

Post-doctoral position in LIMMS CNRS/University of Tokyo

Subject: Nanomechanical data storage

The LIMMS (Laboratory of Integrated Micro Mechatronic Systems), which is an international laboratory belonging both to CNRS and University of Tokyo, opens a new postdoctoral position, for October 2006. The recruited post-doctorate will be affected on a new integrated project focusing on the applications of MEMS and NEMS for data storage.

With advanced ebeam lithography techniques, it is now possible to build nanometric mechanical structures. The goal of this project is to build an array of memory points made of a buckling nanobridge. A suspended nanobridge with typical dimensions in the range of 100nm width x several microns long can exhibit bistable mechanical behaviour within certain conditions of internal stress or shape. Electrostatic actuation made with lateral or top/bottom electrodes allows to buckle the beam from one stable position to the other, thus writing information as a mechanical state of the nanobridge. Writing is next made by capacitive or ohmic coupling between the nanobridge and the electrodes. On this project several technological options will be discussed for the realization of the device, such as in plane or out of plane motion of the bridge. In a second step, integration on VLSI technologies will be considered using the VDEC facilities from the University of Tokyo.

The research will take place in Institute of Industrial Science in the University of Tokyo and will be held in the framework of a new LIMMS project conducted by two Professors of the University of Tokyo and a CNRS researcher.

Website: <http://toshi.fujita3.iis.u-tokyo.ac.jp/limms/>

Qualification: Experience of the candidate in one of these domains will be appreciated : MEMS design, microfabrication technologies , Analog and digital IC design.

Salary: equivalent to JSPS post-doctoral salaries

Interested candidates should send their CV and motivation letter to:

H. Toshiyoshi, Y.Mita, B.Charlot, and LIMMS Direction

To:

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