

## ANNOUNCEMENTS

# International Symposium-Workshop on Particulate and Multiphase Processes and 16th Annual Meeting of the Fine Particle Society with 1985 Particulate and Powder Technology Exhibition Miami Beach, Florida, U.S.A. 22-26 April 1985

### INTRODUCTION

Recent developments in aerosol science and engineering, microcontamination, suspensions and slurry transport together with an increasing interest in the particulate matter in the environment have resulted in renewed emphasis on multi-disciplinary research in particulate science and technology and multi-phase processes.

### OBJECTIVES

The joint meeting is planned to provide a forum for exchange of knowledge with a particular emphasis on a strong interaction between participants from universities, industry, commercial and non-profit research institutes and government. The meeting will also provide the latest developments and accomplishments in particulate/powder science and technology and multi-phase processes.

### PROGRAM FORMAT

In keeping with these objectives, invited experts from many disciplines will present plenary lectures on various aspects of the stated areas. A large number of technical sessions, coupled with workshops on slurry transport, microcontamination, colloidal interactions and any other topic of current interest are planned. The program will include four broad and interdisciplinary areas, viz., I. Aerosol Science and Technology, II. Contamination in Semiconductor, Electronics, Biomedical and Pharmaceutical Industries, III. Suspensions and Slurry Transport, IV. Fine Particulate/Powder Science and Technology.

A tentative list of topics to be covered in these areas is:

#### I. Aerosol Science and Technology

Aerosol Physics and Chemistry  
Aerosol Measurements  
Aerosol Generation and Nucleation  
Atmospheric Aerosols  
Combustion Aerosols  
Aerosol Dynamics  
Optical Scattering  
Deposition and Erosion

#### II. Contamination Analysis and Control

Microcontamination in Semiconductor and Electronics Industries  
Microcontamination in Biomedical and Pharmaceutical Operations  
Generation of Particulate Air Contaminants  
Measurement of Microcontaminants  
Chemical Composition  
Detection and Monitoring  
Prevention and Control  
Filtration Technology  
Clean Room Design and Technology

Electrostatic Hazards  
Surface Cleaning Technology  
Health Effects  
Aerosols in Nuclear Reactor Safety  
Biological Contaminants  
**III. Suspensions and Slurry Transport**  
Mechanics of Suspension, Colloids and Emulsions  
Rheology of Suspensions  
Colloidal Interactions  
Colloidal Suspensions  
Effect of Particle Size on Fluid-Particle Behavior  
Sedimentation-Theory and Analysis  
Sedimentation-Applications  
Settling of Particles in Single and Multi-Particle Systems  
Flow of Particulate Media  
Flow of Fine Particle Suspension  
Flow of Coarse Particle Suspension  
Multiple Species Particle Slurry Flows

Slurry Transport-Applications  
Critical Velocity in Slurry Transport  
**IV. Fine Particle/Powder Science and Technology**  
Particle Morphology  
Particle Formation and Production  
Particle Characterization and Sizing  
Methods and Standards for Particle Measurements  
Particle Separation Processes  
Particulate Flow Measurements and Analysis  
Agglomeration  
Material Safety, Emission Control and Dust Explosions  
Particle Mixing and Transportation  
Particulate Handling, Packing and Storage  
Electrical and Magnetic Separation  
Fluidized Beds  
Particle Control Technology  
Electrostatic Effects and Filtration  
Powder Science and Technology

### CALL FOR PAPERS

The organizing committee welcomes your prospective papers or other presentations. Please submit an abstract (200 words or less), containing the title of the paper, names and full mailing addresses of all authors, as soon as possible but no later than 30 November 1984, to:

Ms. Sheila Puryear  
Coordinator, Clean Energy Research Institute  
University of Miami, P.O. Box 248294  
Coral Gables, Florida 33124, U.S.A.

The authors of the selected abstracts will be informed by 15 January 1985. Extended abstracts will be due by 15 March 1985, and the full length papers by 15 April 1985.

## TWO-PHASE FLOW IN PIPES

1985 Fluid Flow Projects

State of the art short course to be held at the Excelsior Hotel, Tulsa, Oklahoma,  
May 20–24, 1985

presented by

The University of Tulsa

in cooperation with the

College of Engineering and Applied Sciences, Division of Continuing Education

### SHORT COURSE IN TWO PHASE FLOW PIPING SYSTEMS ANNOUNCED.

Short courses on the design of two-phase flow piping systems for oil and gas production and transportation are among the services offered by The University of Tulsa Fluid Flow Projects to member and nonmember firms. Course dates are May 21–25, 1985.

The purpose of this course is to give participants a well-grounded understanding of the fundamentals of two-phase flow through pipes and restrictions. Upon completion, the individual should be able to apply knowledge gained to design fluid flow conduits encountered in petroleum, natural gas, and chemical engineering operations. Current and future research trends in the two-phase flow area will be discussed.

### RECOMMENDED BACKGROUND

Participants should have engineering or scientific backgrounds and should have studied mathematics through calculus. Each person should also be familiar with basic fluid mechanics and fluid properties. A familiarity with hydrocarbon systems vapor-liquid equilibrium and computer programming is recommended. No previous experience in two-phase flow is necessary.

### COURSE FORMAT

An appropriate balance will be maintained between lecture and problem solving and between theory and application. Problem solving sessions are dispersed throughout the course to enhance the understanding of variables unique to two-phase flow. Computer algorithms are presented so that the participant will be able to develop his own programs upon completion of the course. Techniques to perform calculations without the computer are also stressed.

All new and commonly used correlations for predicting flow pattern, liquid holdup, and pressure drop for steady state two-phase flow in pipes at any inclination angle will be presented and analyzed. Thus, the individual will be qualified to select the correlation best suited for his particular design situation.

Each participant will receive a textbook and a portable scientific calculator at the beginning of the course.

### FOR DETAILS CONTACT

Division of Continuing Education—Engineering  
The University of Tulsa  
600 South College Avenue  
Tulsa, Oklahoma 74104  
Phone: (918) 592-6000, ext. 2347  
Telex: 497543 INFOSVC TU TUL