

DYNAMIC SYSTEMS AND CONTROL DIVISION (DSCD)

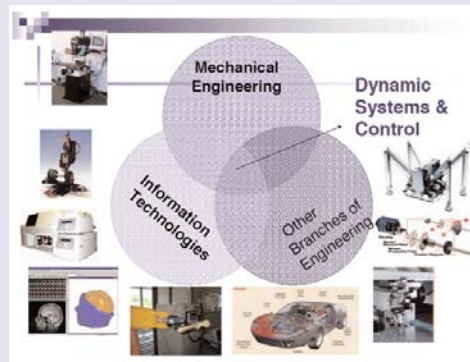
AMERICAN SOCIETY OF MECHANICAL ENGINEERS
Established in 1943

Background

The Dynamic Systems and Control Division (DSCD) is one of 34 technical divisions in the American Society of Mechanical Engineers (ASME). The Division has actively developed and broadened its scope from instruments, regulators, and automatic control, since its establishment in 1943.

The Division (DSCD) encompasses all aspects of the modeling, analysis, design, instrumentation, and control of physical dynamic systems that involve forces, motions, and/or the flow of energy or material.

Mechanical, chemical, biological, and human-related systems, and other multi-domain systems such as electromechanical and Mechatronic systems; particularly automotive and transportation, energy, robotics, manufacturing, processing, environmental, computational, and man-machine systems are covered by our division.



DSCD Objectives

1. To constitute a professional division of ASME International in accordance with the Constitution, Bylaws, and Policies of the Society in the field of Dynamic Systems and Control.
2. To facilitate the development, advancement, practice, and promotion of the art, science, and engineering of Dynamic Systems and Control in accordance with the mission statement contained in Article III of the bylaws.

DSCD Mission Statement

1. To advance the fundamental knowledge and state of the art of dynamic systems and control, and to promote the advanced application of this knowledge.
2. To disseminate knowledge of dynamic systems and control theory and applications. Disseminating knowledge includes, but is not limited to, publishing and distributing of papers, conducting professional meetings where new methods and applications are presented, and conducting of courses and tutorials for the practicing engineer.
3. To provide the structure to support the professional development of the members of the professional community in dynamic systems and control. Providing a support structure includes providing a means for academic members to have their work reviewed and published, providing a means for new methods and applications to be made available to the practicing engineer, and providing a means for new members and students to join and participate in the dynamic systems and control professional community. The professional community includes practicing engineers, researchers, academics, and others who use theory, methods, and technologies of dynamic systems and control.
4. To acknowledge outstanding engineering achievement in the field of dynamic systems and control and to recommend suitable recognition by the Society for such achievement.
5. To foster cooperative exchanges with other groups and societies, both nationally and internationally.

DSCD Technical Panels

Dynamic Systems and Control is a fast growing and pervasive engineering field. There is rarely an engineering endeavor that does not involve the careful control, analysis, and/or synthesis of physical, dynamic systems. Be it fluids, thermodynamics, heat transfer, machine design, or materials engineering, systems and control contributions are essential. The Division has the following technical panels:

- Adaptive and Optimal Control
- Aerospace Systems
- Automotive and Transportation Systems
- Biomechanical Systems
- Computer Communications and Control
- Education
- Fluid Control Systems
- Intelligent Systems
- Manufacturing Systems
- Modeling and Identification
- Nanoscale Control
- Robotics
- Sensors and Instrumentation
- System Theory
- Vibration and Noise Control

After a period of existence and following careful assessment, a technical panel may be converted into a technical committee, which has a broader functionality than a panel.

Division Membership
Approximately 10,000.

Conferences and Technical Meetings

ASME International Mechanical Engineering Congress and R&D Exposition (IMECE)

American Control Conference (ACC)

The DSCD holds business meetings of its Executive Committee each year at these conferences. (IMECE)

Other conferences co-sponsored by DSCD include:

Advanced Vehicle Control (AVEC) international Symposium IEEE/ASME
Advanced Intelligent Mechatronics (AIM) Japan-USA Symposium on Flexible Automation

Publications

ASME Journal of Dynamic Systems, Measurement, and Control
The IEEE/ASME Transactions on Mechatronics

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Strengths of the Division

- Long history of interaction with professional societies in other disciplines through joint conferences and publications
- Strong volunteer participation
- Sound financial basis
- Recognition of outstanding engineering achievement through award programs, including the Oldenburger Medal, the premier ASME Award in Dynamic systems and Control
- Effective outreach programs including a biannual Newsletter
- Multidisciplinary character
- Support and encouragement of new and student members

Planned New Activities

- Collaboration with other societies with similar interests
- Encouragement of industry participation through relevant activities (e.g. a technical panel on Industrial Process Control)
- Distinguished Lecture Program (E.g., Nyquist Lecture at 2005 IMECE)

Personnel

Details are found at: <http://www.asme.org/divisions/dscd/>

At the top of the organizational chart is the Executive Committee, whose membership is given below.

Committees

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Dynamic Systems and Control Division

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Executive Committee 2004 - 2005

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