

INSTITUT FEMTO-ST - UMR6174

Département AS2M

24 rue Alain Savary

25000 Besançon

Tél. 03.81.40.28.01

Fax 03.81.40.28.09

<http://www.femto-st.fr>

Vision for Nano Manipulation

Email : nadine.piat@ens2m.fr, Tél : 33 (0)3 81 40 27 93

Web : <http://www.femto-st.fr/fr/Departements-de-recherche/AS2M/Presentation/>

Post-doctoral position

FEMTO-ST Institute, Dept AS2M

Starting date : février 2010

DURATION : 12 months

SCIENTIFIC CONTEXT: This post-doctoral position is offered in the context of the researches of the SAMMI group in the department AS2M of FEMTO-ST. The research works concern the design and development of automated micromanipulation and micro-assembly platforms. The vision Team in the SAMMI group works since several years on microvision and visual servoings for the manipulation and assembly of MEMS (Micro-Electro-Mechanical Systems).

The post-doc is in the continuity of these works with an orientation to the manipulation of components with a size $< 10\mu\text{m}$, notably the CNT (carbone nanotubes) and cristals. At this scale, optical microscopy is not enough efficient and the more adapted vision sensor is the scanning electron microscope (SEM). The works envisaged during this post-doc concern the calibration of the SEM and the tracking of objects in the images which are strongly noisy. It can be noticed that the model of the SEM varies from projective model at low level magnification to parallel one at high level magnification.

REQUIRED QUALIFICATIONS: Experience with one or more of: Image Processing, Computer Vision, Visual servoing, Robotics , Experience of programming (C++).

ACADEMIC BACKGROUND: 5 years higher education (university's degree or engineering equivalence). A Ph.D in the field of image processing, computer vision.

CONTACTS FOR ADDITIONAL INFORMATION: Applicants should send a CV including a list of publications, a statement of research interests and name and contact information of 1 referee electronically to Nadine Piat: nadine.piat@ens2m.fr, <http://www.femto-st.fr/fr/Departements-de-recherche/AS2M/Presentation/>, until 30 janvier 2010.