ΕΙΧΗΜΥΘ-ΙΤΕ

ΣΕΜΙΝΑΡΙΟ

ΟΜΙΛΗΤΗΣ: Prof. Rajamani Rajagopalan
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ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ - ΙΤΕ

ΗΜΕΡΟΜΗΝΙΑ: Πέμπτη, 21 Σεπτεμβρίου 2000

ΩΡΑ: 19:00

Brief description of research

Colloid Physics: Studying the structure and stability of colloidal dispersions and interaction forces in colloids. We are interpretating static structure factors from light, X-ray and neutron scattering (especially the inverso problem of extracting effective interaction potentials from structure factors). We are also investigating structural and glass transitions in colloidal dispersions.

Polymer/Colloid Interactions: Studying the adsorption/desorption kinetics of polymers. We are using dynamic Monte Carlo simulations for obtaining 'scaling laws'. We are also using laser trapping for direct measurement of polymer induced forces.

Micellization and Self-Assembly: Studying the thermodynamics of micellization of surfactants and polymers. We are also investigating encapsulation in surfactants and polymeric micelles.

Selected Publications

- P. C. Hiemenz and R. Rajagopalan, *Principles of Colloid and Surface Chemistry*, Marcel Dekker, New York, NY, 1997.
- R. Rajagopalan and K. S. Rao, "Interaction Forces in Charged Colloids: Inversion of Static Structure Factors", Phys. Rev. E., 55, 4423 (1997).
- A. K. Arora and R. Rajagopalan, "Applications of Colloids in Studies of Phase Transitions and Patterning of Surfaces", Current Opinion on Colloid and Interface Sci., 2, 391, 1997.
- Y. Wang, R. Diermeier and R. Rajagopalan, "Kinetics of Polymer Adsorption in Spherical Geometry", Langmuir, 13, 2348 (1997).
- S. Talsania, Y. Wang, R. Rajagopalan and K. K. Mohanty, "Monte Carlo Simulations of Micellar Encapsulation", J. Colloid Interface Sci., 190, 92 (1997).