2010 IEEE Multi-Conference on Systems and Control

September 8-10, 2010
Yokohama, Japan
A port city on Tokyo Bay

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Call for Papers

Background and scope

The 2010 IEEE Multi-Conference on Systems and Control (MSC) is comprised of three international conferences promoted by the IEEE Control Systems Society: the International Conference on Control Applications (CCA), initiated in 1992, the International Symposium on Computer-Aided Control System Design (CACSD), initiated in 1992, and the International Symposium on Intelligent Control (ISIC), initiated in 1985. The MSC provides a unique opportunity for researchers and practitioners from different areas to discuss the state-of-the-art and the future directions in advanced control technology, intelligent systems and computational methods for control systems design. The conference will feature several kinds of presentations including contributed and invited papers as well as workshops, covering a broad range of topics relevant to control applications, methods, and development tools.

Invitation and venue

The Organizing Committee is pleased to invite you to participate in the 2010 MSC, to be held Wednesday through Friday, September 8 to 10, 2010, at the PACIFICO YOKOHAMA, one of the largest convention complexes in the world. The PACIFICO YOKOHAMA is located in the Yokohama Minato Mirai 21 (MM21) area on Tokyo Bay, a shopping and leisure area possessing beautiful seaside parks, a variety of museums, the red brick warehouse, and the Yokohama Landmark Tower, the tallest building in Japan. The Chinatown and Motomachi areas, full of the exotic charms of the port city, are within a few stops by train. There you will find many unique shops, cafes, and fine restaurants. The city of Yokohama, the second largest city in Japan, is literally connected to the Tokyo Metropolitan District, and the convenient train system will take you to the heart of Tokyo within forty minutes.

Call for papers

Contributed and invited session papers as well as invited session proposals need to be submitted electronically through the IEEE CSS conference management system PaperPlaza at http://css.paperplaza.net/. Note that the Program Committees reserve the right to assign accepted papers to oral or interactive presentations. Please refer to the conference website for the most up-to-date information about the conferences. The Organizing Committee also solicits proposals for preconference workshops within the technical scope of the conferences.

Industrial Papers (new paper category): The 2010 MSC creates a new submission category, Industrial Papers, to encourage submission from industry and nonacademic organizations. The nominal length of the paper is four pages, shorter than that of the regular papers, but it will be peer reviewed and included in the conference proceedings and the IEEE Xplore. For details on qualification, please see the conference webpage below.

Important deadlines

Contributed papers submission:	January 31, 2010
Invited session papers/proposals submission:	January 31, 2010
Workshop proposals submission:	January 31, 2010
Notification of acceptance:	April 30, 2010
Final paper submission:	May 31, 2010

For further information please consult the 2010 MSC website at:

http://www.mei.titech.ac.jp/msc10/

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SCOPES

2010 IEEE INTERNATIONAL CONFERENCE ON CONTROL APPLICATIONS (CCA 2010)

Agricultural systems	**Aerospace systems**
Automotive systems	**Biological and pharmaceutical processes**
Biomedical systems	**Chemical processes**
Discrete event systems	**Distributed intelligent networked systems**
Fault diagnosis	**Fault tolerant control**
Fuzzy and neural control, Petri nets	**Hybrid systems**
Integrated control and supervision	**Mathematical modeling**
Marine systems	**Mechanical systems and robotics**
Mechatronic systems	**Metal processing**
Mining systems	**Power systems**
Predictive and adaptive control	**Robust control**
System identification	**Transportation systems**
Telecommunications	**Vehicular and traffic control**

2010 IEEE INTERNATIONAL SYMPOSIUM ON COMPUTER-AIDED CONTROL SYSTEM DESIGN (CACSD 2010)

Computer-Aided Design
Computer-aided system modeling; identification and simulation; computer-aided design and tuning of control systems; embedded and networked systems design and implementation.

CACSD Environments for Systems Analysis and Design
Computer toolboxes for control systems design; computer-based teaching and learning environments.

Tools for Industrial Controller Design
Rapid prototyping; real-time aspects and target specific code generation; tools for multi-disciplinary test and integration; tools for plant monitoring and tuning.

Numerical Methods for Systems and Control
Optimization-based control systems analysis and design (including linear matrix inequalities techniques); randomized algorithms in systems and control; symbolic methods for systems and control; model-order reduction techniques; soft-computing algorithms.

Numerical Methods for System Identification
Numerical methods and tools for white/grey/black box identification of linear/nonlinear systems;time series analysis; experiment design and identifiability analysis;model validation; identification for control;adaptive control and data-based controller tuning; monitoring and fault detection.

Systems with Uncertainty
Modeling and identification of uncertain systems (linear/nonlinear, time-invariant/time-varying, etc); robustness analysis (stability; performance; invariant sets; etc); robust control (controller synthesis; controller validation; etc); optimization under uncertainty.

2010 IEEE INTERNATIONAL SYMPOSIUM ON INTELLIGENT CONTROL (ISIC 2010)

Autonomous Systems
Robotics and unmanned systems; intelligent behavior generation; architectures for autonomy; autonomous manufacturing and industrial systems; planning and decision-making for autonomy; cooperative autonomous systems.

Architecture and Software for Intelligent Control
Next generation intelligent control architectures and methods; distributed embedded systems; embedded intelligent controllers.

Computational Intelligence Methods
Neural networks; fuzzy systems; genetic algorithms; probabilistic approaches.

Distributed-Information Systems
Multi-agent based planning, control and intelligence; swarm intelligence, learning and control; distributed and decentralized control; distributed intelligence; large-scale systems; multi-resolution modeling and control; cooperative control.

Hybrid Intelligent Systems
Hybrid dynamical systems control; logic control systems; pattern discovery.

Learning and Adaptive Systems
Adaptive control; machine learning; learning control systems; biologically-inspired learning.

Multi-Sensor Integration and Fusion
Smart sensors; knowledge-based sensor fusion.

Networked Systems and Control
Wireless ad hoc and sensor networks; distributed embedded systems; control of networked dynamic systems.

Reconfigurable Systems
Fault detection, identification, diagnosis, prognosis, and control.

Soft Computing and Heuristics
Artificial intelligence; expert systems; applications of computational intelligence methodologies.

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