



FORTH/ICE-HT

SEMINAR SEMINAR

ΟΜΙΛΗΤΗΣ: **Σωτήριος Τραγουλιάς, Υποψήφιος Διδάκτωρ**
Τμήμα Χημείας, Πανεπιστήμιο Πατρών

Επιβλ. Καθηγητής: **Dr. Θεόδωρος Χριστόπουλος, Καθηγητής**
Τμήμα Χημείας, Πανεπιστήμιο Πατρών
email: tkc@chemistry.upatras.gr, τηλ.: 2610 996.022

ΤΙΤΛΟΣ: **Instrumentation for DNA Microarrays**
Οργανολογία μικροσυστοιχιών DNA

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΙΤΕ/ΕΙΧΗΜΥΘ

ΗΜΕΡΟΜΗΝΙΑ: Πέμπτη, 18 Οκτωβρίου 2007

ΩΡΑ: 12:00

ΠΕΡΙΛΗΨΗ: Microarray technology covers the urgent need to exploit the accumulated genetic information from large scale sequencing projects and facilitate exploration and discovery on a genome wide scale. The superior multiplexing capability of microarrays is based on the spatial separation of hundreds or thousands of discrete hybridization assays in a few cm² of a flat solid substrate.

Although most applications to date have employed DNA microarrays (expression profiling, genotyping of mutations and sequencing), the technology has been extended to microarrays of proteins, peptides, carbohydrates and small molecules aiming either at detection/quantification of biomolecules or investigation of biomolecular interactions in a massively parallel manner. Glass slides, membranes (e.g. nylon or nitrocellulose) and polyacrylamide pads may serve as solid supports although glass microscope slide is the most common choice.

Microarray experiments require two specialized instruments: An arrayer (or printer) for construction of microarrays and a readout instrument (scanner). In our lab, we have designed, constructed and evaluated the first integrated microarray system (IMAS) that combines the functions of a microarrayer and a three-laser confocal fluorescence scanner into a single instrument.