



AVVISO DI SEMINARIO

Il giorno mercoledì 30 settembre 2015 alle ore 11,00
presso l'Area della Ricerca CNR di Pisa, Aula 33, piano Terra, Edificio "A"

il Dr. Assegid M. FLATAE

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terrà un seminario sul tema:

Optically controlled elastic microcavities

On the seminar I will demonstrate the fabrication and optical characterization of polymeric whispering gallery mode micro-lasers on a silicon chip. For the realization of low threshold quantum dot- and organic dye lasers different integration techniques will be presented. The physics of microlasers and its application will be discussed.

To further improve the resonators for robust device applications, for the first time, optically controlled tunable micro-lasers on scales compatible with on-chip integration will be introduced. This is done by the integration of photoresponsive smart materials with polymeric resonators. The results serves as an example of how light can control light, by invoking a physical reshaping of the resonators. This way of optical tuning creates interesting possibilities for all-optical control in circuits, enabling interaction between signal and control beams and the realization of self-tuning cavities.

References:

<http://www.nature.com/lsa/journal/v4/n4/full/lsa201555a.html>

<http://scitation.aip.org/content/aip/journal/aplmater/2/1/10.1063/1.4862695>

<http://digbib.ubka.uni-karlsruhe.de/volltexte/1000044923>