSD-129

DEVS as a Common Denominator for Multi-Formalism Hybrid Systems Modelling

H. Vangheluwe

McGill Univ.

4:20 (I)	CACSD-135
Implicit Model Checking: Formal Verification Technique for Large-Scale Discrete Systems	
T. Park	MC Research & Innovation Ctr., Inc.
4:40 (I)	CACSD-141
Formal Methods for Analysis of Heterogeneous Models of Embedded Systems	
S. Nadjm-Tehrani	Linköping Univ.

CCA-MP3	Katmai
Control of Acoustic Noise	
Chair: H. Rota	ADFA
Co-Chair: A. Kelkar	ADFA
3:20 (I)	CCA-243
Review of DSP Algorithms for Active Noise Control	
S. Kuo	Northern Illinois Univ.
D. Morgan	Lucent Technologies
3:40 (I)	CCA-249
An Adaptive Feedback Active Noise Control System	
T. Tsuei	Ta Hwa Inst. of Tech.
A. Srinivasa	Northern Illinois Univ.
S. Kuo	Northern Illinois Univ.
4:00 (I)	CCA-255
Subspace Based System Identification for an Acoustic Enclosure	
T. McKelvey	Chalmers Univ. of Tech.
A. Fleming	Univ. of Newcastle
S. Moheimani	Univ. of Newcastle
4:20 (I)	CCA-261
Experiments in Feedback Control of an Acoustic Duct	
I. Petersen	Aus. Defence Force Academy
H. Pota	Univ. of New South Wales
4:40 (I)	CCA-267
Analysis of Perfect Noise Cancelling Controllers	
H. Pota	Univ. of New South Wales
A. Kelkar	Kansas State Univ.
5:00 (I)	CCA-273
Robust Broadband Control of Acoustic Duct	
A. Kelkar	Kansas State Univ.
H. Pota	Univ. of New South Wales

Dillingham

CCA-MP4

Vehicle Control

Chair: A. Phillips

Co-Chair: M. Larsen

Ford Research Lab.

Univ. of California, Santa Barbara

3:20

CCA-279

Heading-Aided Odometry and Range-Data Integration for Positioning of Autonomous Mining Vehicles

J. Bakambu

V. Polotski

P. Cohen

Ecole Poly. de Montréal

Ecole Poly. de Montréal

Ecole Poly. de Montréal

3:40

CCA-285

Robust Sampled-Data Control for Vehicle Steering Systems

L. Hu

Y. Cao

H. Shao

Shanghai Jiao Tong Univ.

Duisburg Univ.

Shanghai Jiao Tong Univ.

4:00

CCA-291

Exact Model Matching with Limiting Properties of LQR and its Application to Cooperative Transportation by Two Vehicles

R. Suzuki

S. Furuya

S. Kawashima

N. Kobayashi

H. Yamada

Kanazawa Inst. of Tech.

Kanazawa Inst. of Tech.

Kanazawa Inst. of Tech.

Kanazawa Inst. of Tech.

Kanazawa Tech. College

4:20

CCA-297

Vehicle System Controller Design for a Hybrid Electric Vehicle

A. Phillips

M. Janković

K. Bailey

Ford Research Lab.

Ford Research Lab.

Ford Research Lab.

4:40

CCA-303

Application of Direct Adaptive Generalized Predictive Control to an Automatic Gear Box with a Continuous Variable Transmission

G. Ramond

D. Dumur

P. Boucher

ESIEA

Supélec

Supélec

5:00

CCA-309

Indirect Passivation Design for a Diesel Engine Model

M. Larsen

M. Janković

P. Kokotovic

Visteon Advanced ETS

Ford Research Lab.

Univ. of Calif., Santa Barbara

CCA-MP5**Fuzzy Control**

Chair: J. Juang

Co-Chair: K. Krishnamurthy

Natl. Taiwan Ocean Univ.
Texas A&M Univ.

3:20

CCA-315

Trajectory Synthesis Based on Different Fuzzy Modeling Network Pruning Algorithms

J. Juang

National Taiwan Ocean Univ.

3:40

CCA-321

Automated Mode Inferencing for Intelligent Aircraft

K. Krishnamurthy

D. Ward

Texas A&M Univ.
Texas A&M Univ.

4:00

CCA

Missing

4:20

CCA-327

Application Oriented Control System Design Based on the Fuzziness of Parameter Uncertainties

A. Weinmann

Vienna Univ. of Tech.

4:40

CCA-333

Satisfactory Optimization Control in Fuzzy Dynamic Environment for Complex Systems

S. Li

Y. Xi

Shanghai Jiaotong Univ.
Shanghai Jiaotong Univ.

5:00

CCA-339

Self-Learning Neural Network Fuzzy Control Applied to the Synthetic Ammonia Production

S. Li

Y. Xi

W. Xiaoye

Shanghai Jiaotong Univ.
Shanghai Jiaotong Univ.
Hebei Univ. of Tech.

CCA-MP6**Nonlinear Control Techniques and Applications**

Chair: J. Chang

Co-Chair: M. Aliyu

Natl. Taiwan Ocean Univ.
Louisiana State Univ.

3:20

CCA-343

Adaptive Solution of Hamilton-Jacobi-Isaac Equation and Practical H-Infinity Stabilization of Nonlinear Systems

M. Aliyu

Louisiana State Univ.

Portage

3:40	CCA-349
Design of a Nonlinear H-Infinity Controller Applied to a Ship Control System	
P. Yang	The 202nd Arsenal, C.S.F.
S. Hu	The 202nd Arsenal, C.S.F.
J. Juang	National Taiwan Ocean Univ.
4:00	CCA-355
Tracking for Nonlinear Underactuated Surface Vessels with Generalized Forces	
G. Toussaint	Univ. of Illinois at Urbana Champaign
T. Başar	Univ. of Illinois at Urbana Champaign
F. Bullo	Univ. of Illinois at Urbana Champaign
4:20	CCA-361
Controllable Set Based Saturation Management Using Backstepping Control	
T. Rendon	Oklahoma State Univ.
B. O'Dell	Oklahoma State Univ.
E. Misawa	Oklahoma State Univ.
4:40	CCA-367
Integral Backstepping Control and Experimental Implementation for Motion System	
Y. Tan	Rockwell Science Center
J. Chang	Rockwell Science Center
H. Tan	Rockwell Science Center
J. Hu	Rockwell Science Center
5:00	CCA-373
Adaptive Robust Precision Motion Control of Linear Motors with Ripple Force Compensations: Theory and Experiments	
L. Xu	Purdue Univ.
B. Yao	Purdue Univ.

2000 IEEE CCA/CACSD

Tuesday, September 26, 2000

Aleutian

CCA/CACSD Plenary Presentation

8:00 - 9:00

Control System Design: Matching Methods to Problems

Keith Glover, University of Cambridge, UK

Chair: A. Varga
Co-Chair: V. Syrmos

Iliamna

CACSD-TA1

Computational Toolboxes in Control Design

Chair: F. Delebecque INRIA
Co-Chair: D. Kalita Univ. of Michigan

9:30 CACSD-147

A Slicot Based Control Library for Scilab INRIA
F. Delebecque

9:50 CACSD-150

A Descriptor Systems Toolbox for MATLAB DLR Oberpfaffenhofen
A. Varga

10:10 CACSD-156

SF2STeP: A CAD Tool for Formal Verification of Timed Stateflow Diagrams Univ. of Michigan
D. Kalita
P. Khargonekar Univ. of Michigan

10:30 CACSD-163

MVTools: Multivariable Systems Toolbox West Virginia Univ.
G. Campa
M. Davini
M. Innocenti Univ. of Pisa
Univ. of Pisa

King Salmon

CACSD-TA2

Simulation and Validation II

Chair: J. Freuderberg
Co-Chair: D. Dawson

Univ. of Michigan
Clemson Univ.

9:30

WAP Application for PID Controller Tuning

J. Lieslehto

CACSD-168

Tampere Univ. of Tech.

9:50

Real-Time Linux Target: A MATLAB-Based Graphical Control Environment

Z. Yao
N. Costescu
S. Nagarkatti
D. Dawson

CACSD-173

Clemson Univ.
Clemson Univ.
Clemson Univ.
Clemson Univ.

10:10

**Validating Executable Controller Specifications
Through Formal Model Checking**

J. Scillieri
K. Butts
J. Freudenberg

CACSD-179

Univ. of Michigan
Ford Research Lab
Univ. of Michigan

10:30

**A Generic Client/Server Architecture for Distributed Web-Based Simulation
Experimentation**

R. Finsterwalder

CACSD-185

Univ. der Bundeswehr, Munich

10:50

Modified Evolution Strategies with a Diversity-Based Parent-Inclusion Scheme

T. Huang
Y. Chen

CCA-379

Natl. Taiwan Univ.
Natl. Taiwan Univ.

Katmai

CCA-TA3

Plasma Control in a Tokamak

Chair: G. Ambrosino
Co-Chair: M. Ariola

Univ. di Napoli Federico II
Univ. di Napoli Federico II

9:30 (I)

Current, Position, and Shape Control of Tokamak Plasmas: A Literature Review

R. Albanese
G. Ambrosino

CCA-385

Univ. di Reggio Calabria
Univ. di Napoli Federico II

9:50 (I)	CCA-395
Aggregation-Based Model Reduction for Tokamak Control	
A. Beghi	Univ. di Padova
D. Ciscato	Univ. di Padova
10:10 (I)	CCA-401
Vertical Stabilization and Plasma Shape Control in the ITER-FEAT Tokamak	
M. Ariola	Univ. di Napoli Federico II
A. Pironti	Univ. di Napoli Federico II
A. Portone	European Fusion Dev. Agreement
10:30 (I)	CCA-406
Non-Linear Simulations by Numerical Magneto Hydro Dynamics Equilibrium Codes in ITER-FEAT	
M. Cavinato	ITER JCT
A. Kavin	ITER JCT
V. Lukash	KIAE
R. Khayrutdinov	TIITR
10:50 (I)	CCA-412
Initial Implementation of a Multivariable Plasma Shape and Position Controller in the DIII-D Tokamak	
D. Humphreys	General Atomics
M. Walker	General Atomics
J. Leuer	General Atomics
J. Ferron	General Atomics
11:10 (I)	CCA-419
Design and Experimental Testing of Robust MIMO Controllers on TCV	
M. Ariola	Univ. di Napoli Federico II
J. Lister	Ecole Polytechnique-Fédérale
A. Pironti	Univ. di Napoli Federico II de Lausanne
CCA-TA4	Dillingham
Mobile Robot and Architecture	
Chair:P. Tsiotras	Georgia Tech.
Co-Chair: S. Thongchai	Vanderbilt Univ.
9:30	CCA-425
Application of Fuzzy Control to a Sonar-Based Obstacle Avoidance Mobile Robot	
S. Thongchai	Vanderbilt Univ.
K. Kawamura	Vanderbilt Univ.

9:50	CCA-431
Visual Servo Control of a Class of Mobile Robot	
J. Carvalho	Automation Institute/CTI
P. Rives	INRIA
A. Santa-Bárbara	Automation Institute/CTI
S. Bueno	Automation Institute/CTI
10:10	CCA-437
Robust Control of a Mobile Robot System with Kinematic Disturbances	
W. Dixon	Clemson Univ.
D. Dawson	Clemson Univ.
E. Zergeroglu	Clemson Univ.
10:30	CCA-443
Time-Invariant Stabilization of a Unicycle-Type Mobile Robot: Theory and Experiments	
B. Kim	Georgia Inst. of Tech
P. Tsiotras	Georgia Inst. of Tech
10:50	CCA-449
A General Invariance Principle for Nonlinear Time-Varying Systems and its Applications	
T. Lee	Ming Hsin Inst. of Tech.
D. Liaw	National Chiao Tung Univ.
11:10	CCA-455
New Reference Point for Guiding an Articulated Vehicle	
V. Polotski	Ecole Polytech. de Montréal
<hr/>	
Susitna	
CCA-TA5	
Fault Tolerant Control	
Chair: J. Boskovic	Scientific Systems Co.
Co-Chair: G. Provan	Rockwell Science Ctr.
9:30	CCA-461
Numerical Synthesis of a Failure-Tolerant, Nonlinear Adaptive Autopilot	
L. Crawford	Optimal Synthesis Inc.
V. Sharma	Optimal Synthesis Inc.
P. Menon	Optimal Synthesis Inc.
9:50	CCA-467
Optimal Design of Fault Tolerant Sensor Networks	
G. Hoblos	Univ. Sciences Tech. and Hautes Etudes Industrielles
M. Staroswiecki	Univ. Sciences Tech. Hautes Etudes Industrielles
A. Aïtouche	Hautes Etudes Industrielles

10:10	CCA-473
Model-Based Fault Tolerant Control Reconfiguration for Discrete Event Systems	
G. Provan	Rockwell Science Center
Y. Chen	Rockwell Science Center
10:30	CCA-479
Reconfigurable Flight Control Design Using Multiple Switching Controllers and On-Line Estimation of Damage-Related Parameters	
J. Bošković	Scientific Systems Co., Inc.
S. Li	Scientific Systems Co., Inc.
R. Mehra	Scientific Systems Co., Inc.
10:50	CCA-485
Fault Feature Extracting by Wavelet Transform for Control System Fault Detection and Diagnosis	
Z. Ren	Univ. of California, Riverside
J. Chen	Univ. of California, Riverside
X. Tang	Northwestern Polytech. Univ.
W. Yan	Northwestern Polytech. Univ.

CCA-TA6	Portage
Signal Processing and Filtering	
Chair: X. Lu	Univ. of California, Berkeley
Co-Chair: C. Birdsong	Michigan State Univ.
9:30	CCA-490
An Adaptive Nonlinear Filter Approach to Vehicle Velocity Estimation for ABS	
F. Jiang	Cleveland State Univ.
Z. Gao	Cleveland State Univ.
9:50	CCA-496
Time Delay Filter Design in the Non-Minimum Phase Systems	
C. Liang	Shanghai Jiaotong Univ.
J. Xie	Shanghai Jiaotong Univ.
10:10	CCA-501
Integral Filters from a New Viewpoint and Their Application in Nonlinear Control Design	
X. Lu	Univ. of California at Berkeley
J. Hedrick	Univ. of California at Berkeley
10:30	CCA-507
Switched Kalman Filter in a High Frequency Series Loaded Resonant Converter	
A. Hultgren	Univ. of Kalmar
W. Kulesza	Univ. of Kalmar
M. Lenells	Växjö Univ.

10:50	CCA-513
Design of a Normalized Delayless LMS Adaptive Subband Digital Filter	
S. Tenqchen M. Sun W. Feng	Natl. Taiwan Univ. Natl. Taiwan Univ. Chang Gung Univ.
11:10	CCA
Missing	

	Iliamna
CACSD-TM1	
New Toolboxes for Control System Analysis and Design	
Chair: J. Magni Co-Chair: L. Verde	ONERA-CERT CIRA
1:00 (I)	CACSD-190
The CRONE Toolbox for Matlab	
A. Oustaloup P. Melchior P. Lanusse O. Cois F. Dancla	Université Bordeaux Université Bordeaux Université Bordeaux Université Bordeaux Université Bordeaux
1:20 (I)	CACSD-196
A Software Tool for Robustness Analysis in Plant Parameters Space (ROBAN)	
L. Verde F. Amato P. Canzolino	CIRA Univ. di Napoli Federico II CIRA
1:40 (I)	CACSD-202
A Toolbox for Robust Modal Control Design (RMCT)	
J. Magni	ONERA-CERT, DCSD
2:00 (I)	CACSD-208
SIMART: An Engineering CACSD Package for Process Control	
M. M'Saad P. Tona	ISMRA ENSIEG
2:20 (I)	CACSD-214
A Component Oriented Modelling Approach for Fluid-Dynamic Piping System Simulation (FluiDyS)	
F. Corrado L. Verde	CIRA CIRA

King Salmon

CACSD-TM2
System Design Applications I

Chair: V. Syrmos
Co-Chair: A. Hofer

Univ. of Hawaii, Manoa
Technical University Graz

1:00 CACSD-220

Inverse Solutions for the Diffusion Equation

J. Yin
V. Syrmos
D. Yun

Univ. of Hawaii at Manoa
Univ. of Hawaii at Manoa
Univ. of Hawaii at Manoa

1:20 CACSD-226

Computer Aided Control System Design for Multivariable Systems with Saturations

M. Horn
A. Hofer

Technical Univ. Graz
Technical Univ. Graz

1:40 CACSD-234

**Automatic Design of Both Topology and Tuning of a Common Parametrized Controller
for Two Families of Plants Using Genetic Programming**

J. Yu
M. Keane
J. Koza

Genetic Programming, Inc.
Econometrics Inc.
Stanford Univ.

2:00 CACSD-243

A Framework for Verification and Validation of Integrated and Adaptive Control Systems

J. James
D. Barton

J.R. James Associates, Inc.
J.R. James Associates, Inc.

Katmai

CCA-TM3
Sensitivity Analysis and Design for PDE Applications

Chair: B. King
Co-Chair: J. Burns

Virginia Tech
Virginia Tech

1:00 (I) CCA-519

Sensitivity Analysis for Chemical Laser Design: A Model Problem

J. Borggaard
E. Cliff

Virginia Tech
Virginia Tech

1:20 (I) CCA-524

A Sensitivity Equation Method for Molding Processes

L. Stanley

Montana State Univ.

1:40 (I)		CCA-530
Modeling Heat Transfer for Optimal Control Problems in Food Processing		
M. Fahl	Univ. Trier	
E. Sachs	Virginia Tech.	
C. Schwarz	Univ. Trier	
2:00 (I)		CCA
Missing		
2:20 (I)		CCA-536
Sensor Location in Feedback Control of Partial Differential Equation Systems		
A. Faulds	Virginia Tech.	
B. King	Virginia Tech.	
2:40		CCA-542
Application of the Locus of a Perturbed Relay System to Sliding Mode Relay Control Design		
I. Boiko	SNC-Lavalin	

CCA-TM4	Dillingham
Sensor Based Control	
Chair: C. Robl	Technische Universitat Munchen
Co-Chair: E. Zergeroglu	Clemson Univ.
1:00	CCA-548
Modeling of Current-Programmed Converters with Inductor Current Sensing	
J. Leyva-Ramos	UASLP
J. Morales-Saldaña	UASLP
1:20	CCA-554
Development of a Continuous Scanning Laser Doppler Vibrometer for Vibration Mode Shape Analysis	
K. Park	Kwangju Inst. Science & Tech.
S. Kim	Korea Atomic Energy Research Inst.
S. Yoon	Kwangju Inst. Science & Tech.
J. Ryu	Kumho Tire Co.
1:40	CCA-560
Adaptive Camera Calibration Control of Planar Robots: Elimination of Camera Space Velocity Measurements	
E. Zergeroglu	Clemson Univ.
D. Dawson	Clemson Univ.
Y. Fang	Clemson Univ.
A. Malatpure	Clemson Univ.

2:00	CCA-566
Segmentation of Underwater Images for AUV Navigation	
D. Crovato	SeeLab S.r.l.
B. Ros	SeeLab S.r.l.
M. Filippini	Tecnomare S. p. A.
M. Zampato	Tecnomare S. p. A.
R. Frezza	Universita di Padova
2:20	CCA-570
Algorithms for Iterative Learning Control of Nonlinear Plants Employing Time-Variant System Descriptions	
H. Hengen	Univ. of Kaiserslautern
S. Hillenbrand	Univ. of Kaiserslautern
M. Pandit	Univ. of Kaiserslautern
2:40	CCA-576
Control of a Micro Positioning System Using Sensor Fusion	
C. Robl	Technische Univ. München
G. Färber	Technische Univ. München
<hr/>	
Susitna	
CCA-TM5	
Manufacture Systems	
Chair: J. Westman	Univ. of California at Los Angeles
Co-Chair: D. Holding	Aston Univ.
1:00	CCA-582
Manufacturing Production Scheduling with Preventive Maintenance in Random Environments	
J. Westman	Univ. of California at Los Angeles
F. Hanson	Univ. of Illinois at Chicago
1:20	CCA-588
Integration of COTS Components with a DSP Coprocessor for Microstereolithography Machine Control	
G. Burmberger	Technische Univ. München
G. Färber	Technische Univ. München
1:40	CCA-594
Servo-Hydraulic Positioning System for the ALPINE MINER	
G. Rath	Univ. of Leoben
P. O'Leary	Christian Doppler Lab.
A. Marek	Voest-Alpine Bergtechnik
G. Siebenhofer	Voest-Alpine Bergtechnik
N. Sifferlinger	Voest-Alpine Bergtechnik

2:00		CCA-598
Mechatronic Objects Encapsulation in IEC 1131-3 Norm		
M. Bonfè	Univ. of Ferrara	
C. Fantuzzi	Univ. of Ferrara	
2:20		CCA-604
The Synthesis of Controllers to Handle Safety, and Liveness for Timed Discrete-Event Systems – An Example in Nuclear Reactor Systems		
T. Ho	Royal Military College of Canada	
2:40		CCA-610
UML and Petri Nets for Design and Analysis of Distributed Systems		
B. Bordbar	Aston Univ.	
L. Giacomini	Aston Univ.	
D. Holding	Aston Univ.	
<hr/>		
Portage		
CCA-TM6		
Estimation and Observers		
Chair: K. Shimizu	Keio Univ.	
Co-Chair: B. Driessen	Sandia National Labs	
1:00		CCA-616
Nonlinear State Observers by Gradient Descent Method		
K. Shimizu	Keio Univ.	
1:20		CCA-623
Cascade Nonlinear Observer for Induction Motors		
J. DeLeon	Univ. of Nuevo Leon	
A. Glumineau	IRCCyN	
G. Schreier	IRCCyN	
1:40		CCA-629
An Application of Discrete-Time H_∞ Filters to Tracking of Power System Harmonics		
H. Rho	Washington State Univ.	
C. Hsu	Washington State Univ.	
D. Hou	Schweizer Engineering Labs	
2:00		CCA-635
Robust H_∞ Filtering with Error Variance Constraints for Uncertain Discrete-Time Systems		
F. Yang	Fuzhou Univ.	
Y. Hung	The Univ. of Hong Kong	

2:20	CCA-641
Nonlinear Transformation and Observer Synthesis	
J. DeLeon	Univ. of Nuevo Leon
I. Souleiman	IRCCyN
G. Schreier	IRCCyN
A. Glumineau	IRCCyN
2:40	CCA-647
A Robust Line Search for Underdetermined Learning Control	
B. Driessens	Sandia National Labs
N. Sadegh	Georgia Inst. of Tech.
K. Kwok	Sandia National Labs

2000 IEEE CCA/CACSD Wednesday, September 27, 2000

CACSD-WA1	lhamna
Numerical Methods for Model Reduction: Dedication to Thilo Penzl	
Chair: P. Benner	Universitat Bremen
Co-Chair: A. Varga	DLR Oberpfaffenhofen
9:30 (I)	CACSD-249
Model Reduction Software in the SLICOT Library	
A. Varga	DLR Oberpfaffenhofen
9:50 (I)	CACSD-255
Singular Perturbation Approximation of Large, Dense Linear Systems	
P. Benner	Univ. Bremen
E. Quintana-Ortí	Univ. Jaime I, Castellon
G. Quintana-Ortí	Univ. Jaime I, Castellon
10:10 (I)	CACSD-261
Passive Reduced-Order Modeling via Krylov-Subspace Methods	
R. Freund	Bell Laboratories
10:30 (I)	CACSD
Missing	
10:50 (I)	CACSD
Missing	

King Salmon

CCA-WA2

Sliding Model Control Techniques and Applications

Chair: J. Pieper
Co-Chair: H. Wu

Univ. of Calgary
Hiroshima Prefectural Univ.

9:30

CCA-653

Application of the Neural Networks in Sliding Mode Control

V. Mkrtchian
A. Lazaryan

State Eng. Univ. of Armenia
State Eng. Univ. of Armenia

9:50

CCA-658

Discrete Sliding Mode Control of Magnetic Bearings

S. Edmonds
J. Pieper

Univ. of Calgary
Univ. of Calgary

10:10

CCA-664

ANN-Based Sliding Mode Control for Non-Holonomic Mobile Robots

S. Akhavan
M. Jamshidi

The Univ. of New Mexico
The Univ. of New Mexico

10:30

CCA-668

A Sliding Mode Controller for Manipulator Driven by Artificial Muscle Actuator

D. Cai
Y. Dai

Iwate Prefectural Univ.
Iwate Prefectural Univ.

10:50

CCA-674

Adaptive Fuzzy Sliding-Mode Control for Motor-Toggle Servomechanism

C. Lin
J. Shiu

Yuan-Ze Univ.
Yuan-Ze Univ.

11:10

CCA-680

Robust Tracking and Model Following for a Class of Uncertain Dynamical Systems by Variable Structure Control

H. Wu

Hiroshima Prefectural Univ.

Katmai

CCA-WA3

Industrial Control Applications

Chair: P. Boucher
Co-Chair: R. Ortega

SUPELEC
SUPELEC

9:30

CCA-686

Control of Under-Actuated Systems – Application to a Tandem Fan in a 3-d.o.f.-platform

R. Galindo
R. Lozano

Automatic Control-CINVESTAV
Heudiasyc-UTC UMR

9:50	The Control of the Hovercraft System: A Flatness Based Approach	CCA-692
	H. Sira-Ramírez C. Ibáñez	CINVESTAV-IPN CIC-IPN
10:10	Cascaded Nonlinear Predictive Control of Induction Motor	CCA-698
	R. Hedjar R. Toumi P. Boucher D. Dumur	L.A.D. LAR Supélec Supélec
10:30	Discrete Time Variable Structure Control and Disturbance Observer for Disk Drives	CCA-704
	R. Lyle E. Misawa	Oklahoma State Univ. Oklahoma State Univ.
10:50	Optimization of an Actuated Flexible Arm for Improved Control Properties	CCA-709
	M. Moallem R. Patel K. Khorasani	Univ. of Western Ontario Univ. of Western Ontario Concordia Univ.
11:10	Experimental Comparison of Linear and Nonlinear Controllers for a Magnetic Suspension	CCA-715
	H. Rodriguez H. Siguerdidjane R. Ortega	Supélec Supélec Supélec
<hr/>		Dillingham
CCA-WA4		
Robot and Manipulator Control		
Chair: J. Wen Co-Chair: D. Swanson		Rensselaer Polytechnic Inst. Georgia Tech.
9:30	Variable Structure Control with Time-Varying Boundary Layer for Robot Manipulator	CCA-720
	K. Limtanyakul	Chulalongkorn Univ.
9:50	Stabilization of a 2-DOF Spherical Pendulum on X-Y Table	CCA-724
	R. Yang Y. Kuen Z. Li	The Hong Kong Univ. of Science and Tech. The Hong Kong Univ. of Science and Tech. The Hong Kong Univ. of Science and Tech.

10:10	CCA-730
A Robust Feedback Linearizing Approach for the Precise Control of Direct Drive Systems	
O. Bogosyan M. Gokasan	Istanbul Technical Univ. Istanbul Technical Univ.
10:30	CCA-736
Torque Feedback Control of Dry Friction Clutches for a Dissipative Passive Haptic Interface	
D. Swanson W. Book	Georgia Inst. of Tech. Georgia Inst. of Tech.
10:50	CCA-742
Autonomous Suturing Using Minimally Invasive Surgical Robots	
H. Kang J. Wen	Center for Automation Tech. Center for Automation Tech.
11:10	CCA-748
Neural Network Based Manipulator Control with Time-Optimal Robot Path Tracking	
Y. Veryha L. Kourtch	Belarussian State Poly. Acad. Belarussian State Poly. Acad.

CACSD-WM1	Iliamna
System Design Applications II	
Chair: R. Gessing Co-Chair: H. Huang	Politechnika Slaska NIST
1:00	CACSD-267
Designing an Iterative Learning Controller with Reduced Sampling Rate and Smooth Controller Output	
S. Hillenbrand M. Pandit	Univ. of Kaiserslautern Univ. of Kaiserslautern
1:20	CACSD-273
Sliding Mode Control with Decreased Chattering – Model and Simulations	
R. Gessing	Instytut Automatyki
1:40	CACSD-279
Discrete-Time Linear-Quadratic Output Regulator for Two Variable Systems	
R. Gessing	Instytut Automatyki
2:00	CACSD
Missing	

2:20

CACSD-285

Design of a Cyclic One-Spot Tuning PID Controller and its Application for an Atmospheric Distillation Process

K. Fujii
T. Yamamoto

Idemitsu Kosan Co. Ltd.
Hiroshima Univ.

CCA-WM2

Industrial and Biological Process Control

Chair: M. Khanbaghi
Co-Chair: X. Cheng

Pulp and Paper Research Inst. of Canada
Westinghouse Process Control, Inc.

1:00

CCA-754

Production Plan and Schedule System used in Modern Refinery CIMS

G. Xiong
T. Nyberg
G.Y. Xiong

Tampere Univ. of Tech.
Tampere Univ. of Tech.
Tampere Univ. of Tech.

1:20

CCA

Missing

1:40

CCA-760

Nonlinear Controllers Design for Robust Stabilization of Continuous Biological Reactors

R. Antonelli
A. Astolfi

Imperial College of Science, Technology and Medicine
Imperial College of Science, Technology and Medicine

2:00

CCA-766

Modeling and Control of an Industrial Pressure Screen

M. Khanbaghi
B. Allison
J. Olson

Pulp and Paper Research Institute of Canada
Pulp and Paper Research Institute of Canada
Univ. of British Columbia

2:20

CCA-772

A Methodology for the Potential Improvement of Gas-Turbine Engine Digital Control Systems

C. Rabbath
N. Hori

McGill Univ. and OPAL-RT Technologies Inc.
Univ. of Tsukuba

2:40

CCA-778

Model-Based Once-Through Boiler Start-Up Water Wall Steam Temperature Control

X. Cheng
R. Kephart
C. Menten

Westinghouse Process Control, Inc.
Westinghouse Process Control, Inc.
Westinghouse Process Control, Inc.

King Salmon

CCA-WM3**Modeling and System Identification**

Chair: S. Schooling

Co-Chair: T. Hanshaw

UMIST

Washington State Univ.

1:00

CCA-784

On the Application of System Identification and Model Validation Methods for Constructing Multivariable Anesthesia Response Models

C. Beck

Univ. of Illinois at Urbana-Champaign

R. Smith

Univ. of California, Santa Barbara

H. Lin

Univ. of Illinois at Urbana-Champaign

M. Bloom

New York Univ. School of Med.

1:20

CCA-791

The Use of System Identification Technology in the Development of a Battery Test Instrument – A Technology Transfer Case Study

S. Schooling

Univ. of Manchester Inst. of Science & Tech.

P. Wellstead

Univ. of Manchester Inst. of Science & Tech.

L. Denny

Univ. of Manchester Inst. of Science & Tech.

J. Edmonds

Univ. of Manchester Inst. of Science & Tech.

1:40

CCA-797

Identification of Layered Material Properties Using Wavelet Transform of Ultrasonic Data

T. Hanshaw

Washington State Univ.

C. Hsu

Washington State Univ.

M. Anderson

Univ. of Idaho

2:00

CCA-802

Modeling for Control of a Steckel Hot Rolling Mill

E. Scholtz

Univ. of Pretoria

I. Craig

Univ. of Pretoria

P. Pistorius

Univ. of Pretoria

2:20

CCA-808

Control System Design for Rotorcraft-Based Unmanned Aerial Vehicles Using Time-Domain System Identification

D. Shim

Univ. of California at Berkeley

H. Kim

Univ. of California at Berkeley

S. Sastry

Univ. of California at Berkeley

2:40

CCA-814

Singular Pencil Model-Based Predictive Control Strategy

G. Wang

Natl. Research Council of Canada

W. Liu

Natl. Research Council of Canada

Dillingham

CCA-WM4

Aerospace and Space Systems

Chair: R. Wiśniewski

Co-Chair: J. Mukherjee

Aalborg Univ.
Univ. of Calgary

1:00

CCA-820

Stability Analysis of Sampled-Data System with Application to Control of International Space Station

A. Tchernychev

T. Alt

The Boeing Company
The Boeing Company

1:20

CCA-826

Spacecraft Attitude Control in Hamiltonian Framework

R. Wiśniewski

Aalborg Univ.

1:40

CCA-832

Linear Quadratic Optimal Control for an Experimental OHS Aircraft

J. Mukherjee

J. Pieper

Univ. of Calgary
Univ. of Calgary

2:00

CCA-838

Non-Minimum Phase Output Reference Trajectory Tracking for a PVTOL Aircraft

H. Sira-Ramírez

CINVESTAV-IPN

2:20

CCA-844

Pseudolinearising Autopilot for a 6 d.o.f Quasi-Linear Parameter Varying Missile Model

A. Tsourdos

B. White

Cranfield Univ.
Cranfield Univ.

2:40

CCA-850

System Identification Experiments on a Large-Scale Unmanned Helicopter for Autonomous Flight

S. Hashimoto

Utsunomiya Univ.

T. Ogawa

Utsunomiya Univ.

S. Adachi

Utsunomiya Univ.

A. Tan

Kawada Industries, Inc.

G. Miyamori

Kawada Industries, Inc.

CACSD-WP1**Adaptive and Robust Control**

Chair: A. Sano

Co-Chair: F. Lizarralde

Keio Univ.

Univ. of Rio de Janeiro

3:20

CCA-856

Improvement of Transient Performance for a SIMO System by Gain-Scheduled Q-Parameterization

F. Takemori

Y. Okuyama

Tottori Univ.

Tottori Univ.

3:40

CCA-862

Real-Time Position Control of Free-Electron Laser Beams: Theory and Experiments

M. Moallem

Univ. of Western Ontario

4:00

CCA-868

Auto-Tuning of Motor Drive System by Simple Adaptive Control Approach

T. Higashiyama

Keio Univ.

M. Mine

Keio Univ.

H. Ohmori

Keio Univ.

A. Sano

Keio Univ.

H. Nishida

Fuji Electric Corp.

Y. Todaka

Fuji Electric Corp.

4:20

CCA-874

Robust Adaptive Visual Tracking Control: Analysis and Experiments

L. Hsu

Fed. Univ. of Rio de Janeiro

F. Lizarralde

Fed. Univ. of Rio de Janeiro

4:40

CCA-880

Current Feedback for Shock Disturbance Attenuation in a Compact Disc Player

J. Stoustrup

Aalborg Univ.

E. Vidal

Aalborg Univ.

P. Andersen

Aalborg Univ.

T. Pedersen

Aalborg Univ.

5:00

CCA-886

Command Governor Strategies for Constrained Control of an Inverted Pendulum

G. Calamai

Univ. di Firenze

A. Casavola

Univ. della Calabria

E. Mosca

Univ. di Firenze

King Salmon

CCA-WP2

Power Electronic Systems

Chair: J. Jatskevich

Purdue Univ.
Univ. of Kentucky

Co-Chair: R. Heath

3:20

CCA-892

Power Pollution due to Grid Connected Wind Electric Converter

W. Gandhare

Govt. Polytechnic
MEDA

G. Bhagwatikar

3:40

CCA-896

A Robust High Performance Three-Phase Uninterruptible Power Supply

E. Carati

UFSM/CT/DELC/NUPEDEE

C. Richter

UFSM/CT/DELC/NUPEDEE

H. Gründling

UFSM/CT/DELC/NUPEDEE

4:00

CCA-902

Continuous State-Space Modeling of Switched Electric Networks

J. Jatskevich

Purdue Univ.

O. Wasynczuk

Purdue Univ.

E. Walters

Purdue Univ.

C. Lucas

Purdue Univ.

4:20

CCA-908

Development, Application, and Verification of a Digital Model of the 3-Phase Current Regulator Function of a Switched Reluctance Cycloconverter Controller

J. Heath

Univ. of Kentucky

A. Radun

Univ. of Kentucky

K. Hon

Univ. of Kentucky

4:40

CCA-914

Multivariable Model Reference Adaptive Control for a Three-Phase Uninterruptible Power Supply

C. Richter

UFSM/CT/DELC/NUPEDEE

E. Carati

UFSM/CT/DELC/NUPEDEE

H. Gründling

UFSM/CT/DELC/NUPEDEE

5:00

CCA-918

Harmonic Modeling of the Motor Side of an Inverter Locomotive

H. Sandberg

Lund Inst. of Tech.

E. Möllerstedt

Lund Inst. of Tech.

Katmai

CCA-WP3

Discrete Event Systems

Chair: Y. Chen

Co-Chair: P. Hsu

Rockwell Science Ctr.
Natl. Chiao-Tung Univ.

3:20

CCA-924

Stability and Stabilization Techniques for Discrete Event Systems Modeled by Coloured Petri Nets

Z. Retchkiman

Instituto Politecnico Nacional

3:40

CCA-929

A PLC-Based Design for the Sequence Controller in Discrete Event Systems

J. Lee

National Chiao-Tung Univ.
National Chiao-Tung Univ.

P. Hsu

4:00

CCA-935

Adaptive Supervisory Control of Interconnected Discrete Event Systems

D. Gordon

Naval Research Lab
U.S. Naval Academy

K. Kiriakidis

4:20

CCA-941

Modeling of Discrete Event Systems Using Finite State Machines with Parameters

Y. Chen

Rockwell Science Center
Wayne State Univ.

F. Lin

4:40

CCA-947

Hybrid Control Systems: A Design Case Study

B. Bordbar

Aston Univ.

L. Giacomini

Aston Univ.

D. Holding

Aston Univ.

Dillingham

CCA-WP4

Active Vibration Control

Chair: C. Burrows

Univ. of Bath

Co-Chair: K. Hong

Pusan Natl. Univ.

3:20

CCA-953

Sliding Mode Active Vibration Control of Circular Saws

J. Sun

Natl. Research Council of Canada

X. Wang

Natl. Research Council of Canada

F. Xi

Natl. Research Council of Canada

3:40

CCA-959

Optimal Boundary Obstacle of the String Vibration

W. Liu

Dalhousie Univ.

4:00	CCA-965
Adaptive-Q Control of Vibration Due to Unknown Disturbances in Rotor/Magnetic Bearing Systems	
M. Cole	Univ. of Bath
P. Keogh	Univ. of Bath
C. Burrows	Univ. of Bath
4:20	CCA-971
Noncollocated Passive Transfer Functions for a Flexible Link Robot	
M. Saad	École Polytechnique de Montréal and École de Tech. Supérieure
L. Saydy	École Polytechnique de Montréal
O. Akhrif	École de Tech. Supérieure
4:40	CCA-976
H_∞ Control of Active Vehicle Suspensions	
D. Sammier	INPG-CNRS UMR
O. Sename	INPG-CNRS UMR
L. Dugard	INPG-CNRS UMR
5:00	CCA-982
Semi-Active Control of the Macpherson Suspension System: Hardware-in-the-Loop Simulations	
H. Sohn	Pusan National Univ.
K. Hong	Pusan National Univ.
J. Hedrick	Univ. of California at Berkeley