

IMT – INSTITUT DE MICROTECHNIQUE

STI – SCHOOL OF ENGINEERING

SENSOR, ACTUATORS AND MICROSYSTEMS LABORATORY

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ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

PhD position – MEMS fabrication of cantilever arrays for life science applications

This proposed project deals with the development of cantilever array based methods for their application in different fields of biological sciences / medical research. Two main methods are being proposed, namely Scanning Force Microscopy (AFM) based force spectroscopy on and between cells, as well as cantilever based nanomechanical sensing of specifically absorbed species with high detection limits. The work of the PhD candidate will focus on microfabricated cantilever arrays with well-adapted layouts, dimensions, sensitivities and probe shapes.

This project is funded by the Swiss initiative NanoTera, Engineering Complex Systems for Health, Security and the Environment (<http://www.nanotera.ch/>). The work program will be carried out at the Sensors, Actuators and Microsystems Laboratory (SAMLAB) at the Institute of Microtechnology of the EPFL located in Neuchâtel. Collaborative work will be performed with the other partners in the project (CSEM Neuchâtel, UNI Basel, EPFL Lausanne, LICR Lausanne). This project will give the opportunity to physicists, engineers, biologists and medical doctors to work together towards a common goal.

We are looking for a highly motivated and ambitious candidate with a high degree of autonomy and enthusiasm to work in a multi-disciplinary environment. The candidate should exhibit a strong interest for experimental work related to the design, fabrication, assembly, and characterization of micro and nano devices. The main languages used for technical discussions in the lab are English and German. We are looking for a candidate with a background in micro-engineering and micro-/nanotechnologies. If you feel attracted to work on a collaborative project within an interdisciplinary scientific environment please contact us or send your application (CV and cover letter) by email to:

Dr. Sebastian Gautsch, EPFL STI IMT-NE, +41 (0)32 720 5515

e-mail: sebastian.gautsch@epfl.ch

<http://samlab.epfl.ch/>

Deadline to send your application is February 1st 2010

Please note: Students planning to do their PhD at the EPFL must register in one of the EPFL doctoral schools. SAMLAB, is part of the microsystems and microelectronics doctoral school: <http://phd.epfl.ch/>
