

Dynamics of Concentrated Systems

Program

Invited Talks

S. Edwards

“The Flow of Deformable Bodies”

G. Leal

“The Interplay Between Continuum Mechanics and Molecular Theories of Polymeric Liquids”

A. Acrivos

“The Rheology of Concentrated Suspensions of Solid Spheres”

G. Bell

“Dynamics of Particulate Biological Fluids”

F. Dowell

“Overview of Molecular Ordering, Phases, and Dynamics of Liquid-Crystalline Polymers and Monomers”

A. Gast

“Order-Disorder Transitions in Concentrated Colloidal Suspensions”

F. Gelbard

“Aerosol Dynamics in Nuclear Reactor Containments”

I. A. Aksay

“Colloidal Phase Transitions and Their Use in Ceramics Processing”

M. Denn

“Rheology of Nematic Melts”

M. Jaffe

“Applications of Liquid Crystal Polymers”

F. Moussa

“Neutron Scattering Studies of Molecular Conformations in Liquid Crystal Polymers”

- G. Fuller
"Optical Rheometry of Concentrated Polymeric and Colloidal Liquids"
- M. Tirrell
"Brownian Dynamics of Non-Dilute Solutions of Rodlike Polymers"
- G. Berry
"Rheology of Nematic Solutions of Rodlike Chains: Comparison of Theory and Experiment"
- R. Powell
"Rheology of Suspensions of Rod-Like Particles"
- J. Petrovic
"Fracture of Sic Whisker-Reinforced Ceramic Composites"
- H. Brenner
"Macrotransport Processes: Brownian Tracers as Stochastic Averages in Effective-Medium Theories of Heterogeneous Media"
- G. Doolen
"Lattice Gas Dynamics Methods for Suspensions and Porous Media Flow"
- O. R. Walton
"Modeling the Flow of Granular Solids"
- R. Rabie
"Importance of the Particulate Nature of Explosives in Their Processing and Importance"
- B. Alder
"Spherical Molecules: Continuum Properties from Molecular Dynamics Calculations"
- G. Zanetti
"The Macroscopic Behavior of Lattice Gas Automata"
- E. G. D. Cohen
"Lorentz Lattice Gases, Abnormal Diffusion, and Polymer Statistics"
- J. Brady
"Stokesian Dynamics Simulation of Concentrated Dispersions"
- N. Phan-Thien
"Boundary Element Methods for Concentrated Suspensions"
- P. E. Cladis
"Dynamical Test of Phase Transition Order: New Things in Old Places or Old Wine in New Bottles?"

Contributed Poster Presentations (presenter underlined):

S. Kim and Y. O. Fuentes

“Parallel Computational Strategies for Hydrodynamic Interactions Between Complex Microstructures in Viscous Fluids”

A. Sirivat

“Cellular Patterns in a Flow Between Two Rotating Disks”

G. C. Straty, H. J. H. Hanley, and C. J. Glinka

“Shearing Apparatus for SANS”

A. M. Kraynik

“Foam Rheology”

L. C. Nitsche and H. Brenner

“Continuum Mechanics of Multiphase Flows: From Micro to Macro”

Y. Monovoukas and A. P. Gast

“Microstructure Identification During Crystallization of Charged Colloidal Suspensions”

J. M. Nitsche and H. Brenner

“Nonlinear Effects in the Force-Induced Migration of Brownian Particles Through Periodic Fiber Arrays: Applications to Zone Electrophoresis”

B. van den Brule

“On the Modeling of Concentrated Suspensions”

A. L. Graham, M. S. Ingber, D. J. Kaiser, and L. A. Mondy

“Finite Element and Boundary Element Modeling for the Investigation of Composite and Suspension Micromechanics”

J. T. Jenkins and D. F. McTigue

“Viscous Fluctuations in Concentrated Suspensions”

G. Wilemski

“Nonequilibrium Brownian Dynamics Simulations of Shear Thinning in Concentrated Colloidal Suspensions”

E. Ganani, W. J. Tetlow, J. B. Nees, and A. L. Graham

“Particle Size Segregation Induced by Propellant Processing”

F. Dowell

“Theoretical Predictions of the Properties of Self-Assembling, Self-Reinforcing Polymers”

R. K. Menon, R. A. Brown, and R. C. Armstrong

“Kinetic Theory and Rheology of Liquid Crystalline Polymers”

W. Burghardt and G. Fuller

“Transient Shear Flow of a Nematic Liquid Crystal Subject to the Tumbling Instability”

J. G. Curro and K. S. Schweizer

“Theory of Polymer Blends”

A. E. Chavez, M. Lopez de Haro, and O. Manero

“Hydrodynamic Interactions in Dilute Polymer Solutions”

D. Adolf, J. E. Martin, and J. P. Wilcoxon

“The Evolution of Structure and Viscoelasticity Near the Sol Gel Transition”