ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Swiss Federal Institute of Technology, Lausanne

Centre SI
Integrated Systems Centre

CCMX
Competence Centre for
Materials Science and Technology

is pleased to invite you to the **Summer School** on

Nano-Bio-Sensing

29 June - 3 July 2009
EPFL Auditorium Polydôme

This summer school is partly sponsored by the Centre SI and the MMNS Education and Research unit of the CCMX Competence Centre for Materials Science and Technology. All lectures will take place at EPFL in Auditorium Polydôme.

The Summer School will provide 1 credit for the Doctoral Schools of EDMI (http://phd.epfl.ch/edmi/) and EDEE (http://phd.epfl.ch/edee/). A final written examination will be required to get the credits. The format of the final evaluation will be a 4-pages summary of one lecture of the course evaluated by a proper professors committee by the Summer School.

Posters are kindly required to participants. The posters will be presented during the school.

Registration fee is **150 CHF** and it includes one coffee break per day during the week of the summer school. On-line registration is required. Please see **http://si.epfl.ch/page35281.html** for registration. As the summer school is part of the EDMI Doctoral Program Courses, the registration is free of charge for the first 15 EDMI doctorates.

CCMX Competence Centre for Materials Science and Technology

Summer School Program

materials for micro and nano systems

Lectures		
Date:	**Lecturer:**	**Schedule:**
Monday 29 June Afternoon	**James K. Gimzewski** U.C. Los Angeles **Adrian Ionescu** EPFL	**14:00–14:45** Introduction to AFM sensors **14:45–15:00** *Questions time* **15:00–15:45** Nano-sensors for cells and bacteria **15:45–16:15** *Coffee break* **16:15–17:00** Vibrating nanowires for advanced sensing **17:00–17:15** *Questions time*
Tuesday 30 June Afternoon	**Ming C. Wu** U.C. Berkeley **Martha Liley** *CSEM*	**14:00–14:45** Introduction to Optical MEMS **14:45–15:00** *Questions time* **15:00–15:45** Nano-Photonics for bio-sensing **15:45–16:15** *Coffee break* **16:15–17:00** Nanotechnology in optofluidic sensors **17:00–17:15** *Questions time*
Wednesday 1 July Afternoon	**Marco Mascini** Firenze University **Sandro Carrara** *EPFL*	**14:00–14:45** Introduction to Electrochemical sensors **14:45–15:00** *Questions time* **15:00–15:45** Aptamers Applications in biosensors **15:45–16:15** *Coffee break* **16:15–17:00** Nano-structures Enhanced Bio-sensing **17:00–17:15** *Questions time*
Wednesday 1 July Evening	**Poster Session**	**17:15–19:15** Poster presentation from the participant students **19:15–20:00** Aperitif
Thursday 2 July Afternoon	**Marco Bianchessi** ST Microelectr. **Pierre Grangeat** *LETI*	**14:00–14:45** Introduction to Point-of-care Devices **14:45–15:00** *Questions time* **15:00–15:45** Real Time PCR Portable Platforms **15:45–16:15** *Coffee break* **16:15–17:00** lab-on-chip for cancer diagnosis **17:00–17:15** *Questions time*
Friday 3 July Afternoon	**Roland Thewes** TU-Berlin **Carlotta Guiducci** *EPFL*	**14:00–14:45** Introduction to electronic DNA Microarrays **14:45–15:00** *Questions time* **15:00–15:45** CMOS DNA Microarrays: Circuit and System Aspects **15:45–16:15** *Coffee break* **16:15–17:00** Integrated electronic chips for innovation in life sciences **17:00–17:15** *Questions time*