

ICOMES 2007, Brussels, Belgium  
March 17-18, 2007

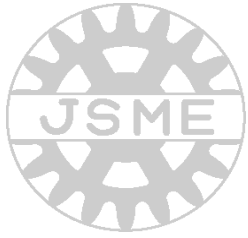


**JSME's Challenge Toward  
Relationship Building**

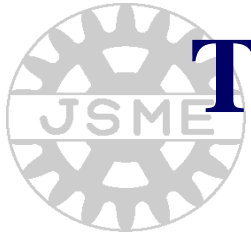
*Nobuhide Kasagi*

President

The Japan Society of Mechanical Engineers



- **Introduction of JSME**
- JSME's Strategic Issues
- Relationship Building
- Machine Day and Machine Week
- Toward a Professional Society in the 21<sup>st</sup> Century

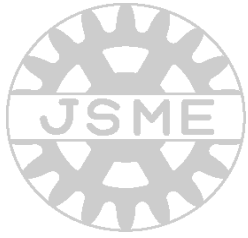


# The Japan Society of Mechanical Engineers

- 日本機械學會 founded in 1897
- 110<sup>th</sup> anniversary in 2007
- 39,940 members as of December, 2006
  - 825 corporate members
  - 159 honorary and 902 fellow members
- 8 Regional Branches, 3 International Chapters
- Centers and Institute
  - Code & Standard, Publishing, Industry-Academia Collaboration, Capacity Development
- 20 Technical Divisions, 2 Interdisciplinary Task Forces
- 3 Trans. JSME (Jap), 3 Intl. J. (Eng), 8 Int. Web J. (Eng)
- Annual Revenue in FY 2005: ¥1.4 billion



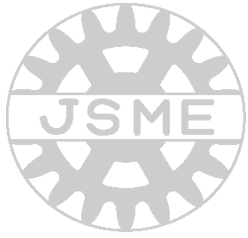
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# The Role of JSME

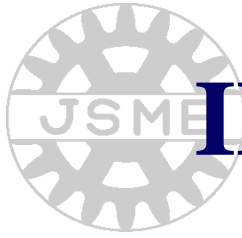
**Inaugural Address of the 84th JSME President, April 2006**

- The goal of engineering and technology in the new century is to secure sustainability under environmental constraints, guarantee good health and improved comfort in the lives of people with diverse values, and establish a safe and peaceful global society.
- JSME perceives its important role and moves proactively in the coming new era.
- **Three strategic initiatives**



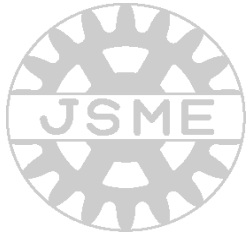
# I. Competitiveness of JSME

- **Future directions of mechanical engineering**
  - Visions for future mechanical engineering released by 20 Technical Divisions
  - Inter- and transdisciplinary activities in the frontiers
- **JSME members encouraged to make a challenge toward technological innovation**
  - Regional Branches and Technical Divisions promote various JSME members' activities
  - Collaboration between Branches and Divisions, and also with the government, industries, and academia
- **New English web journals, textbooks, manuals and standards**
- **Publishing and marketing**
  - JSME Publishing Center
- **IT to enhance the multi-functions of JSME Headquarters**



## **II. Human Resource Development**

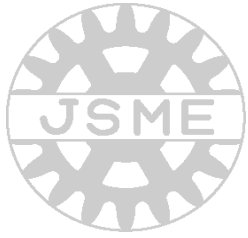
- **JSME's role as a catalyst between the government, industries and academia**
- **Institute for Promotion of Capacity Development**
  - Japan heavily relies on human resources and its culture
  - “Issue of quantity,” decrease in the number of engineers
  - “Issue of quality;” education tailored to meet the needs of the new century
- **Integrity of conduct of engineers**
  - Recent corruption and social problems related to science and technology
  - Responsible professional engineers with good moral values
  - Revision of JSME ethics codes



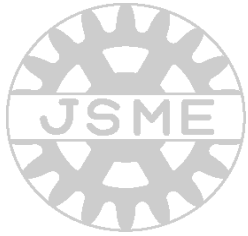
# III. Presence of JSME

## As a Professional Society of Mechanical Engineers

- **JSME should enhance the pride and status of engineers by earning the trust and confidence of the society**
  - Identifying social problems such as the environment, energy, safety, and biomedical research, and offering technological solutions
  - Grand message at Annual JSME Congress, “Toward an Affluent and Sustainable Society”
- **Dissemination of R&D achievements and proposals of JSME**
  - Current focus is laid on Energy & Environment, Biomedical Engineering and Human Recourse Development
- **Commemoration day for machines and mechanical systems**
  - A chance to reconsider the relationship between technologies and the society, the role of engineers, and other issues
  - Collaboration with government agencies, industries, and engineering societies

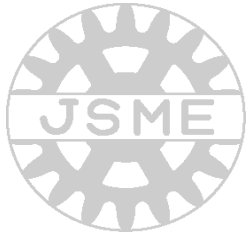


- Introduction of JSME
- JSME's Strategic Issues
- **Relationship Building**
- Machine Day and Machine Week
- Toward a Professional Society in the 21<sup>st</sup> Century



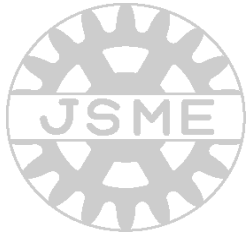
# Why Relationship Building?

- **A single discipline** can no longer meet needs of the society and offer solutions to difficult problems.
  - New and innovative ideas of mechanical engineers can only be materialized by working with various disciplines including social sciences and humanities.
  - Mechanical engineering should play ever more important roles in interdisciplinary areas as catalyst, promoter, and synthesizer.
- Mechanical engineers should actively take place in the **decision making processes** of societal issues including the national policy for science and technology.
- JSME should raise the status of engineers in the eyes of the public, and attract **next generation** for the future society.
- **Forming “Open Alliance”**
  - Government organizations, academic institutes, research laboratories, industries, ...

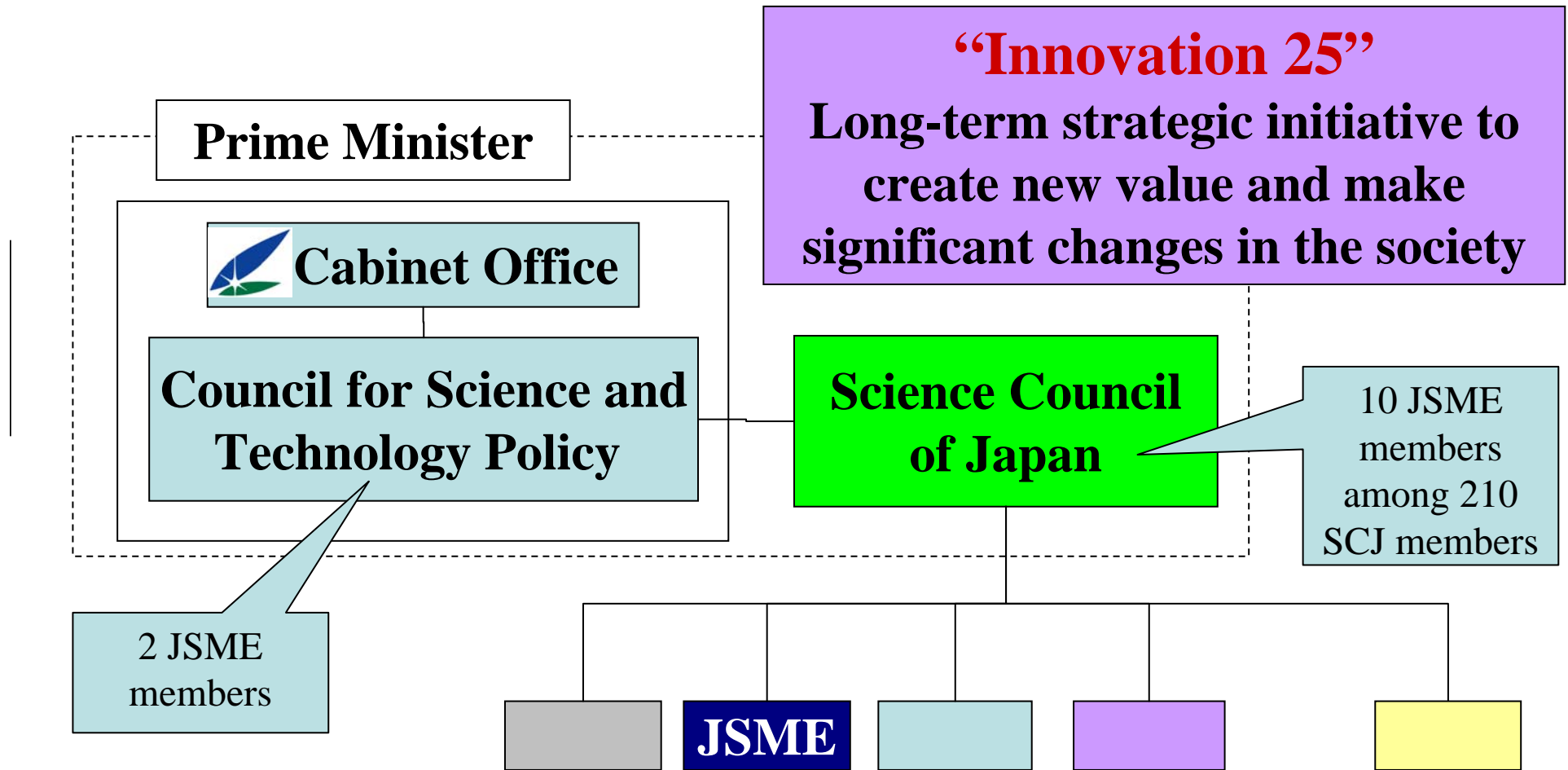


# Collaborating Domestic Organizations

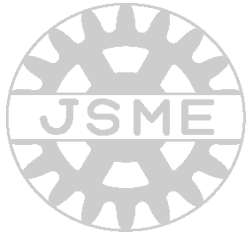
- Ministry of Education, Culture, Sports, Science and Technology (MEXT)
- Ministry of Economy, Trade and Industry (METI)
- Ministry of Land, Infrastructure and Transport (MLIT)
- Science Council of Japan
- Supreme Court of Japan
- Japan Society for Promotion of Science (JSPS)
- New Energy and Industrial Technology Development Organization (NEDO)
- Japan Science and Technology Agency (JST)
- National Institute of Informatics (NII)
- National Institution for Academic Degrees and University Evaluation
- Japanese Standards Association (SAJ)
  
- The Japan Machinery Federation (JFM)
- The Japan Federation of Engineering Societies (JFES)
- The Engineering Academy of Japan
- Institute of Electrical Engineers of Japan (IEEJ), and other societies and industrial organizations related to mechanical engineering



# Government Ministries and Agencies

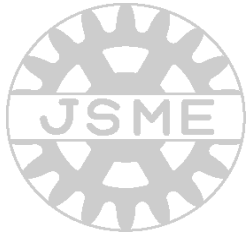


( ~800 registered academic and technical societies and institutes)



# Collaboration with ME Related Societies

- **President forum** of mechanical engineering related societies
  - 26 societies as of Oct. 2006
  - Standardization and sharing of CPD (Continuing Professional Development) points
- **Council for Ethics of Engineers**
  - 12 engineering societies as of Oct. 2006
- **Inter-society collaboration in the transdisciplinary fields**
  - Micro and nano technology, biotechnology, energy, robotics, safety, security, laws, etc.



# **Industrial and Business Sectors**

- Nippon Keidanren (Japan Federation of Economic Organizations)
- The Japan Machinery Federation
- Japan Machine Tool Builders' Association
- Japan Automobile Manufacturers Association
- ~800 JSME Corporate Members

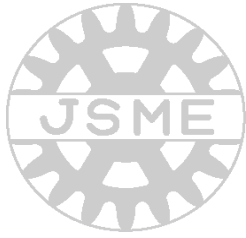


# Industrial and Business Sectors

- Nippon Keidanren (Japan Federation of Economic Organizations)

## Shared Recognition of Engineering Education (EE) in Global Era

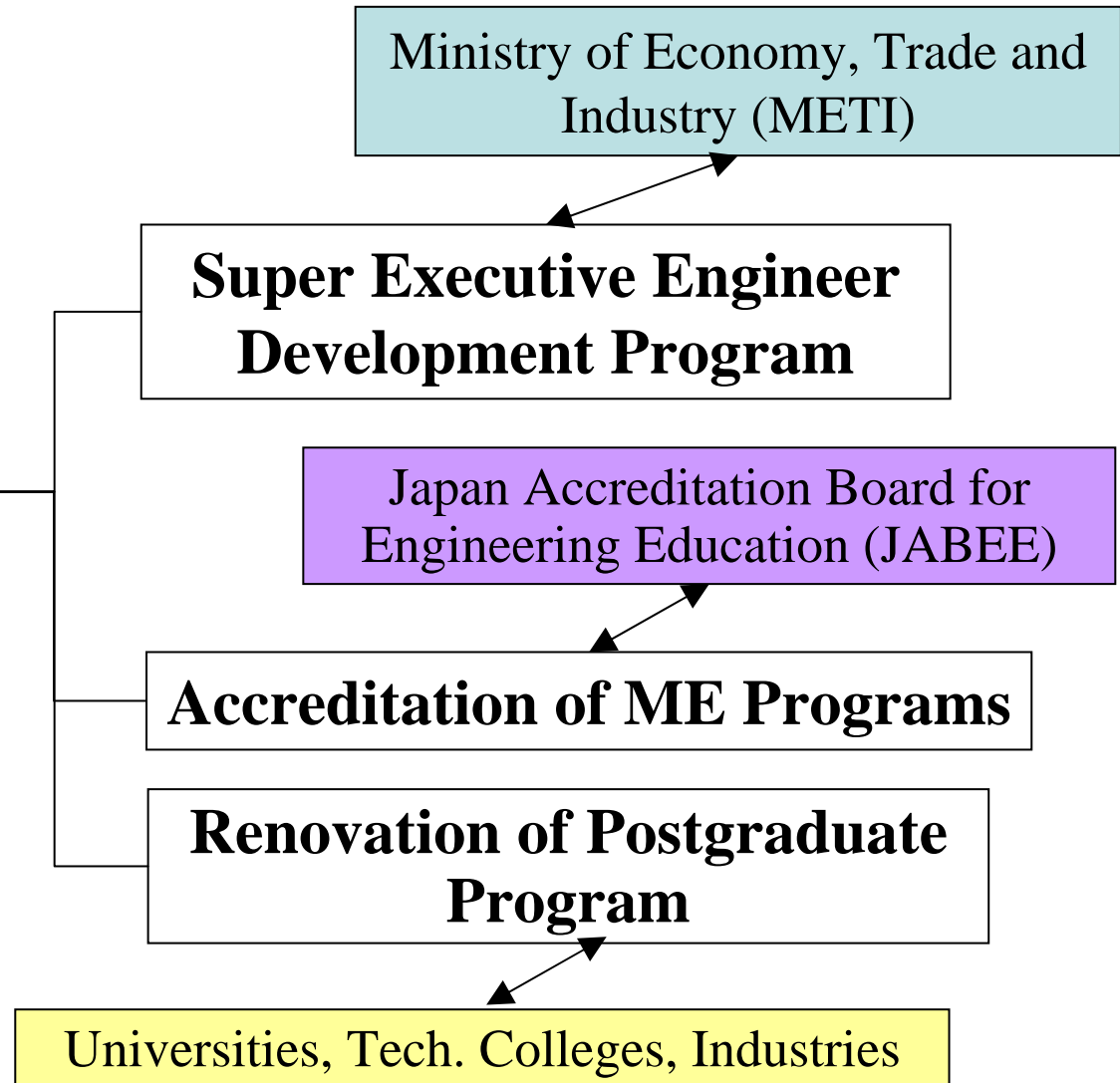
- EE in the 21st century developed in a framework shaped by not only educational and professional matters, but also economic, environmental and societal issues
  - Needs for interdisciplinary and transdisciplinary education of engineers
  - Shared roles of industries and universities in EE
- ~800 JSME Corporate Members



# Human Resource Development

**JSME Institute for  
Promotion of  
Capacity  
Development**

**(Established in April 2006)**

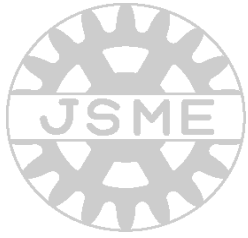




# International Partners

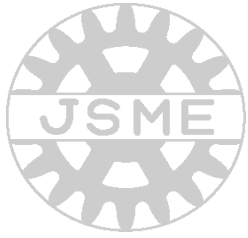
<b>ABCM</b>	Brazilian Society of Mechanical Sciences
<b>ASME</b>	The American Society of Mechanical Engineers
<b>BSMEE</b>	Belgian Society of Mechanical and Environmental Engineering
<b>CMES</b>	Chinese Mechanical Engineering Society
<b>CSM</b>	Czech Society for Mechanics
<b>EIT</b>	The Engineering Institute of Thailand
<b>ESME</b>	The Egyptian Society of Mechanical Engineers
<b>IEAust</b>	The Institution of Engineers, Australia
<b>IEEE</b>	Robotics & Automation Society
<b>IES</b>	The Institution of Engineers, Singapore
<b>IMechE</b>	The Institution of Mechanical Engineers
<b>KONES</b>	European Science Society of Powertrain and Transport KONES Poland
<b>KSME</b>	The Korean Society of Mechanical Engineers
<b>PII</b>	The Institution of Engineers, Indonesia
<b>PSME</b>	Philippine Society of Mechanical Engineers
<b>SEM</b>	Society for Experimental Mechanics
<b>TMMOB</b>	Turkish Chamber of Mechanical Engineers
<b>VDI</b>	Verein Deutscher Ingenieure

**ICOMES** : International Congress of Mechanical Engineering Societies

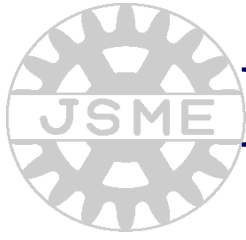


# International Partnerships

- Joint International Conferences with ASME, CMES, KSME and other societies
- Codes and standards in collaboration with ASME
  - JSME Codes for Power Generation Facilities
  - JSME Standards
- e-mail Newsletter with CMES and KSME



- Introduction of JSME
- JSME's Strategic Issues
- Relationship Building
- **Anniversary and Commemoration Day**
- Toward a Professional Society in the 21<sup>st</sup> Century



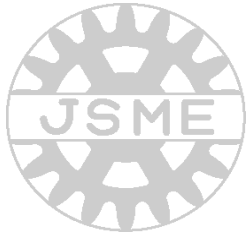
# Relationship with the Society

## 110th Anniversary of JSME

- Certification of technological heritage
- Rewarding outstanding mechanical engineering achievements
- JSME technical road map (with MITI)

## National Commemoration Day

- Raise social awareness of the role of mechanical engineering in improving and enriching human life
- Develop better relationship between the society and mechanical engineers
- Encourage young people and women to participate in mechanical engineering activities
- Promote international technological and academic exchanges



機械の日

8月7日は「機械の日」。

日本機械学会は、「機械」の意義や役割を広く社会とともに考え、人間と機械のふさわしい関係を模索するため、七夕の中暦にあたる8月7日を「機械の日」、8月1日～7日を「機械週間」(メカウィーク)として制定します。

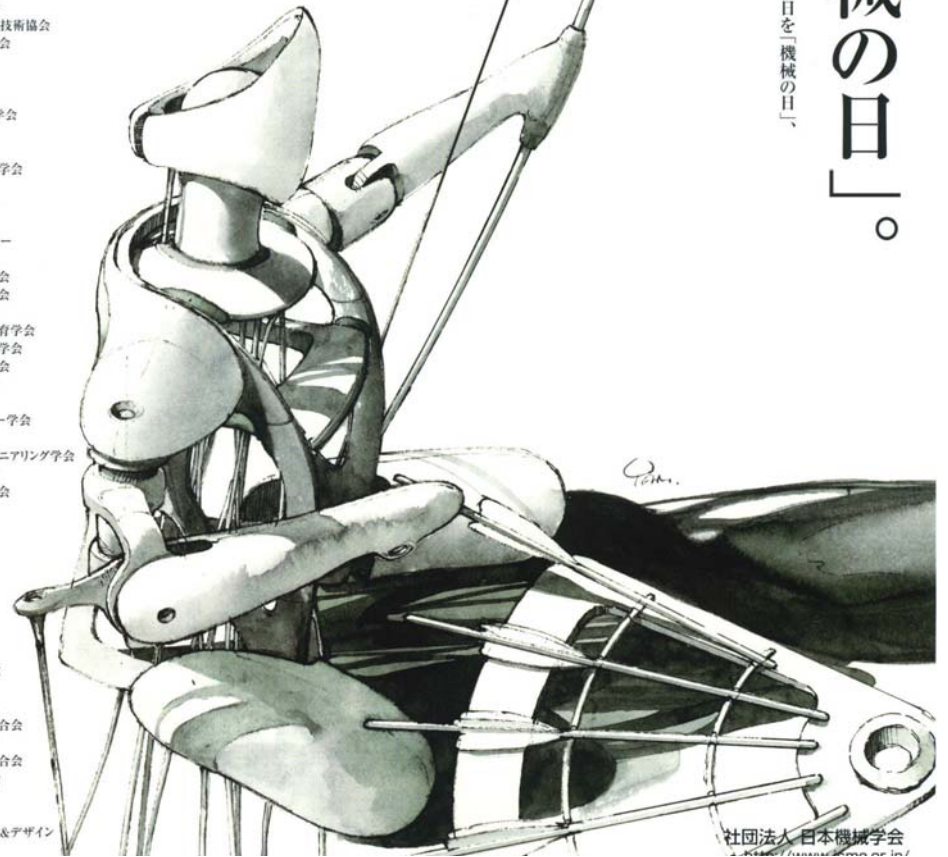
“Machine Day”  
Aug. 7  
and  
“Machine Week”  
Aug. 1-7

制定記念式典  
主催 日本機械学会  
日時 2006年8月7日(月)15:00-19:30  
場所 東京大学本郷キャンパス工学部2号館  
記念講演  
1.「日本の機械の歴史」鈴木一義(国立科学博物館主任研究員)  
2.「思想としての機械工学」吉川弘之(産業技術総合研究所理事長)

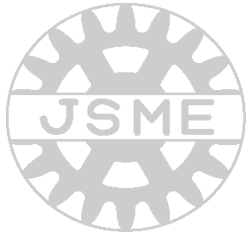
協賛(予定)  
可視化情報学会  
火力原子力発電技術協会  
計測自動制御学会  
自動車技術会  
精密工学会  
ターボ機械協会  
日本エネルギー学会  
日本音響学会  
日本学術会議  
日本ガスタービン学会  
日本技術士会  
日本計算工学会  
日本原子力学会  
日本工学アカデミー  
日本工学会  
日本工学会教育協会  
日本航空宇宙学会  
日本材料学会  
日本産業技術教育学会  
日本船舶海洋工学会  
日本塑性加工学会  
日本鋳造工学会  
日本伝熱学会  
日本トライボロジー学会  
日本燃焼学会  
日本マリンエンジニアリング学会  
日本流体力学学会  
日本冷凍空調学会  
日本ロボット学会  
発明協会  
溶接学会

後援(予定)  
文部科学省  
経済産業省  
国土交通省  
国立科学博物館  
科学技術館  
日本科学未来館  
日本経済団体連合会  
日本商工会議所  
日本機械工業連合会  
電気事業連合会  
(順不同)

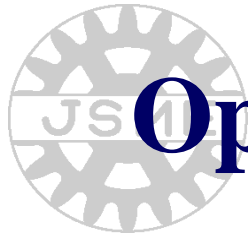
イラストレーション&デザイン  
山中俊治



社団法人 日本機械学会  
JSAE (The Japanese Society of Mechanical Engineers)



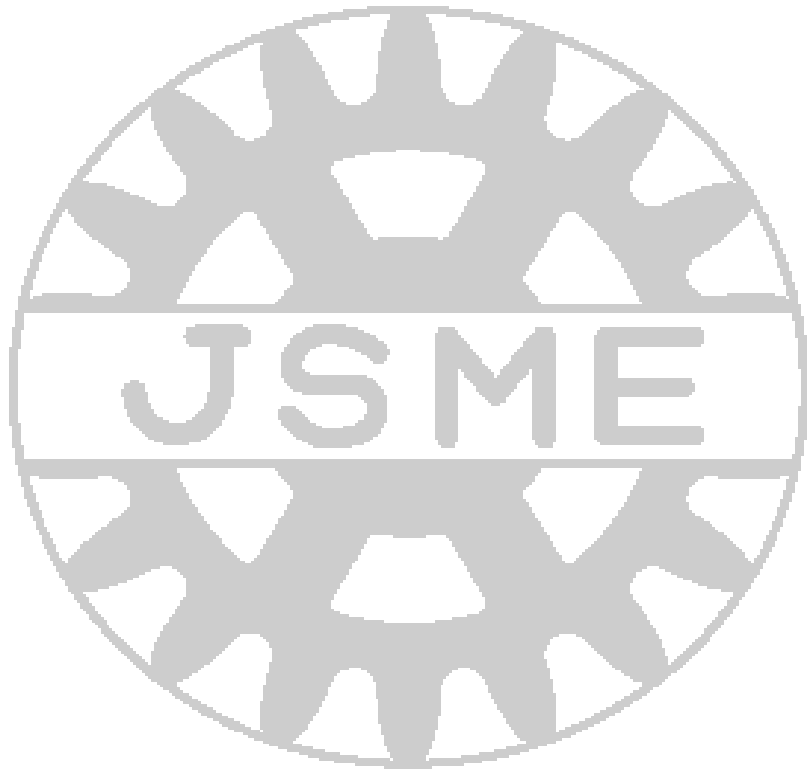
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# Open Alliance and Open Innovation

To achieve the goals stated so far,

- **Cultivate an open culture** without building any barriers in any aspect of activities, and establish alliance with other bodies within and without JSME,
- **Pioneer scientific fields and develop new technologies** that realize human dreams and lead to a better society,
- **Foster human resources** with noble ambitions by developing schemes, in which every JSME member can make new experiences, create new knowledge, and achieve self-development through various encounters with many fellow engineers of diverse values.



*Thank you very much for  
your attention*

**The Japan Society of Mechanical Engineers**

**<http://www.jsme.or.jp/>**