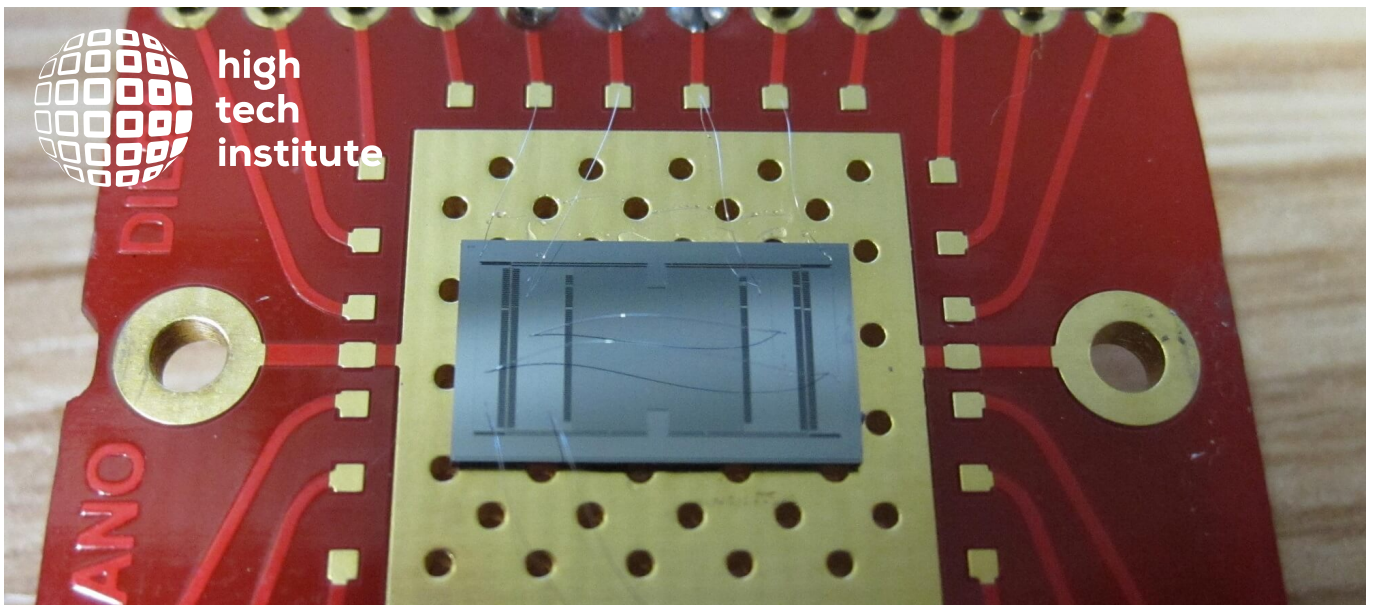


TRAINING BROCHURE

Microelectromechanical systems (MEMS) training



[Provisional reservation >](#)

[Book now >](#)



Microelectromechanical systems

Price: € 1,975 excl. VAT *

Duration: 3 consecutive days

Contact: training@hightechinstitute.nl, +31 85 401 3600

Score: 8.5 ★★★★★☆

Intro

This is an introductory course of 3 days on microelectromechanical systems (MEMS): the basic theory and how MEMS are designed and fabricated, various applications of MEMS in sensors and actuators, and usage issues of MEMS.

This training is available for open enrollment as well as for in-company sessions. For in-company sessions, this MEMS training can be adapted to your situation and special needs.

Objective

After having attended the course, the participant knows:

- the basic theory of microelectromechanical systems (MEMS),
- how MEMS are designed and fabricated,
- various applications of MEMS in sensors and actuators,
- how MEMS can be used.

Target audience

This course is intended for electronic and mechanical/mechatronic design engineers (technical college/university level) working in research and product development.

Assumed pre-knowledge: elementary knowledge on IC-technology/processing.



Certification

Participants will receive a High Tech Institute course certificate for attending this training.

Trainers

[Prof. Michael Kraft](#)

** Prices are subject to change. Price correction will be applied at the end of the year.*

Keep me posted



Program

Introduction to microelectromechanical systems

- MST - MEMS - micromachines
- MEMS, general aspects and motivation: miniaturisation, portability, markets

Micromechanical processing techniques

- Bulk micromachining
- Surface micromachining
- Dry etching
- Deep reactive ion etching
- Wafer bonding techniques, Silicon on Insulator
- Bonding

Sensors and actuators

- Transduction methods (capacitive, piezoresistive, piezoelectric)
- Pressure sensors
- Accelerometers, gyroscopes
- Actuators
- Acoustic MEMS
- Resonant based sensors
- Optical MEMS and applications
- Gas sensors, chemical and Biosensors

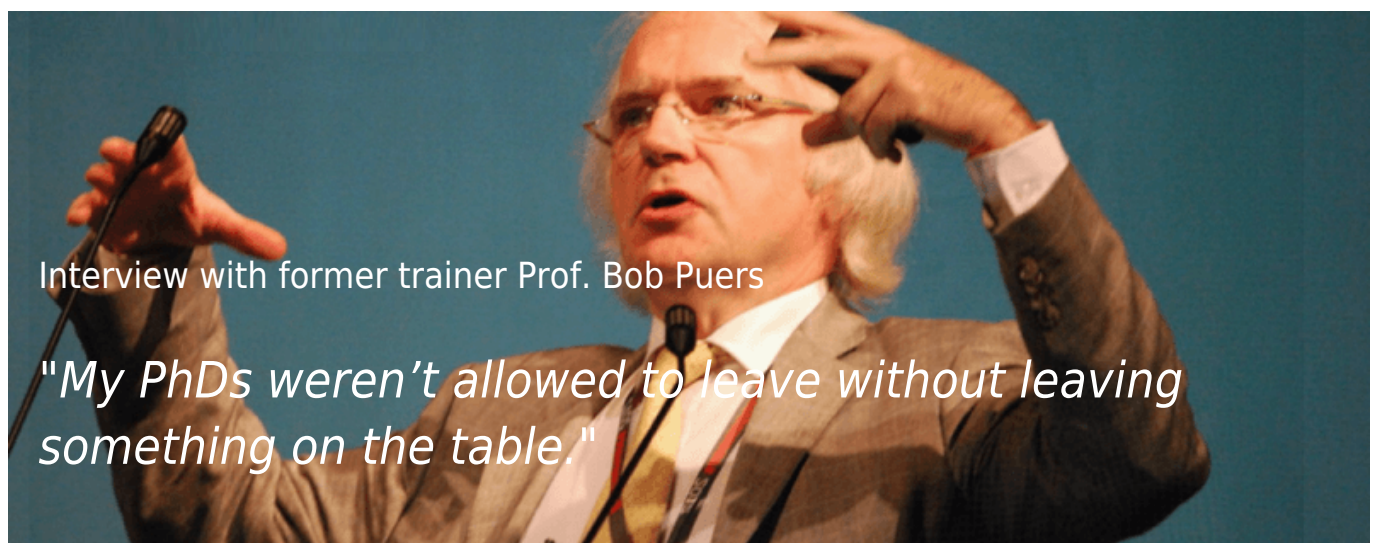
Methods

Lectures and exercises. Course material: course notes.

Frequency

Once per 1,5 year

Read the interview:



Remarks from participants:

- 'It was an excellent training both in terms of contents and presentation. The trainer was exceptional in answering the questions raised by the trainees.' > Anonymous (Beijing)
- 'It was excellent for the beginners who want to study the technology from scratch. I have learnt different technique for MEMS manufacturing which are very helpful.' > Anonymous (Beijing)
- 'The course was useful for the overall understanding of hardware design of MEMS and the fabrication techniques of MEMS.' > Anonymous (Beijing)
- 'The training is very nice, in fact excellent. Very informative containing a lot of knowledge about the title of training (MEMS). Everything in training including contents, material and lecturer is excellent.' > Anonymous (Beijing)