

## Press Release

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July 20, 2006

### MTTRF Annual Convention and Awards Ceremony

On the 6<sup>th</sup> and 7<sup>th</sup> of July 2006, the MTTRF (Machine Tool Technologies Research Foundation) Annual Convention and Awards Ceremony were held at the InterContinental MARK HOPKINS, San Francisco, California, USA.

The MTTRF was established in October 2002 to promote research activities throughout the world by providing aid to people engaged in research and development of innovative technology regarding machine tool systems at universities and public research organizations. It is a non-profit organization approved by the United States government. The chairman is Prof. Kazuo Yamazaki of University of California, Davis, and our company's President, Dr. Masahiko Mori, and Managing Director, Dr. Makoto Fujishima, are executive board members.

Approximately 80 researchers gathered for the meeting, and a variety of lectures were given by machine tool researchers from all over the world during the 2 days, including one by our president, Dr. Mori, under the theme of "Challenges and Needs of Mori Seiki, The Machine Tool Company."

After the meeting, in order to promote friendly relations, a dinner cruise was held on San Francisco Bay for 3 hours.

Next year's Annual Convention and Awards Ceremony are scheduled to be held at Mori Seiki's Seminar House in Tateshina, Nagano on July 11 and 12, 2007.

**【This Year's Awards】**

Service Award	Professor Marvin DeVries	University of Wisconsin, USA
Equipment Loan Award	Professor Yusuf Altintas	University of British Columbia, Canada (Leased Machines: Horizontal Machining Center)
Equipment Loan Award	Professor Fujishiro Aoyama	Keio University, Japan (Leased Machines: Vertical Machining Center)
Equipment Loan Award	Professor David Dornfeld	University of California, Berkeley, USA (Leased Machines: Vertical Machining Center)
Equipment Loan Award	Professor Atsushi Matsubara	Kyoto University, Japan (Leased Machines: Vertical Machining Center)
Equipment Loan Award	Professor Toshimichi Moriwaki	Kobe University, Japan (Leased Machines: 5-axis Machining Center)
Equipment Loan Award	Professor Mustafizur Rahman	National University of Singapore, Singapore (Leased Machines: Vertical Machining Center)
Equipment Loan Award	Professor Yoshimi Takeuchi	Osaka University, Japan (Leased Machines: 5-axis Machining Center)
Equipment Loan Award	Professor Takashi Ueda	Kanazawa University, Japan ( Leased Machines: Vertical Machining Center)
Equipment Loan Award	Professor Joao Oliveira	University de Sao Paulo, Brazil (Leased Machines: Vertical Machining Center)

【Photo】



【Lectures】

Influences of Downsized Design for Machine Tools on the Environmental Impact

Keio University Professor Aoyama

Micro Machining of Glass with Micro End Mill

Keio University Professor Kakinuma

Influence of MQL on Cutting Tool in Temperature

Kanazawa University Professor Ueda

Micro Machining and Burr Formation for Precision Components

California University, Berkeley Professor Dornfeld

On the Estimation of Cutting Forces and Their Control in End Milling Processes

Kyoto University Professor Ibaragi

Effects of Coolant Supply Strategies and Cutting Conditions on Tool Life in End Milling Titanium Alloy

Singapore University Professor Rahman

Influence of Tool Engagement and Size Effect on Tool Wear in Micro Machining

Singapore University Professor Rahman

Virtual Simulation and Optimization of Milling Processes

Vancouver University Professor Altintas

Tool Altitude Determination of 5-Axis Control Machining on the Basis of Area Division Method

Osaka University Professor Takeuchi

A Study on Circular Vibration Ball End Milling for Dies and Molds

Kobe University Professor Moriwaki

Nucleus for Advanced Manufacturing

University of Sao Paulo Professor Oliveira

## OMNI-CNC/ MTTRF ANNUAL MEETING 2006 PROGRAM

July 6, 2006 (Thursday)

- 8:00 - 9:00 Registration**
- 9:00 - 9:20 Welcome speech** Prof. Yamazaki, K.  
CEO and President of MTTRF
- 9:20 - 10:20 Technical Presentations on OMNI-CNC Project**
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|---------------|---|-------------|
| 09:20 - 09:40 | A System Design Study of the OMNI-CNC High Performance Core                     | Dr. Liu, Y. |
| 09:40 - 10:00 | A Study on Universal OMNI-CNC NC Program Processor                              | Dr. Guo, X. |
| 10:00 - 10:20 | Study on Performance Enhancement of OMNI-CNC Motion Controller by means of FPGA | Dr. Li, W.  |
- 10:20 - 10:50 Coffee Break**
- 10:50 - 12:10 Technical Presentations**
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|---------------|---|------------------------------|
| 10:50 - 11:20 | Design of OMNI-Vision System  | Dr. Tian, X.<br>Mr. Deng, H. |
| 11:20 - 11:40 | Study on High Productive Surface Finishing By Electron Beam Irradiation with Vibration Assistance | Dr. Wang, Z.                 |
| 11:40 - 12:00 | A Fundamental Study on EDM Machinability of Difficult-to-Machine Materials                        | Mr. Fonda, P.                |
| 12:00 - 12:10 | Development of 5-Axis Linear Motor Driven Super-Precision Machine                                 | Mr. Soshi, M.                |
- 12:10 - 12:20 Concluding Address** Prof. Yamazaki, K.
- 12:20 - 14:00 Lunch**
- 14:00 - 14:10 MTTRF Opening Address and Annual Activity Report** Prof. Yamazaki, K.
- 14:10 - 15:10 Foundation Lectures**
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|---------------|--|--|
| 14:10 - 14:40 | Challenges and Needs of Mori Seiki, The Machine Tool Company                                   | Dr. Mori, M., President of Mori Seiki, Co., Ltd. |
| 14:40 - 15:10 | Research and Engineering Activities and Future Needs in Machine Tool Technologies - DTL View - | Mr. Hansel, A.                                   |
- 15:10 - 15:40 Coffee break**
- 15:40 - 17:10 Lectures by guests**
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|---------------|--|------------------|
| 15:40 - 16:10 | Influences of Downsized Design for Machine Tools on the Environmental Impact | Prof. Aoyoma, T. |
| 16:10 - 16:40 | Micro Machining of glass with Micro End Mill                                 | Dr. Kakinuma, Y. |
| 16:40 - 17:10 | Influence of MQL on Cutting Tool in Temperature                              | Prof. Ueda, T.   |

18:00 - 21:00 Banquet

**July 7, 2006 (Friday)**

08:00 - 09:00 Registration

09:00 - 09:30 Service Award Reception ( Presentation by Prof. DeVries )

09:30 – 10:30 Lectures by guests

09:30 - 10:00 Micromachining and Burr Formation for Precision Components Prof. Dornfeld, D.

10:00 - 10:30 On the Estimation of Cutting Forces and Their Control in End Milling Processes Dr. Ibaraki, S.

10:30 - 11:00 Coffee Break

11:00 – 12:00 Lectures by guests

11:00 - 11:30 Effects of Coolant Supply Strategies and Cutting Conditions on Tool Life in End Milling Titanium Alloy Prof. Rahman, M.

11:30 - 12:00 Influence of Tool Engagement and Size Effect on Tool Wear in Micro Milling Prof. Rahman, M.

12:00 - 13:30 Lunch

13:30 - 14:30 Lectures by guests

13:30 - 14:00 Virtual Simulation and Optimization of Milling Processes Prof. Altintas, Y.

14:00 - 14:30 Tool Attitude Determination of 5-axis Control Machining on the Basis of Area Division Method Prof. Takeuchi, Y.

14:30 - 15:00 Coffee Break

15:00 - 16:00 Lectures by guests

15:00 - 15:30 A Study on Circular Vibration Ball End Milling for Dies and Molds Prof. Moriwaki, T.

15:30 - 16:00 Nucleus for Advanced Manufacturing Prof. Oliveira, J.

16:00 - 16:20 Concluding Address

Dr. Masahiko Mori, Director of MTTRF  
Prof. Kazuo Yamazaki, President of MTTRF

16:20 – 16:30 Taking Photographs

18:45 - 22:00 Sunset cruise