



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 16 December 2010
17:00-18:00

3rd Floor Seminar Room

**"LAB ON A CHIP BIOANALYTICAL DEVICES BASED ON
SILICON OPTOCOUPERS"**

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Abstract:

Point of care bioanalytical devices, in addition to the molecular recognition functions, must provide for small size, compact readout electronics, automated fluidic functions, sensitivity and cost effectiveness. In the core of such a system lies the biosensor with the solid support, the immobilized biomolecular probes and the basic signal transduction mechanism. Optical biosensing is superior to some other signal transduction mechanisms due to the galvanic isolation of the transducer from the readout electronics. The presentation will outline how monolithically integrated silicon optocouplers can provide solutions leading to portable optical bioanalytical devices with multianalyte potential.