



UNIVERSITÀ  
DEGLI STUDI  
DI TORINO



## Seminar

**Dr. Damiano Giubertoni**

Fondazione Bruno Kessler



### **Multispecies focused ion beam for plasmonics and color center fabrication**

**Thursday, October 13<sup>st</sup> h 11:00**

**Sala Wataghin - Dipartimento di Fisica – Via P. Giuria 1**

Focused ion beam has been a widely adopted technique to fabricate nanometric prototypes in the last decades given its ability to pattern in principle every material, in direct writing mode and with lateral resolution on the order of 10 nm. More recently, the introduction of multi species ion sources allowed to increase not only the possibility of patterning but also to add extra functionalities in the ion irradiated areas. In this talk examples of nanofabrication using an Au-Ge-Si liquid metal alloy ion sources will be reported: integration of plasmonic nanostructures on Si photodiodes, hard mask for Si etching for MEMS fabrication, color centers in diamond.

### **The speaker**

Dr. Damiano Giubertoni is a researcher of the Sensors and Devices Center of Fondazione Bruno Kessler, Trento, Italy. His work has been focused on surface characterization, mostly by secondary ion mass spectrometry (SIMS), doping technologies in semiconductors, ion beam induced nanostructures and self-assembly phenomena, nanofabrication by electron beam lithography and focused ion beam techniques. He started the nanofabrication laboratories in FBK, installing EBL and FIB systems and currently managing them.

Ref: Jacopo Forneris ([jacopo.forneris@unito.it](mailto:jacopo.forneris@unito.it))