Design Engineering Division
A Technical Division of ASME

TEC 05 Products and Services

Division Vision and Mission

Vision Statement:

- To be an agile and engaged division of the Society that keeps abreast with rapid changes in knowledge, technology, and global and societal needs in the field of design engineering.

Mission Statement:

- To lead in fostering and promoting the art, science and application of Design Engineering as well as the professional careers of Design Engineers in Education, Research, and Engineering Practice.

Strategic Plan

- Designed to achieve DED's vision while fulfilling its mission by:
  - Ensuring that the division is evolving to respond to future changes and demographics
  - Maintaining leadership technically and technologically
  - Having a business model that would make the division evolve as a technical division as well as an enterprise
  - Maintaining a process of attracting young and diversified groups of members and volunteers

Division Demographics

The division is presently the largest division of ASME with 17,842 primary members in 2005 and ability to maintain approximately over 13,000 primary and 24,000 secondary members over the last several years. The division membership since 1997 is provided below:

Year	Primary	Secondary	Other	Total
1997	13,973	10,932	14,325	39,230
1998	13,763	10,848	14,471	39,082
1999	13,862	10,688	14,953	39,503
2000	13,652	10,392	14,942	38,976
2001	13,652	10,392	14,942	38,976
2002	13,522	9,697	14,417	37,636

Technical Committees

- Design Automation
- Design for Manufacturability
- Design Theory & Methodology
- Design Education
- Fastening & Joining
- Mechanisms and Robotics
- Power Transmission & Gearing
- Reliability, Stress Analysis, and Failure Prevention
- Vehicle Design
- Vibration & Sound
- Multibody Systems and Nonlinear Dynamics

Conferences

- The Division sponsors and organizers the annual International Design Engineering Technical Conferences (IDETC) each autumn which showcases advances in research on design related subjects. This conference usually has an excess of 500 participants and is currently the largest source of income for the Division.
- The Division also participates in the National Manufacturing Week formerly called the National Design Engineering Conference in Chicago, traditionally sponsoring 12 to 20 sessions and employing the conference as its primary source of contact with industrial members.
- The Division also participates in the International Mechanical Engineering Congress and Exhibition (IMECE) each winter – usually filling 22 to 30 sessions.

Publication Activities

Division Publications Include:

- One conference proceedings in the form of a CD ROM for division's annual International Design Engineering Technical Conferences,
- ASME Transactions *Journal of Mechanical Design.*
- ASME Transactions *Journal of Vibrations & Acoustics.*
- ASME Transactions *Journal of Computational & Nonlinear Dynamics.*
- Joint publication of the IEEE/ASME *Transactions on Mechatronics.* This is a cross society journal published jointly with the IEEE. The Dynamics Systems & Controls Division also participates in this journal. This is a multidisciplinary journal cutting across mechanical and electrical engineering.

Products

Present Products:

- Technical Conferences Providing a Forum for the Exchange and/or documentation of Technical Information, enterprise issues, and practices of design engineering
- Technology Conferences, Exhibitions, and Shows aimed at the Practicing Engineers and Industrial Sector
- Workshops and tutorials for focused information and technology transfer
- Archival Journals for dissemination of long lasting knowledge
- Conference Proceeding Publications for rapid dissemination of knowledge
- Honors and Awards recognizing outstanding contributions
- Training of students and engineers

Additional Products Under Consideration for Development:

- Codes and standards for design engineering practices
- Recruitment and retraining tools and workshops for practicing design engineers
- Standards and requirements for design engineering education (Design Education Certification)
- Design Engineering Certification
- National Student Design Competition

Customers

- Members
- Technical Committees
- Design Educators
- Design Professionals and Practicing Engineers
- Students
- Industrial Organizations and staff involved in Design Engineering
- Government Organizations and staff involved in Design Engineering
- Codes and standard organizations and staff dealing with Design Engineering Standards
- Engineers communicating technical issues to the public
- The general public utilizing engineered products and processes
- Historians and sociologists dealing with technology and the society

Strength and Weaknesses

Strength:

- An enterprise model for a technical division with a well maintained revenue stream and a growth plan
- A division structure that attracts exceptionally capable volunteer group
- Well recognized publications with both short term and archival value
- A well established and managed technical conference
- Well established and recognized set of honors and awards

Weaknesses:

- Participation of industrial members in technical activities and conferences need improvements
- Graduate and undergraduate student participation need sustainable resources
- Better coordination is need with other ASME divisions and units
- Methods to ensure organizational agility are needed
- Coordination and networking is lacking with standards, accreditation and registration organizations

Metrics of Performance

- Are important technical work, enterprise work, and innovations come out of our activities?
- Are we covering other relevant important areas?
- Are we properly serving our members: academics, students, government employees, and practicing engineering community?
- Do we reach to interdisciplinary areas by teaming within and outside engineering?
- Do we identify, recognize, and embrace new and evolving areas?
- Do the top people in the field remain involved with the activities of the division?
- Do our journals & conferences publish the most important developments in the field?
- Do our awards recognize the top developments and the leaders in the field?
- Are we developing the needed resources and the enterprise model to support and evolve our activities?