

# The Design Engineering Division

Vijay Kumar

Past Chair, DED Ex. Committee



**Design Engineering Division**

# Why ASME?

- Improve quality of life
- Creativity and problem solving
- Exciting, fun activity with a great community

# What does our Global Membership Look like in 2018? 2023?

- ASME or ISME, DED or IDDED?
- India/China dominated membership
- What if the center of gravity of design were in continent X?
- Chapters in high schools
- What if DED had corporate members?
- What if DED had reciprocal membership agreements?

## What PPP are we driving in 2018? 2023?

- Engineers are undervalued
  - Government needs to understand engineering
  - Public needs to learn about engineering
- Industry aligns with technologies and not with disciplines – what if DED were to promote
- What if undergraduates found real value in DED membership?

# What strategic partnerships have we created and why? By 2018? 2023?

- Today: CIE, industry, medical devices, IFToMM
- Missing: ABET, certification, media, publicity, Canada, industrial design, advanced manufacturing
- What if we had partnerships in the areas of:
  - Education
  - ASME partners (31 other divisions)
  - Industry (certification, advisory board, additive manufacturing)
  - Journals (new DED journals, computational verification of medical devices, additive manufacturing)
  - Societies (IEEE, ACM)
  - Governments (NIST, FDA, South America, Asia ...)
- Institutes

# Are we member focused? Or Profession/Industry focused in 2018, 2023?

- If industry focused
  - Industry would sponsor conferences
  - Conferences would be job fairs for students
  - Focus on industry, entrepreneurship
- If member focused
- 24/7 access to any information
- Why would members come to ASME? What benefits?
- What if non engineers knew about engineering?
- What if majority of the members were US centric? What if India and China dominated ASME?
- What if DED were “certifier” of designs?
- What new platforms for codes/standards? Games, Apps?
- What if IDETC were to be 10 times larger?

# How are our members interacting with each other?

- Now – conferences, journals, short courses, local sections, student chapters
- What if?
  - Vacation together
  - Social media
- asme.org
  - Duplicates facebook
  - What is unique?
- One way interaction with TCs reaching out
  - No one asks TC/DED for anything?
- Facilitate job searching, networking
- Crowd sourcing (reviews, papers)
- Blogging
- Interacting with industry

## How are impacting our members career track?

- Journals
  - Increase number, impact factor, online
- Conferences
- Industry involvement
- Students
  - Jobs
- Life long learning track





# What niche needs have we identified and addressed?

- Address design at the K-12 through mind craft games
- Undergraduate – toolboxes, networking
- Ambassador program in design
- Entrepreneurs
  - IP issues, SBIR
  - Spotlight activities
  - Business plan competition
- Professional
  - Webinars, podcasts
  - Skill Certificate
  - Social events
  - Guest badges at conferences

# How can we encourage a strong, multi-cultural ecosystem?

- IAME instead of ASME
- IDETC in Africa, S. America
- Encourage local regional societies
- Support accreditation activities
- How do we certify mechanical engineering skills in developing countries?
- How can ASME get involved in solving problems in developing countries?
- Star Alliance for mechanical engineering



# What products/services have we added/deleted?

- + IDETC App for conference planning, scheduling
- + National Design Expo
- + Design challenges in emerging areas
- + Additive Design and Manufacturing committee
- + Rotation schedule for IDETC
- + Webcast of conferences
- + Podcast videos for outreach
- + Presentation recording available for purchase along with the paper
- + Job fair
- + Better integration with local industry, local chapters
- Webtool
- Program booklet

# Maximize Governance Structure

- Parallel Institute structure
- Technology Integration Teams/Committees
- DED Management Structure
  - Committee structures
  - Advisory boards
  - Clustering/grouping

# Maximize Use of Staff

- Make staff responsive to needs of conference organizers
- Empower volunteers, staff need to do less

# What additional resources

- More motivated, committed people
- Give people more time
- Contract out services to professionals to execute
- Branding, marketing
- Journal tool improvement

# What new technologies

- Social media
- Mobile apps
- Archived live web casts
- MOOC delivery
- Top 10 cited articles from journals, conferences



# What additional information do you need?

- Industry: how to entice them? Market research?