

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.
Some help with accommodation will be provided, contact us for more details.

Registration deadline May 18th 2012

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

Contact DTU-Mekanik:

Department of Mechanical Engineering
DTU - Building 427South
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:



**Micro Mechanical Systems Design
and Manufacturing**

**PhD Summerschool website:
<http://microsummerschool.net>**



**Micro mechanical
systems design and
manufacturing**

**PhD Summer School
25th of June - 6th of July 2012**

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

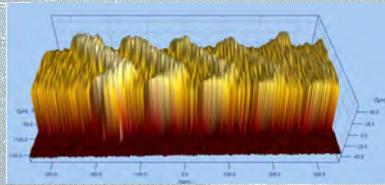
Methodology of design

- * Life cycle assessment,
- * Toolbox for design...

Metrology

Micro Handling and assembly

- * Laser welding,
- * Joining...

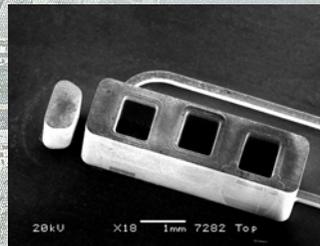


This course is situated in the context of **emerging micro/nano technologies**. Micromechanical components play an increasing role



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.

Micro mechanical systems design and manufacturing



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

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

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.



The 2011 bunch.

