Studying in Japan?

Join DeMaMech Exchange Program!

Come to the Information Day
on Friday 15 April 2005 at 15:45–16:45
at PTO Bibliotheek (8D-3-13)

www.ocp.tudelft.nl/wbmt/fac/Mechatronics/Japan
E-mail: t.tomiyama@wbmt.tudelft.nl
or h.h.langen@wbmt.tudelft.nl

HOKKAIDO UNIVERSITY 北海道大学

東京大学 THE UNIVERSITY OF TOKYO

KEIO UNIVERSITY · CALAMVS GLADIO FORTIOR · 1858

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TU berlin

KU LEUVEN

DTU

DeMaMech

- **Design and Manufacturing in Mechatronics**
  - EU-Japan Pilot Cooperation in Higher Education
    - Funded Jointly by EU and Japan
    - 2 Pilot Programs
    - 2004–2006
    - To Exchange 36 Students Each Way Twice
- **Participating Universities**
  - EU
    - TU Delft, TU Berlin, KU Leuven, DTU
  - Japan
    - Tokyo, Osaka, Hokkaido, Keio

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Who Can Participate in DeMaMech?

- **MSc Wb Students in Design, Manufacturing, or Mechatronics**
  - To Follow Courses
  - To Conduct Research Work
- **Either**
  - 5 Months (1 Semester), or
  - 10 Months (2 Semesters)
    - Note Japanese Schools Starts in April and October
- **How Many Will be Selected?**
  - 5 to 10 from Delft, Depending on the Length of Stay, Applicants from Other Universities

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Conditions

- **Finance**
  - €700/Month for Living Costs (Fixed Amount)
  - €1,000 for Airfare (Maximum)
- **Including a Two-Week Workshop in Berlin in Early September 2005 Before Going to Japan**
  - €750 for Travel and Living
  - Compulsory
  - Learning Japanese Culture, History, Language, etc.
- **If You are Still at TU Delft in July 2005, Participation in the Final Workshop**
- **Accommodation is Arranged by the Host University**
  - ¥10,000 to ¥20,000/Month (€1=¥135)

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Schedule (1)

- **Consult Your Supervisor/Mentor to Select the Topics and Period**
- **Meanwhile, Search a Suitable Research Topic through the Web Page**
  - http://www.ocp.tudelft.nl/wbmt/fac/Mechatronics/Japan
  - Or Go to Google, Look for "Delft DeMaMech Japan"
- **You Can Contact the Japanese Professors by Saying**
  - "I am Now Considering"
  - "When I am Selected, Can I Come to Your Lab to Do …?"
  - "To Help Me to Decide, Could You Please Give Me Some More Information…?"

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Schedule (2)

- **Selection: By 15 May 2005**
  - Interview: Notified Later for Date and Place
- **Notification of Acceptance: By the End of May 2005**
  - Immediately Start Contacting the Japanese University
    - Finalize the Research Topics
    - Research Plan
      - Approval from Both Japanese and Delft Professors
    - Visa Application Procedures
    - Accommodation Procedures

TU Delft

Schedule (3)

- **Finalize Your Plan Including Tickets Before the End of July**
  - Apply for Payment of Travel to Japan and Living Costs
  - Apply for the Workshop in Berlin
- **Workshop in Berlin**
  - Dates will be Announced Later but Last Week of August to Early September
- **Should Leave for Japan**
  - In the Mid September 2005 (5 Months/10 Months)
  - In March 2006 (5 Months)

TU Delft

Web Page (www.ocp.tudelft.nl/wbmt/fac/Mechatronics/Japan)

Japan Exchange Program

http://www.ocp.tudelft.nl/wbmt/fac/Mechatronics/Japan/Index.html

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DEMAMECH

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EU and Japan Pilot Cooperation in Higher Education Program DeMaMech (Design and Manufacture in Mechatronics)

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General information

Design and manufacturing are without doubt critical for advanced industrial societies.

With production itself moving away from many EU countries and Japan, talents of bringing innovations in design and manufacture are highly demanded.

Responding to these new developments, a pilot student exchange program, called DeMaMech (Design and Manufacture in Mechatronics), in the strategically important areas of design engineering, manufacturing engineering and mechatronics started in 2004 (to end in 2006) participated by four EU universities (TU Delft, TU Berlin, KU Leuven and DTU) and four Japanese Universities (Tokyo, Osaka, Hokkaido, and Keio).

Japan is known for design and manufacture of high quality and low cost mechatronic products. A period of study in Japan not only gives you the possibility to improve your engineering knowledge, but also gives you the possibility to have a very valuable experience of staying abroad. On the other hand, EU countries are known for their design of high quality products, cutting edge technologies in mechatronics, and environmental conscious design and manufacture.

When and for whom?

This exchange program are meant for Master's course students who will participate in lectures and/or research work to finish their studies, for either a five-months (one semester) or ten-months (two semesters) stay. They must be students of a participating university and at the time of exchange must be in the Master's course of the relevant studies.

European students will participate in a two-week workshop to be held at TU Berlin in September 2005 and subsequently will leave for Japan. Japanese students will leave Japan in September 2005 and should stay at two participating European Universities. However, the exact period of exchange depends on the host universities.

In 2004-2005, DeMaMech exchanged 16 Japanese students and 16 European students. In 2005-2006, a similar number of students will be exchanged.

Participating Universities

Four European universities and four Japanese universities participate in DeMaMech.

In Europa
- Delft University of Technology (the Netherlands)
- Technical University of Denmark (Denmark)
- Technische Universitaet Berlin (Germany)
- Katholieke Universiteit Leuven (Belgium)

In Japan
- The University of Tokyo

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Research Topics (1)

- **The University of Tokyo**
  - UT01: Modeling of Human Manipulation Skills (Prof. Dr. Tamio Arai)
  - UT02: Strategy Design of Behavior of Autonomous Agents (ROBOCUP) (Prof. Dr. Tamio Arai)
  - UT03: Study on Optical Hybrid Integration (Prof. Dr. Eiji Higurashi)
  - UT04: Ensemble Recording from Neuronal Networks (Prof. Dr. Yasuhiro Jimbo)
  - UT05: Product Life Cycle Management based on Life Cycle Simulation (Prof. Dr. Fumihiko Kimura)
  - UT06: Realization of Attentive Workbench (Prof. Jun Ota)
  - UT07: Reverse Engineering using X-Ray CT scanner (Prof. Dr. Hiromasa Suzuki)
  - UT08: Evaluation of Performance of X-Ray CT scanning (Prof. Dr. Hiromasa Suzuki)
  - UT09: Control of Evanescent Light Distribution (Assoc. Prof. Dr. Satoru Takahashi)
  - UT10: Application of Electrostatics in Mechatronics/ Human-Machine Interaction using Mechatronic Devices (Prof. Dr. Akio Yamamoto)
  - UT11: Application of Electrostatics in Mechatronics/ Human-Machine Interaction using Mechatronic Devices (Prof. Dr. Akio Yamamoto)

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Research Topics (2)

- **Keio University**
  - KU01: Estimation of Error Parameters in the Measuring Apparatus for Motion Accuracy of NC Machine Tools (Prof. Kimiyuki Mitsui)
  - KU02: Haptic Mechatronics for Robotic Surgery (Prof. Dr. Kouhei Ohnishi)
  - KU03: Development of Style Design System for Mobile Phone Based on Design Concept (Prof. Dr. Hideki Aoyama)
  - KU04: Development of Advanced CAD/CAM System (Prof. Dr. Hideki Aoyama)
  - KU05: Texture Perception by Use of Tactile Sensors Incorporated in Elastic Robot Finger Skin (Prof. Dr. Takeshi Maeno)
  - KU06: Finite Element Analysis of Human Finger Skin Deformation and Mechanoreceptors' Response (Prof. Dr. Takeshi Maeno)
  - KU07: Intelligent Control in Human Assist System (Prof. Dr. Toshiyuki Murakami)
  - KU08: : Application of Electro-Rheological Gel to Precision Machine Elements (Prof. Dr. Tojiro Aoyama)

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Research Topics (3)

- **Osaka University**
  - OU01: Control of Pneumatic Actuated Robot (Dr. Koh Hosoda)
  - OU02: Simultaneous Cooperative/Competitive Behavior Acquisition in Multi-Agent System (Dr. Yasutake Takahashi)
  - OU03: Generating Natural Motion in an Android by Synchronizing with its Utterance (Prof. Dr. Hiroshi Ishiguro)
  - OU04: Design and Mechanical Assessment of Your Own Nanostructures (Prof. Dr. Yoji Shibutani)
  - OU05: Laser Applied Cutting Edge Profile Measurement for 3D Micromachining (Prof. Dr. Takashi Miyoshi)
  - OU06: Tracking Control by Controller Switching (Dr. Toru Asai)
  - OU07: Control of Industrial Robotic Manipulator (Prof. Dr. Yoshito Ohta)
  - OU08: Visual tracking of multiple persons (Dr. Jun Miura)
  - OU09: Road recognition for autonomous driving (Dr. Jun Miura)
  - OU10: Knowledge Management System for Designing Product Families (Prof. Dr. Kikuo Fujita)

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Research Topics (4)

- **Osaka University (Ctnd.)**
  - OU11: Development of CAM System for Multi-Axis Control Machining (Prof. Dr. Yoshimi Takeuchi)
  - OU12: Nondestructive Evaluation (Prof. Dr. Shiro Kubo, Dr. Takahide Sakagami)
  - OU13: Development of Ecodesign Methodology (Prof. Dr. Yasushi Umeda)
  - OU14: Modeling of Designer's Intention (Prof. Dr. Eiji Arai)
  - OU15: Planning of Linear Object Manipulation (Prof. Dr. Eiji Arai)
  - OU16: Dynamic Management Architecture for Production System (Prof. Dr. Eiji Arai)
  - OU17: Simulation of Linear Object Deformation (Prof. Dr. Eiji Arai)
  - OU18: Space Robot Studies (Prof. Dr. Takeshi Fukuda)
  - OU19: Damage Mechanics of Composites (Prof. Dr. Masaru Zako)

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Research Topics (5)

- **Hokkaido University**
  - HU01: Construction of Work Space Model by using PenTag (Prof. Dr. Masahiko Onosato)
  - HU02: Automatic Solid Model Creation from High-Density Point Clouds Given by 3D Scanners of from Voxel Data by Industrial CT (Assoc.Prof.Dr. Satoshi Kanai)
  - HU03: Connecting a Commercial 3D Mechanical Simulator to a Firmware/Hardware Simulator for Virtual Prototyping and Functional Verification of Mechatronics or Embedded Systems (Assoc.Prof. Dr. Satoshi Kanai)
  - HU04: An Application of Mixed Reality to Prototyping and Usability Assessment for User Interfaces of Small Digital Devices using RFID Technology (Assoc.Prof. Dr. Satoshi Kanai)
  - HU05: Three Dimensional Tracking by Stereo Vision (Prof. Dr. Shun'ichi Kaneko)
  - HU06: Man-Machine Interface for Wearable Robots (Assoc.Prof. Dr. Takayuki Tanaka)
  - HU07: Universal User Interface for Rescue Robots using a Haptic Device (Prof. Dr. Masahiko Onosato)
  - HU08: Visual Tracking of Multiple Persons (Assoc.Prof. Dr. Fumiki Tanaka)
  - HU09: Realization of Reinforcement Learning Using FPGA (Prof. Dr. Hajime Igarashi)

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