



ΕΡΕΥΝΗΤΙΚΟ ΙΝΣΤΙΤΟΥΤΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ ΚΑΙ ΧΗΜΙΚΩΝ ΔΙΕΡΓΑΣΙΩΝ ΥΨΗΛΗΣ ΘΕΡΜΟΚΡΑΣΙΑΣ

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ΣΕΜΙΝΑΡΙΟ

- ΟΜΙΛΗΤΗΣ:** Professor R.W. Bilger
School of Aerospace, Mechanical and Mechatronic Engineering
The University of Sydney, Australia
- ΘΕΜΑ:** **THE EFFECTS OF TURBULENT MIXING ON THE
PREDICTION OF PHOTOCHEMICAL SMOG**
- ΤΟΠΟΣ:** Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ-ΙΤΕ
- ΗΜΕΡΟΜΗΝΙΑ:** Πέμπτη, 12 Ιουλίου 2001
- ΩΡΑ:** 14:15

ΠΕΡΙΛΗΨΗ

Photochemical smog occurs most often in urban areas where there are strongly varying surface sources of the main reactants, NO_x and ROCs together with some elevated point sources of NO_x . Often there are pre-existing concentrations of ozone and other oxidants in the atmosphere into which these reactants are being mixed.

Consequently, strong spatial and temporal variations in concentrations of species occur and these can have a significant impact on mean reaction rates. Most models neglect these concentration fluctuations and calculate sub-grid-scale mean reaction rates from grid-mean concentrations. This “unmixedness” problem is similar to that much studied in turbulent combustion. Monitoring data usually fail to show the photostationary state relationship among NO , NO_2 and O_3 that is predicted by such models. The seminar will survey the work conducted on ozone/nitric oxide mixing in the Turbulent Smog Chamber at the University of Sydney over the years.