

## ANNOUNCEMENTS

### MULTIPHASE FLOW AND HEAT TRANSFER A SHORT COURSE FOR ENGINEERS

Argonne National Laboratory,  
Argonne, Illinois, U.S.A.

*11-13 September 1989*

#### *Purpose*

Multiphase flow and heat transfer is of major importance to engineers involved in research and development in the automotive, chemical, cryogenic, nuclear, petroleum and other industries. The objective of this course is to provide the research engineer with a working knowledge of multiphase flow and heat transfer fundamentals.

#### *Lecturers*

The featured instructors are: A. C. Raptis, Argonne National Laboratory; T. M. Knowlton, Illinois Gas Technology; M. A. Bergougnou, University of Western Ontario; M. Tan, Argonne National Laboratory; and L. S. Fan, Ohio State University.

#### *Registration*

Tuition is \$600 and covers coffee breaks, lunches, lecture notes and dinner on the first evening. Limited registrations are available for students at a special rate of \$250.

The short course is sponsored by the Multiphase Flow Research Institute and organized by Argonne National Laboratory and the Midwest Universities Energy Consortium.

To register and to receive a program contact: James P. Hartnett, Executive Secretary, Midwest Universities Energy Consortium Inc., 312/996-4490, P.O. Box 5478, Chicago, IL 60680.

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## BASES OF MULTIPHASE FLOW AND HEAT TRANSFER

### A 5-DAY WORKSHOP

*Hosted by*

Department of Chemical and Nuclear Engineering and University Extension,  
The University of California, Santa Barbara, U.S.A.

*15-19 January 1990*

#### THE PROGRAM

Two-phase flow and boiling heat transfer continue to focus the attention of researchers and to frustrate and challenge the engineer in the chemical, nuclear, oil-and-gas, cryogenic and other industries. New data and information, ideas and hypotheses, and facts and erroneous theories continue to be produced.

The short course described here is patterned after similar courses offered for a number of years at Stanford University and more recently at the University of California—Santa Barbara and at ETH—Zurich. Its intent is to provide:

- A condensed and critical view of present knowledge including areas of uncertainty
- Transfer of knowledge from one area of application to another
- Sources of data and correlations
- System analysis and design philosophy and methods
- Limitations of modern codes will be pointed out