Physical Modelling of Multiphase Processes in Mineral and Chemical Processing

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Overview

Many industrial processes involve interaction between gas, liquid and solid phases; and in today's world of global competitiveness and environmental awareness it's important that those interactions are performed as efficiently and with the least amount of energy and resource consumption as possible. The design and operation of processes that meet these requirements needs a good working knowledge of the underlying phenomena of heat, mass and momentum transfer that govern the behavior of multiphase flows. The size and dispersion of bubbles, droplets and particles is also very important and is closely associated with how and where the energy source is introduced into the system—where too much or too little or at the wrong location can have major detrimental effect in both product quality and operating costs. This course is aimed at providing unique insight into the underlying principles of multiphase processes. It includes both (simple) theory and application to real work examples in the fields of mineral and chemical processing; and at the conclusion will provide the tools and knowledge needed to make informed choices that maximizes beneficial output in terms of energy usage, outputs and resource usage.
Course participants will learn these topics through lectures and case studies and assignments will be shared to further enhance the learning experience of participants.

Modules	A. Physical Modelling of Multiphase Processes in Mineral and Chemical Processing
You Should Attend If…	▪ You are a practicing chemical/ mechanical engineer designing/working with multiphase flow system ▪ You are an academician/researcher working in the area of multiphase flow with application in chemical and process industries ▪ You are a student (BTech/MSc/MTech/PhD) interested in learning the design of multiphase systems in mineral or process industries
Fees	The participation fees for taking the course is as follows: **Participants from abroad : US $500** **Industry/ Research Organizations: Rs. 15000** **Academic Institutions:** **Student: Rs. 1000 (**Refundable subject to joining the course**)** **Faculty: Rs. 5000** The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation on payment basis.

The Faculty

Prof. Geoffrey Evans is a Professor in the Department of Chemical Engineering at The University of Newcastle, NSW, Australia. His principal area of expertise lies in the fields of particle technology, multiphase processes, mass transfer and interfacial phenomena. He has been actively involved in fundamental and applied research into multiphase systems over the last 30 years.

Dr. Raghvendra Gupta is an Assistant Professor in the Department of Chemical Engineering, Indian Institute of Technology, Guwahati. His research interests are in the area of multiphase flows, microfluidics and biofluid mechanics.

Course Co-ordinator

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