



SEMINARIO

venerdì 10 maggio 2013 alle ore 11:00 – Aula 44

Area della Ricerca di Pisa - Edificio "A" primo piano

il Dr Giuseppe d'Arrigo

Istituto per la Microelettronica e Microsistemi, CNR, Stradale Primosole 50, 95121 Catania

giuseppe.darrigo@imm.cnr.it

Abstract.

Micro-Nanofabrications tools to build a Nanoworld

The micro fabrication technologies have been developed in the past decades, especially in the last fifteen years. In particular the first study was done in 1954 when C. S. Smith discovered the piezoresistive effect in semiconductor material such as silicon and germanium. This piezoresistive effect of semiconductor can be several magnitudes larger than the geometrical piezoresistive effect in metals. This discovery was very important and was used for the fabrication of the first pressure sensor in 1959. Etching processes combined with the photo lithographic processes are the basic steps to fabricate micro-mechanical structures. Actually different MEMS devices are commercialized, such as micro-accelerometers, inkjet printer head, micromirrors for projection etc.. The most important aspect of the Micro-Electro-Mechanical Systems (MEMS) is the possibility to combine a specific micromachining technology to fabricate more and more complex micro mechanic structures to be dedicated to a specific application.