

Advanced simulation of lithography for the 22 nm node:

Unfortunately conventional optical photolithography is running out of steam for the 22 nm node as no shorter wavelength/larger numerical aperture is expected to be ready on time. This implies that most critical layers will be printed using double patterning techniques. And whatever the retained process flow, the second mask will obviously be exposed on topographical wafers inducing a deterioration of the image fidelity.

During his training period, the student will have to find ways to simulate such effects. The results will be matched against experiments. Dependency between design choices and process capability will also be addressed using OPC commercial software.

Required candidate skills:

This position is open to a student in physics with knowledge in optics and computer skills.

Duration of Internship: 4 to 6 months

Location: CEA-LETI, MINATEC Grenoble, France

Please contact : Laurent PAIN, Head of Lithography Laboratory, CEA-LETI, MINATEC Grenoble, France

E mail: laurent.pain@cea.fr

Tel : +33 4 38 78 33 97