



ΕΡΕΥΝΗΤΙΚΟ ΙΝΣΤΙΤΟΥΤΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ ΚΑΙ ΧΗΜΙΚΩΝ ΔΙΕΡΓΑΣΙΩΝ ΥΨΗΛΗΣ ΘΕΡΜΟΚΡΑΣΙΑΣ

Οδός Σταδίου, Πλατάνι, Πάτρα
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ΣΕΜΙΝΑΡΙΟ

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ΘΕΜΑ: **INTEGRATED MULTISCALE PROCESS SIMULATION IN
MICROELECTRONICS: GRAIN SCALE TO EQUIPMENT
SCALE**

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ-ΙΤΕ

ΗΜΕΡΟΜΗΝΙΑ: Τρίτη, 5 Μαρτίου 2002

ΩΡΑ: 19:00

ΠΕΡΙΛΗΨΗ

My goal in this talk is to demonstrate some roles of transport and reaction modeling and simulation in topography relevant processes such as deposition and etch processes used in fabrication of integrated circuits. One focus will be on how established models can be used to predict performance in thermal CVD processes used to deposit metals and dielectrics. Another focus of the presentation will be on how to use data to calibrate engineering models, in order to provide timely and cost effective models to guide process development, and process integration; e.g., for plasma deposition and etch processes. I will then discuss integrated multiscale process simulation, in which models for equipment scale to grain scale are integrated and solved simultaneously. Two examples will be considered: thermal LPCVD of silicon dioxide and electrochemical deposition of copper. I will finish by presenting recent results on polycrystalline film formation.

NOTE: Prof. Cale will be accompanied during visit to ICEHT-FORTH by Prof. Bridget Rogers from the Chemical Engineering Department of Vanderbilt University in the US. Prof. Rodgers research interests are in the area of the preparation of thin films of $\text{Al}_2\text{O}_3/\text{ZrO}_2$ alloys through ultra-high vacuum chemical vapor deposition (UHV-CVD) reactor as high-K gate dielectrics for new generation microelectronic components. Those interested in meeting with Prof. Cale or Prof. Rogers should contact Kleanthi Zacharopoulou (E-mail: kleanthi@iceht.forth.gr, Tel.: 0610-965.278).

Για περισσότερες πληροφορίες μπορείτε να επικοινωνείτε με τη Κλεάνθη Ζαχαροπούλου
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