As the program encompasses practical workshops on real machine tools and laboratory equipment, the maximum number of participants is limited to 24.

Registration fee:
400 euros including material, all lunches during the course and a farewell diner.
Help with accommodation will be provided, contact us for more details.

A limited number of scholarships are available to students from institutions which are partners of the 4M Association (http://www.4m-association.org/)

Registration deadline May 10th 2013

All information is posted on the summerschool website: http://microsummerschool.net

Contact DTU-Mekanik:
Department of Mechanical Engineering
DTU - Building 427 A
DK-2800 Kgs. LYNGBY
fax: +45.45.93.01.90

Dr. Giuliano Bissacco, gibi@mek.dtu.dk
Dr. Guido Tosello, guto@mek.dtu.dk
Prof. Hans Nørgaard Hansen, hnha@mek.dtu.dk
Mrs. Pia Holst Nielsen, pini@mek.dtu.dk

**Kindly sponsoring the course:**

4M Association

EU FP7 project
Hi-Micro

**Micro Mechanical Systems Design and Manufacturing**
**-**
**PhD Summerschool website:**
**http://microsummerschool.net**




DTU

# Micro mechanical systems design and manufacturing
# -
# PhD Summer School

**17th - 28th of June 2013**

*at the*
Technical University of Denmark

Department of Mechanical Engineering



**Example of lecture topics:**

Tooling technologies
* Micro cutting,
* Micro EDM,
* Electrochemical deposition processes...

Replication techniques adapted to micro scale
* Micro injection moulding,
* Micro metal forming...

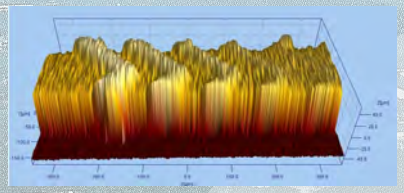
Additive manufacturing technologies

Micro products functionalities
* Microfluidic devices,
* Micro products overview,
* Micro optical devices

Methodology of design
* Life cycle assessment,
* Toolbox for design...

Metrology

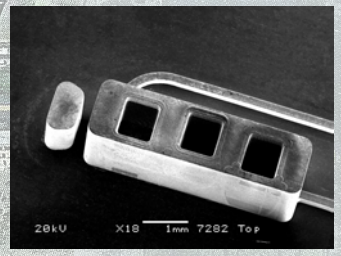
Micro Handling and assembly
* Laser welding,
* Joining...



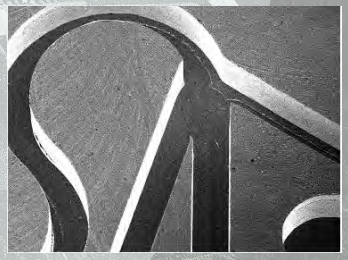


# Micro mechanical systems design and manufacturing

This course is situated in the context of **emer-ging micro/nano technologies**. Micromechanical components play an increasing role in micro systems. The use of **metals, polymers and ceramics** for miniature components requires product development methods as well as manufacturing technologies. Product dimension will range from micrometre to millimetre. The attendees will get insights on the **complete product development** from requirements and technology possibilities to manufacturing and testing, in an industrial perspective. Indeed it is now well known that micro/nanotechnology is not only a matter of downscaling applications and methods.




After the course the attendees will:
* Have an understanding of **applied product development methodologies adapted to micro technology** in general and to micro mechanical products in particular
* Be able to choose and apply the **most relevant process chains** given the requirement of micro mechanical systems
* Have an understanding of **supporting technologies** such as metrology, handling and assembly in a micro technology context
* Gain understanding of the **complete product development, with** focus on integration of technologies and collaboration.





**And for the fun...** some possible outdoors activities!

Picnic in the woods or at the beach,
Tivoli and museums,
Copenhagen nightlife,
...



The 2012 Group