

# ITIT Symposium

## on Development of Manufacturing Technology Infrastructure

Jan. 31,2001-Feb.2, 2001  
at Toranomon Pastoral  
(Minatoku, Tokyo, Japan)

### Organized by



Mechanical Engineering Laboratory,  
AIST

International Affairs Office,  
Industrial Science and Technology Policy Division,  
Industrial Science and Technology Policy and Environment Bureau,  
Ministry of Economy, Trade and Industry



New Energy and  
Industrial Technology  
Development Organization

### Admission free

### Scope:

The topic at this symposium is the acquisition, use and accumulation of manufacturing engineering information. We would like to discuss with the international community of national research laboratories in Asia, as the relationship is a strong stream of manufacturing globalization in connection with the rapid popularization of the Internet. In this symposium, the ITIT (Institute for Transfer of Industrial Technology) research projects in the field of manufacturing technology conducted by MEL are reviewed, and the present status of the use of manufacturing information technology in the participating countries, systematic technique how to model skill and/or know-how, manufacturing knowledge base, the role of the national research centers and the possibility of future research collaboration are discussed.

### Conference Site:

KIKU hall (5<sup>th</sup> Floor), Toranomo Pastoral,  
4-1-1 Totanomom, Minato-ku, Tokyo, JAPAN  
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### Language:

The official language for presentations and the proceedings is English.

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### Message

**Director-General of MEL  
Dr. Naotake Ooyama**

The Mechanical Engineering Laboratory has promoted fundamental and forefront research to contribute development of Industrial Technology of Japan since its establishment in 1937. As far as ITIT research projects are concerned, MEL has conducted various collaborative researches with Asian and Latin American countries in the field of machine production technology from 1977. MEL will step out her new start under the AIST (National Institute of Advanced Industrial Science and Technique) as an Independent Administrative Institution (IAI) from April 2001 together with other research institutes under the Ministry of Economy, Trade and Industry (METI, former MITI) along with the ministerial reform. Therefore, it should be a good opportunity to review our past activities and foresee our future.

Today, at the beginning of the 21st century, each country has been conducting research and development with global view based on their own fundamental technology. How the tomorrow's process and assemble industry will be? How the manufacturing information processing technology of tomorrow will be? What will the role of public research institute tomorrow? In this Symposium we can hear from invited speakers of Asian countries the current activities for manufacturing technology information of their country. We also have reports on activities of MEL and Prefectural and Municipal Research Institute as well as future action program of AIST from Japanese side.

Furthermore, by referring technology to systematize know-how, this symposium will offer opportunity to discuss how these technologies should be developed and installed. I hope that this symposium can show direction to guide us how public research institutes will contribute and how information base as manufacturing knowledge base will be developed.

## Tentative Program

### 31<sup>st</sup> January 2001 (Wednesday)

9:45-10:00 Opening Address

Dr. Naotake Ooyama (Director-General, MEL Japan)

10:00-11:45 Session 1 Situation in Japan

1-1 Present status and Future vision of Research on Manufacturing Technology Information Infrastructure in Japan, Dr. Toshio Kojima (MEL)

1-2 Future approach of R&D to Establish Manufacturing Technology Information Infrastructure in Japan, Mr. Norio Matsuki (MEL)

1-3 Regional Cooperative R&D project to Establish Manufacturing Technology Information Infrastructure, Mr. Toshiaki Otani (Chugoku National Industrial Research Institute)

13:10-14:20 Session 2 ITIT project at MEL

2-1 Achievement of ITIT project, Dr. Kazuo Mori (MEL)

2-2 ITIT project with Korea, Mr. Satoshi Ito (MEL)

14:30-16:50 Session 3 Present status and Future vision in Asian Countries

3-1 "Status of manufacturing technologies in Indian industries and R&D & potential for international and collaboration", Dr. C.G. Krishnadas Nair (Chairman, Hindustan Aeronautics Ltd, India)

3-2 Topics in Thailand, Dr. Pongsak Dulyapraphant (Manufacturing and Design Technology Center, National Metal and Materials Technology Center, Thailand)

3-3 Topics in China, Dr. Zhan Junfeng (China National Institute of Standardization, China )

3-4 "Manufacturing Knowledge Base Infrastructure for Malaysian Industry", Dr. Wan Abdul Rahman Wan Harun (National CAD/CAM Centre, SIRIM Berhad, Malaysia)

17:00- Reception

### 1<sup>st</sup> February 2001 (Thursday)

9:30-12:20 Session 4 R&D to Establish Manufacturing Technology Information Infrastructure

4-1 "Present Status of Government-Funded Research System and Programs in Korea", Dr. Lee Husang (Korea Institute of Machinery and Materials, Korea)

Research topics in Korea, Dr. Seung Woo Lee (KIMM, Korea)

4-2 "Manufacturing Technology R&D in Singapore", Prof. M. K. Lim (Nanyang Technological University, Singapore)

4-3 Research topics in Mexico, Dr. Alfred Ramos Aparicio (Advanced Technology Center, Mexico)

4-4 "Technology transfer from Japanese head office to Asian subsidiaries", Mr. Hideo Hirahara (CEO, Cell-Infortech Inc., Japan)

13:30-14:40 Session.5 Research topics in Japan:

5-1 Techno-Knowledge Network, Dr. Shingo Hirose (Small and Medium Enterprise Agency, Ministry of Economy, Trade and Industry)

5-2 Manufacturing Technology Data Base, Ms. Shigeko Ootani (MEL)

14:50-15:50 Round Table Discussion

15:50- Closing Address

2<sup>nd</sup> February 2001 (Friday) Factory/laboratory Tour

## Abstract

### Present status and Future vision of Research on Manufacturing Technology Information Infrastructure in Japan by Dr. Kojima

Acquisition, use and accumulation of manufacturing engineering information are expected as a technological Infrastructure for development of Manufacturing Industry in Asia countries. I summarize how we plan to establish the manufacturing technology information infrastructure in Japan while a manufacturing globalization is progressing in connection with the rapid popularization of the Internet.

In Japan, government takes measures such as research fund to the University and National Institutes, and subsidiaries for R&D in private companies. And technological support through local government research laboratory is characteristic of measures for the small and medium enterprise. AIST(Agency of Industrial Science and Technology) will be reorganized as an Independent Administrative Institutions (IAIs) new AIST(National Institute of Advanced Industrial Science and Technology), and we make close cooperation with local government research laboratory and industrial sector and start new 7 years research program to digitizing the technology and the know-how.

Advanced Machining Information Technology Research Center will be formed in new AIST as a main organization for this aim from April 2001. We start the project concentrating to the area of cutting, grinding and forging technology, then plan to expand to various manufacturing engineering fields.

The result of MEL research project, outline of new AIST project and international research cooperation scheme will be described.