The 52nd IEEE Conference on Decision and Control (CDC) was held December 10–13, 2013, at Palazzo dei Congressi, Florence, Italy. Preconference workshops were held on Monday, December 9, 2013.

The CDC is recognized as the premier scientific and engineering conference dedicated to the advancement of the theory and practice of systems and control. The CDC annually brings together an international community of researchers and practitioners in the field of automatic control to discuss new research results, perspectives on future developments, and innovative applications relevant to decision making, systems and control, and related areas. The CDC is hosted by the IEEE Control Systems Society (CSS) in cooperation with the Society for Industrial and Applied Mathematics (SIAM), the Institute for Operations Research and the Management Sciences (INFORMS), the Japanese Society of Instrument and Control Engineers (SICE), and the European Control Association (EUCA).

The historic center of Florence contains such a wealth of masterpieces that it is difficult to separate the city from its artworks. With its extraordinarily beautiful churches; museums and art collections; and historic gardens, piazzas, streets, and ancient palaces; Florence can justifiably be called an “open-air museum.” The city is not simply a container for artwork but is a work of art in its own right. The Palazzo dei Congressi is located at the heart of Florence. The technical sessions of the CDC took place in the Villa Vittoria and in the adjacent Palazzo Affari. The two buildings are surrounded by a centuries-old garden, which provided a relaxing environment for conference participants. The plenary and other special sessions were held at the Auditorium, which is located in the same complex.

THE FIRST CDC IN ITALY

The CDC started in 1962 with the name Discrete Adaptive Processes—Symposium and Panel Discussion (IEEE). The meeting was changed to the current name in the early 1970s to reflect research trends. Quoting Michael Athans, “The name Conference...”
on Decision and Control was chosen because we believed that modern control theory (still in its infancy) would eventually have widespread applications in nontraditional control ...”

The CDC was held within the United States until the mid-1980s, even though many authors and participants were distributed worldwide. To reflect internationalization, CSS decided to organize the conference periodically outside the United States. The CDC has been held in Greece, the United Kingdom, Japan, Australia, the Bahamas, Spain, Mexico, and China. The tradition of internationalization continues, and CDC 2013 was the first CDC in Italy!

REGISTRATIONS

The 52nd IEEE CDC had 1604 registrants, including 546 student registrations. The total number of registrants is a record for a standalone CDC. Figure 1 displays a breakdown of the registrants by country of origin for ten countries with the most registrants.

Handling such a large number of registrants required a big effort from the registration team, which consisted of over 40 student volunteers from Universities of Firenze, Benevento, and Trieste who were captained by “The Office” team: Barbara, Laura, Luciana, Rossella, and Veronica.

PRECONFERENCE WORKSHOPS

Preconference workshops were held on Monday, December 9. A total of 175 attendees, including 105 students, registered for eight workshops:

- “Distributed Model Predictive Control Made Easy: Exploring
Members of the registration team ready to go the day before the conference began.

Common Characteristics and Distinguishing Feature”
J.M. Maestre (University of Seville), R.R. Negenborn (Delft University of Technology), Carlos Ocampo Martínez (Technical University of Catalunya), and Paul Trodden (University of Sheffield)

“Ancillary Service from Flexible Loads to Help the Electric Grid of the Future”
Prabir Barooah (University of Florida), Ian A. Hiskens (University of Michigan), Anupama Kowli (Indian Institute of Technology, Bombay), Johanna L. Mathieu (ETH Zurich), and Sean Meyn (University of Florida)

“Time Delay Systems: Theory, Numerics, and Analytical Approaches for Applications”
Rifat Sipahi (Northeastern University, Boston), Fatihcan Atay (Max Planck Institute, Leipzig), Hitay Ozbay (Bilkent University, Ankara), Wim Michiels (Katholieke Universiteit Leuven), and Silviu-Iulian Niculescu (CNRS LSS - Supélec)

“Cooperative Distributed Control for Energy Management Systems:
Shinji Hara (University of Tokyo) and Masayuki Fujita (Tokyo Institute of Technology)

“Recent Advances in Semialgebraic Geometry: Applications in System Identification, Estimation and Filtering”
Diego Regruto (Politecnico di Torino) and Daniel E. Rivera (Arizona State University)

“Dynamical Neural Systems, Synchronization and Control”
Sridevi Sarma (Johns Hopkins University)

“Intelligent Planning and Control: Bringing Together Adaptive Control and Reinforcement Learning for Guaranteeing Optimal Performance and Robustness”
Girish Chowdhary (Oklahoma State University), Warren E.
Photographs from the Conference Banquet

Jay Farrell and Edwin K.P. Chong. 

Masayuki Fujita and Tamer Başar. 

Philipp Wolfrum and Hideaki Ishii. 

Thomas Parisini and Yutaka Yamamoto. 

David and Brenda Castanon. 

Shakunthala and Mathukumalli Vidyasagar. 

Michel Gevers and Pradeep Misra. 

Theresa and Jay Farrell. 

Mamiko Yamamoto and Alberto Isidori. 

Conference participants at the banquet.
Several conference organizers and volunteers experiencing a joyful moment.

The banquet, which took place at Palazzo Cavaniglia, Fortezza da Basso, was attended by a record number of conference participants (over 1540).

Ivana and Felice Andrea Pellegrino.


Several conference organizers and volunteers experiencing a joyful moment.
Dixon (University of Florida), Alborz Geramifard (Massachusetts Institute of Technology), Jonathan P. How (Massachusetts Institute of Technology), Eric N. Johnson (Georgia Institute of Technology), Frank L. Lewis (University of Texas at Arlington), Tansel Yucelen (Georgia Institute of Technology), and Thomas Walsh (Massachusetts Institute of Technology)

"Relaxation Approaches for Control of Uncertain Complex Systems: Methodologies and Tools"
Fabrizio Dabbene (CNR-IEIIT), Didier Henrion (LAAS CNRS), Dimitri Peaucelle (LAAS CNRS), and Roberto Tempo (CNR-IEIIT).

TECHNICAL PROGRAM
A total of 1753 contributed and 354 invited papers were submitted by the deadline of March 11, 2013, which was not extended. Of the 2107 submissions, 1289 were accepted (61% acceptance rate), of which, owing to a number of late withdrawals, 1274 were included in the final program: 276 papers were placed in 46 invited sessions and 998 in 166 regular sessions. These sessions were organized in the usual three time slots: morning, midday, and afternoon. Most sessions included six papers each, with some sessions having seven papers.

A two-stage review process was followed for evaluating all the submitted papers. In the first stage, all submitted papers were assigned by the Conference Editorial Board (CEB) Chair Alessandro Astolfi to CEB members, who collected reviews and wrote recommendations. In the second stage, these materials were reviewed by Program Chair André Tits; Vice Chairs Franco Blanchini, Patrizio Colaneri, and Nuno Martins; and the 39 members of the International Program Committee (IPC).

The technical program included the Bode Lecture, three plenary lectures, six special sessions, and four tutorial sessions.

BODE AND PLENARY LECTURES
The Bode Lecture and the three plenary lectures were held at the Auditorium, a lecture on each day of the conference.

Thomas Parisini and Roberto Tempo presenting flowers to plenary speaker Lucy Pao.

Raffaello D’Andrea delivers the plenary lecture “Acrobatic Flight.”

Jeff Shamma delivers the plenary lecture “From Distributed Control Systems to Game Theory: There and Back Again.”

Lucy Pao delivers the plenary lecture “Wind Energy for Utility Grid Reliability.”

B. Ross (Bob) Barmish delivers the Bode Lecture, “Can Control Science Bring New Insights to Stock Trading Research?”

Conference participants in the Auditorium during one of the very well-attended plenary lectures.
Photographs from Receptions

Roberto Tempo, Franco Blanchini, Faryar Jabbari, Maria Elena Valcher, and David Castanon during the farewell reception.

Conference attendees at the farewell reception.


Kirsten Morris, Geir Dullerud, and Karen Rudie

Conference attendees at the farewell reception.

Sean Meyn and other conference attendees.

Masayuki Fujita and other conference attendees.

Ted Davison and Tongwen Chen.

Thomas Parisini with several conference organizers and volunteers.
conference, and were extremely well attended, exceeding the capacity of the room every day (1050 seats):

» Bode Lecture (Friday), “Can Control Science Bring New Insights to Stock Trading Research?,” by B. Ross Barmish (University of Wisconsin, Madison)

» Tuesday plenary lecture, “Acrobatic Flight,” by Raffaello D’Andrea (ETH Zurich)

» Wednesday plenary lecture, “From Distributed Control Systems to Game Theory: There and Back Again,” by Jeff S. Shamma (Georgia Institute of Technology)

» Thursday plenary lecture “Controlling Wind Energy for Utility Grid Reliability,” by Lucy Y. Pao (University of Colorado at Boulder).

SPECIAL SESSIONS

The technical program included six special sessions held during the four days of the conference:

» New Updates for Control Design and Deployment with Matlab and Simulink
  Sponsor: MathWorks
  Speakers: Pascal Gahinet (MathWorks), Giampiero Campa (MathWorks), and Davide Ferraro (MathWorks)

» A New Transactions: IEEE Transactions on Control of Network Systems
  Organizers: Yannis Paschalidis (Boston University, editor-in-chief) and Magnus Egerstedt (Georgia Institute of Technology, deputy editor-in-chief)

» How to Give a Conference Talk—How Your Presentation Can Turn Bad
  Organizer and Moderator: Yutaka Yamamoto (University of Kyoto, IEEE CSS president), Panelists: Robert Bitmead (University of California San Diego), Christos Cassandras (Boston University), Richard Middleton (University of Newcastle), and Yutaka Yamamoto

» Optimization and Control for Energy Efficiency and Smart Grids

Sponsor: Honeywell Automation and Control Solutions
  Speakers: Vladimir Havlena (Honeywell ACS Global Laboratory, Prague), Tariq Samad (Honeywell Research Center), and Petr Stluka (Honeywell ACS Global Laboratory, Prague)

» Use and Misuse of Impact Factor and Other Bibliometric Indicators: What the IEEE Is Doing to Address This Issue?
  Organizer and Moderator: Yutaka Yamamoto (University of Kyoto, IEEE CSS president)
  Panelists: Gianluca Setti (2013 IEEE vice president for Publication Services and Products) and Yutaka Yamamoto

» Cyberphysical Systems (CPS) Architectures
  Organizer: John S. Baras (University of Maryland)
  Panelists: Manfred Broy (Technical University Munich, Germany), David Corman (National Science Foundation, CPS program director, United States), Karl Henrik Johansson (Royal Institute of Technology, Sweden), P.R. Kumar (Texas A&M University, United States), Max Lemke (European Commission, Complex Systems and Advanced Computing Head), Alberto Sangiovanni-Vincentelli (University of California Berkeley, United States), and Vijay Srinivasan (National Institute of Standards and Technology, United States).

TUTORIAL SESSIONS

Four tutorial sessions, one held each day of the conference, were:

» Quantum Feedback Control
  Organizer: Matthew James (Australian National University)
  Presenters: Matthew James (Australian National University), Hendra Nurdin (The University of New South Wales), and Naoki Yamamoto (Keio University)

» Game Theory and Network Systems
  Organizer: Jason R. Marden (University of Colorado at Boulder)

SPONSORSHIP AND EXHIBITS

The generous financial support of many sponsors and exhibitors is gratefully acknowledged:

» Gold sponsors: Honeywell, MathWorks, Springer, Taylor & Francis, University of Trieste

» Silver sponsors: Elsevier, General Electric, Journal of the Franklin Institute, National Instruments, PendCon, SIAM, United Technologies Research Center, Wolfram

» Bronze sponsors: Daniele Automation.

The exhibits were located in the Passi Perduti auditorium hall.

STUDENT SUPPORT

Student attendees are the future of the Society and received a variety of forms of support under the coordination of Sandra Hirche (Student Activities chair):

» CSS (US$20,000 through the Travel Support Program) and the U.S. National Science Foundation (US$15,000) collaborated to
provide travel support to 51 students from 16 countries (Argentina, Australia, Brazil, Canada, Chile, Colombia, India, Israel, South Korea, Mexico, New Zealand, Singapore, Switzerland, Turkey, the United Kingdom, and the United States).

IEEE CSS provided funding to allow any student registrant of the CDC to attend a preconference workshop for only €20. In response, 106 students registered for workshops.

The student registration fee included a banquet ticket. We are grateful to Kishan Baheti, NSF program director, for his continued support of student travel to the CDC and to the IEEE CSS leadership for their efforts to promote and enhance student membership.

SOCIAL EVENTS
Several social events were scheduled during the conference: Opening Reception, Newcomers Reception, Women in Control Luncheon, CSS Awards Reception, Conference Banquet, and Closing Reception. The receptions took place in the Passi Perduti Ballroom. The conference banquet, which was attended by a record 1540 conference registrants and their guests, was held at Palazzo Cavagniglia, Fortezza da Basso.

OPERATING COMMITTEE
The organization of a CDC requires the effort of many volunteers, and we are deeply grateful to all of them. We have been very fortunate to receive strong support from the members of the Program and Operating Committees, who contributed significantly in addressing all the issues with timeliness, great expertise, and a sense of friendship. Without their help and support, the organization of CDC would not have been possible. We would like to thank the Program chair and cochairs for putting together an outstanding technical program: André L. Tits, Franco Blanchini, Patrizio Colaneri, and Nuno Martins. The entire Operating Committee has been instrumental in managing all the different aspects of the organization. In particular, we would like to thank Alessandro Astolfi (CEB chair), Luigi Chisci (Local Arrangements chair), Fabrizio Dabbene (Workshop and Exhibit chair), Warren Dixon (Finance chair), Laura Giarré...
CSS Awards Ceremony

The 2013 Awards Ceremony of the IEEE Control Systems Society (CSS) was held on Thursday, December 12 and was followed by a reception that provided a forum for several hundred people to celebrate the accomplishments of the distinguished members of our community who received awards from CSS and IEEE.

The Distinguished Member Award went to Shuzhi (Sam) Ge, National University of Singapore, who was recognized for contributions to the intelligent control of nonlinear systems and robotics and outstanding service to the CSS through technical- and membership-related activities.

The Outstanding Chapter Award went to the Argentina Section Joint Chapter, chaired by Cristian De Angelo and Diego Alonso, recognizing its continuous effort over many years in organizing many highly focused technical meetings and activities.

The CDC Best Student Paper Award recipient was Nikolai Matni (advisor John C. Doyle), for the paper, “Communication Delay Co-Design in H₂ Decentralized Control Using Atomic Norm Minimization.” The other finalists were Nikolaos Bekirias-Liberis (advisor Miroslav Krstic), Kwang-Ki Kim (advisor Richard D. Braatz), and Anup Menon (advisor John S. Baras).


The Control Systems Society Transition to Practice Award recipient was John T. Wen “for adaptive scanning optical microscopes and a high precision laser scanning system for the electronic manufacturing industry and for translation of systems theory to practice.”

The award will be presented at the 2014 IEEE Multiconference on Systems and Control in Nice/Antibes, France.

The Antonio Ruberti Young Researcher Prize was given to Alexandre M. Bayen to recognize contributions to the “control and estimation of partial differential equations with applications to large scale sensing in traffic flow and shallow water systems.”

The Hendrik W. Bode Lecture Prize was awarded to B. Ross Barmish, who delivered the Bode Lecture on Friday, December 13.

IEEE AWARDS

IEEE Awards were presented by 2013 IEEE President Peter W. Staecker, who attended the CSS Awards Ceremony and several other events of the CDC 2013.

The IEEE Control Systems Award recipient was Stephen P. Boyd, who was recognized “for contributions to systems design and analysis via convex optimization.”

The individuals elected IEEE Fellows in 2013 who were evaluated by the CSS were

- Vincent Daniel Blondel “for contributions to computational analysis of systems and networks”
- Håkan Hjalmarsson “for contributions to data-based controller design”
- Karl Henrik Johansson “for contributions to the applications of hybrid and networked systems”
- Rolf Johannson “for contributions to system identification and adaptive control”
- Daniel Liberzon “for contributions to analysis and design of switched, nonlinear and quantized control systems”
- Kameshwar Poolla “for contributions to system identification, robust control, and applications to semiconductor manufacturing”
- Carsten W. Scherer “for contributions to optimization-based robust controller synthesis”
- Yuan Wang “for contributions to stability and control of nonlinear systems.”

CSS members who were elected IEEE Fellows in 2013 who were evaluated by other Societies were Stefano Soatto (CS), Yi Ma (CS), Jinhu Lu (CAS), Tadeusz Kaczorek (IE), John Pierre (PE), Chikaodinaka Nwankpa (PE), Wei-Yen Wang (SMC), and Kenneth Kreutz-Delgado (SP).

Pictures of the Awards Ceremony

Kirsten Morris, VP, Membership Activities, introduces the Outstanding Chapter Award.

Kwang-Ki Kim, a finalist for the CDC Best Student Paper Award, receives his plaque from Masayuki Fujita.

Francesco Bullo, VP, Publication Activities, introduces the journal paper awards.
All the finalists for the CDC Best Student Paper Award (from left) Anup Menon, Nikolai Matni, Kwang-Ki Kim, and Nikolaos Bekiaris-Liberis.

Chris T. Freeman accepts the IEEE Control Systems Magazine Outstanding Paper Award from Francesco Bullo.

Oliver Sawodny accepts the IEEE Transactions on Control Systems Technology Outstanding Paper Award from Francesco Bullo.

Cristian De Angelo receives the Outstanding Chapter Award from Kirsten Morris.

Shuzhi Sam Ge accepts the IEEE CSS Distinguished Member Award from Kirsten Morris.

Anup Menon, a finalist for the CDC Best Student Paper Award, receives his plaque from Masayuki Fujita.

All the finalists for the CDC Best Student Paper Award (from left) Anup Menon, Nikolai Matni, Kwang-Ki Kim, and Nikolaos Bekiaris-Liberis.

Bassam Bamieh accepts the George S. Axelby Outstanding Paper Award from Francesco Bullo.

Masayuki Fujita, VP for Conference Activities, introduces the CDC Best Student Paper Award.

Nikolai Matni accepts the plaque for the CDC Best Student Paper Award from Masayuki Fujita.

Partha Mitra accepts the George S. Axelby Outstanding Paper Award from Francesco Bullo.

Nikolaos Bekiaris-Liberis, a finalist for the CDC Best Student Paper Award, receives his plaque from Masayuki Fujita.

Chris T. Freeman accepts the IEEE Control Systems Magazine Outstanding Paper Award from Francesco Bullo.
Mihailo R. Jovanović accepts the George S. Axelby Outstanding Paper Award from Francesco Bullo.

Frank Allgöwer, VP, Technical Activities, announces the 2013 Control Systems Society Transition to Practice Award, which will be presented at the 2014 IEEE Multiconference on Systems and Control.

Christos G. Cassandras, CSS past president, introduces the Hendrik W. Bode Lecture Prize.

B. Ross Barmish accepts the Hendrik W. Bode Lecture Prize plaque from Christos G. Cassandras.

John T. Wen, the recipient of the Control Systems Society Transition to Practice Award.

Peter W. Staecker with IEEE Fellows Håkan Hjalmarsson, Karl Henrik Johansson, and Carsten W. Scherer.

Alexandre M. Bayen accepts the plaque for the Antonio Ruberti Young Researcher Prize from CSS President Yutaka Yamamoto.

The IEEE and CSS awardees (from left) John T. Wen, Shuzhi (Sam) Ge, Cristian De Angelo, Partha Mitra, Eric Rogers, Bassam Bamieh, Mihailo R. Jovanović, Alexandre M. Bayen, Chris T. Freeman, Nikolai Matni, Stephen P. Boyd, B. Ross Barmish, Oliver Sawodny, Karl Henrik Johansson, and Håkan Hjalmarsson.

2013 IEEE President Peter W. Staecker introduces the 2013 IEEE Fellows.

Stephen P. Boyd accepts the plaque for the IEEE Control Systems Award from Peter W. Staecker.

Stephen P. Boyd delivers his acceptance speech.

(Registration cochair), Sandra Hirche (Student Activities chair), Pradeep Misra (Electronic Services coordinator), Felice Andrea Pellegrino (Publicity chair), Ann Rundell (Registration cochair), and Andrea Serrani (Publication chair). We also wish to express our sincere gratitude to the sponsors for their generous support. Last, but not least, we would like to thank Rossella Spangaro and “The Office” team for their superb management of the financial and logistic details of the conference and the many students and volunteers of the Universities of Benevento, Firenze, and Trieste for their enthusiastic support during the event.

CONCLUDING REMARKS
Quoting Jay Farrell’s concluding remarks in his CDC 2012 report, “serving as general chair of an IEEE CDC is a once-in-a-lifetime responsibility and opportunity,” and we cannot agree more. This personal journey for us started in an airport lounge on the way back to Italy after the 2008 CDC. During these five years of service, we always felt the support and trust of the CSS as a professional society and of many colleagues and friends. No doubt that all our efforts have been motivated by trying to make the first CDC in Italy a memorable event.

It is impossible to relate in these short remarks all our memories about this fantastic adventure. So we want to share with the readership two pictures (Figure 2). The first was taken on Friday, December 6. We sat at the registration desk exhausted in front of the empty conference center. Looking at our faces, it is evident that we could not believe some 1600 attendees could be accommodated with the high technical and social standards of our flagship conference. Our faces in the second picture show that, by the middle of the conference, we started relaxing because the atmosphere was great, the sessions were well attended, and our colleagues and friends enjoyed one of the most beautiful cities in the world. This is an unforgettable reward for us. We are looking forward to the 2014 CDC in Los Angeles to share some good memories of this fantastic experience that touched our lives.

Thomas Parisini and Roberto Tempo
General Cochairs, CDC 2013

The 25th Chinese Control and Decision Conference

The 25th Chinese Control and Decision Conference (2013 CCDC) was held in Guiyang, China, May 25–27, 2013. The 2013 CCDC was co-organized by Northeastern University, China, the Industrial Electronics (IE) Chapter of the IEEE Singapore Section, and Harbin Section Chapter of the IEEE Control Systems Society (CSS). The local organizer was Guizhou University, China. The conference was technically cosponsored by the CSS, the Systems Engineering Society of China, the Chinese Association for Artificial Intelligence, and the Technical Committee on Control Theory of Chinese Association of Automation.

TECHNICAL PROGRAM
The 2013 CCDC received 1513 full paper submissions from authors from 26 countries and regions. After going through a rigorous review process—during which all the members in the Technical Program Committee worked professionally, responsibly, and diligently—998 papers were included in the technical program for presentation in 99 oral sessions and nine interactive sessions. The conference was attended by 650 delegates.

In addition to the regular technical sessions, the technical program also included five keynote addresses and seven distinguished lectures, covering the state of the art in both theory and practice.