



# Design Engineering Division

Leadership Training Conference (LTC 2006) 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.

**DED Website:** <http://divisions.asme.org/ded/>

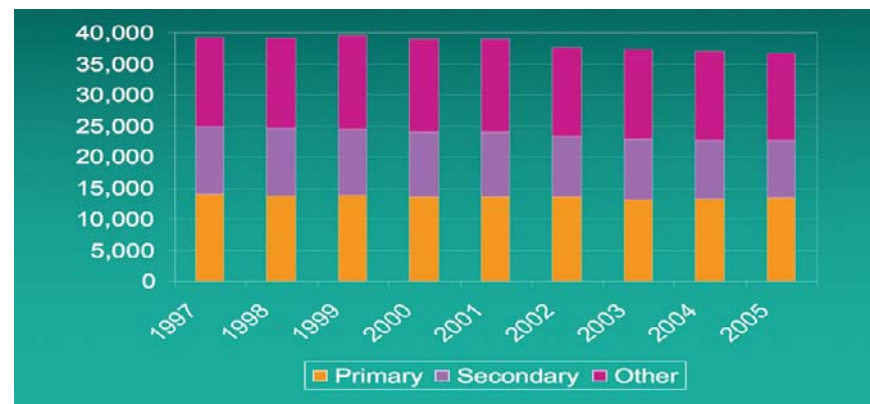
**DED Officers Website:** <http://divisions.asme.org/ded/execCom.html>

## 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

DED is among the largest divisions of ASME. Its membership since 1997 (December data) is provided below:



## Technical Committees

- Design Automation (DAC)
- Design for Manufacturability (DFM)
- Design Theory & Methodology (DTM)
- Design Education (DEDU)
- Fastening & Joining (F&J)
- Mechanisms & Robotics (M&R)
- Power Transmission & Gearing (PTG)
- Reliability, Stress Analysis & Failure Prevention (RSAFP)
- Vehicle Design (VDGN)
- Vibration & Sound (TCVS)
- Micro & Nano Systems (MNS)
- Multibody Systems & Nonlinear Dynamics (MSND)

## Conferences

- The Division sponsors and organizes the annual International Design Engineering Technical Conferences (IDETC) each autumn which showcase advances in research on design related subjects. This umbrella conference has on the average 600-800 participants and is currently the largest source of income for the Division.
- The Division also participates in the National Manufacturing Week conferences in Chicago, formerly called the National Design Engineering Conference, historically sponsoring 8 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 25 to 30 sessions.

## Publication Activities

### Division's Sponsored or Cosponsored Publications Include:

- Conference Proceedings in the form of CD-ROM for division's annual International Design Engineering Technical Conferences (IDETC)
- ASME Journal of Mechanical Design (JMD)
- ASME Journal of Vibrations & Acoustics (JVA)
- ASME Journal of Computational & Nonlinear Dynamics
- ASME JCISE (jointly by CIE-Comp Info Eng & DED-Dgn Eng Div)
- Joint IEEE/ASME Transactions on Mechatronics (ASME sponsors include DED-Dgn Eng Div & DSC-Dyn Sys Ctl Div)

## 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 values
- 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 needs improvements
- Graduate and undergraduate student participation needs sustainable resources
- Better coordination is needed with other ASME divisions and units
- Methods to ensure organizational agility are needed
- Coordination and networking are 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 out 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?