

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.

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

The course features:

- A program of coordinated lectures by experts in the field
- A complete set of lecture notes and copies of slides
- Movies to illustrate physical phenomena
- Limited enrollment.

The lecturers

Sanjoy Banerjee, Professor at the Department of Chemical and Nuclear Engineering, University of California, Santa Barbara, U.S.A.; also visiting Professor at the Swiss Federal Institute of Technology in Zurich (ETHZ).

Gad Hetsroni, Danciger Professor of Engineering at Technion—Israel Institute of Technology. Currently, a Visiting Professor at the University of California, Santa Barbara, U.S.A.

Geoffrey F. Hewitt, Head of the Thermal Hydraulics Division at the Harwell Laboratory and Professor of Chemical Engineering at the Imperial College of Science and Technology, London, England.

George Yadigaroglu, Professor of Nuclear Engineering at the Swiss Federal Institute of Technology in Zurich (ETHZ) and head of the Thermal-Hydraulics Laboratory at the Paul-Scherrer Institute (formerly EIR), Switzerland.

HOTEL INFORMATION

Participants may stay at the Sheraton Santa Barbara at a special room rate of \$79/89/night. Please contact the hotel directly [*Tel*: (805) 963-0744 or *FAX*: (805) 962-0985] and mention the workshop.

REGISTRATION INFORMATION

Registration is requested by **10 December 1989**. To request space after this date call (805) 961-4993 or 961-3200. No refunds will be granted after this date unless the workshop is cancelled. To secure registration, send registration form plus payment prior to **10 December**.

WORKSHOP FEES

Registration fees are \$1100(U.S.) and include lectures notes, copies of all slide notes, reception and workshop banquet. The lectures will be conducted at the Sheraton. Because of space limitations, participants are urged to register well before the deadline.

**FOR FURTHER INFORMATION CALL
PROFESSOR G. HETSRONI
on (805) 961-4993 or 961-3200**