



Smart Sensor Systems

23-26 APRIL 2012
Delft, The Netherlands

Deadline for early registration:
30 March 2012

For full programme, fees and registration information,
please visit the course website at: <http://el.ewi.tudelft.nl>

MONDAY, APRIL 23

Introduction to the course program
Silicon sensors: Applications and Future Perspectives
Designing smart sensors and smart sensor systems

Prof. Dr. Kofi Makinwa, TU Delft
Prof. Dr. Paddy French, TU Delft
Prof. Dr. Kofi Makinwa, TU Delft

Discussions and Demonstrations
Measurement techniques for smart sensor systems
Calibration and Self-Calibration of Smart Sensors

Prof. Dr. Ir. Gerard Meijer, TU Delft
Dr. Ir. M.A.P. Pertijs, TU Delft

TUESDAY, APRIL 24

Integrated Hall Magnetic Sensors
Capacitive sensors
Smart temperature sensors

Dr. P. Kejik, EPFL
Dr. X. Li, TU Delft
Prof. Dr. Ir. G.C.M. Meijer, TU Delft

Optical Sensors Based on Photon Detection
Physical chemosensors
Visit to Dimes Technology Center / Demonstrations

Dr. Ir. R.F. Wolffenbuttel, TU Delft
Prof. Dr. Ir. Michael Vellekoop, TU Vienna
Drs. C.C.G. Visser, TU Delft

WEDNESDAY, APRIL 25

Dynamic-offset-cancellation techniques
Precision Instrumentation Amplifiers
Universal asynchronous sensor interfaces

Prof. Dr. K.A.A. Makinwa, TU Delft
Prof. Dr. Ir. J.H. Huijsing, TU Delft
Prof. Dr. Ir. G.C.M. Meijer, TU Delft

Implantable Smart Sensors for Advanced Medical Devices
Hands-on demonstrations - Part I

Tim Denison, Medtronic
Dr. X. Li, Dr. G. Wang, Ir. Z.Y. Chang, L.
Pakula, Z. Tan, TU Delft

THURSDAY, APRIL 26

Interface electronics and A/D converters
Introduction in CMOS-based DNA Microarrays
Introduction to Image Sensor

Dr. Ir. F.R. Riedijk, Xensor Integration
Dr. R. Thewes, TU Berlin
Ir. J. Bosiers, DALSA

Energy harvesting for autonomous sensor systems
Hands-on demonstrations - Part II

Dr. Ir. R. Vullers, IMEC/Holst Centre
Dr. X. Li, Dr. G. Wang, Ir. Z.Y. Chang, L.
Pakula, Z. Tan, TU Delft

Closing Session

Prof. Dr. K.A.A. Makinwa/Dr. Ir. M.A.P. Pertijs

SMART SENSORS SYSTEMS COURSE INFORMATION

GENERAL INFORMATION

The Smart Sensor Systems Course is a post-graduate engineering course. The lectures are given by top experts from academia and industry thus ensuring a good mix between recent developments and established practice. The prerequisite for the course is a basic knowledge of electrical circuits and systems. The course will be taught in English. After the course, each attendee will receive a certificate of attendance.

SHORT DESCRIPTION

The design and development of smart sensor systems is described. After a general overview, various aspects of sensor systems are discussed: sensor principles, tandem transducers, smart analog interfaces, A/D conversion, bus interfaces, DSPs and microcontrollers. A systematic approach towards the design of smart sensor systems is presented. The lecturers are augmented by case studies and hands-on demonstrations.

REGISTRATION

Registration fees: included in the fee are lecture notes, the book "Smart Sensor Systems", daily lunches, coffee breaks and course dinner on Tuesday organized for all attendees and instructors of the course.

Academics : € 1449.00
Industry : € 1749.00

PAYMENT

- 1 Cash, at the first day of the course
- 2 Bank Transfer
- 3 Send me an invoice
- 4 Credit Card (Visa, Amex, Euro/Master)

LOCATION

The course will be held at Delft University of Technology, in the EWI building (the tallest building located in the University area, TU Wijk).

Address: **TU Delft – EEMCS**
Mekelweg 4
2628 CD Delft, The Netherlands

ACCESS TO TU DELFT

From Amsterdam Airport (Schiphol): by train to Delft Central Station or by car on highway A4 (Den Haag) - A13 (Delft, Rotterdam)

From Rotterdam Central Station: by train to Delft Central Station or by car on highway A13.

From Delft Central Station to TU Delft: by taxi or by bus (line 121).

ACCOMODATION

- 1 Hotel Juliana / www.hoteljuliana.nl
- 2 Hotel Leeuwenbrug / www.leeuwenburg.nl
- 3 Hotel de Vlaming / www.hoteldevlaming.nl
- 4 Bridges House Hotel / www.bridges-house.com
- 5 Hotel Johannes Vermeer / www.hotelvermeer.nl