

14<sup>th</sup> US National Congress of Applied Mechanics  
June 23-28, 2002  
Virginia Tech, Blacksburg, VA

**Symposium on  
Topics in the Flow of Complex Fluids**

**In Memory of Professor Charles G. Speziale**

**SESSION 1: TURBULENCE**

**MONDAY 9:30 AM – 12:00 NOON**

**B. A. Younis** (University of California-Davis) and **S. A. Berger** (University of California-Berkeley). *Turbulence Modeling for Intermittent Pulsatile*

**S. Thangam** (Stevens Institute of Technology) and **K. R. Rajagopal** (Texas A&M University). *A Generalized Nonlinear Two-Equation Turbulence Model: Development and Applications*

**YeZhou and Donald Eliason** (Lawrence Livermore National Laboratory). *Prediction of Equilibrium States in Turbulence Models for Flows Induced by Rayleigh-Taylor and Richtmyer-Meshkov Instabilities and in Oceanic and Atmospheric Applications*

**Shizhi Qian and Haim H. Bau** (University of Pennsylvania). *Optimal and Robust Control of Thermal Convection in Porous Media*

**Jon Vegard Larssen and William J. Devenport** (Virginia Tech). *The Generation and Structure of High Reynolds Number Homogeneous Turbulence*

**Dennis A. Siginer** (Wichita State University). *The Physics of the Secondary Flows of Viscoelastic Fluids in Straight Tubes*

**SESSION 2**

**MONDAY 1:00 PM – 3:05 PM**

**M. Y. Hussaini, C. G. Speziale and S. L. Woodruff** (Florida State University). *Continuous Models: Variants of LES*

**S. E. Bechtel** (Ohio State University). *Internal Constraint Theories for the Thermal Expansion of Viscous Fluids*

**D. De Kee** (Tulane University). *Yield Stress Measurements of Suspensions*

**Promode R. Bandyopadhyay** (Naval Undersea Warfare Center). *Stokes' Mechanism of Drag Reduction*

**Patrick Bourgin** (Ecole Supérieure de Plasturgie). *Spreading Liquid Layers onto Moving Substrates: How does Ambient Air Affect the Contact Line?*