

16th Multiphase Flow Conference & Short Course

November 13 - 16, 2018 Dresden



Helmholtz-Zentrum Dresden - Rossendorf

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16th Multiphase Flow Conference & Short Course

Multiphase Flows – Simulation, Experiment and Application

13 - 16 November 2018, Dresden

Organisation & Information

Languages

The conference language will be English.

Location

Helmholtz-Zentrum Dresden - Rossendorf

Accommodation

More information you will get within the online registration.

- **Pullman Dresden Newa**

Single room € 99 incl. breakfast

- **Ibis Königstein Dresden**

Single room € 59 incl. breakfast

(Double rooms + € 20)



Short Course

Our Short Course, one and a half day - from Tuesday morning until Wednesday noon, is designed to provide knowledge on the use of numerical and experimental methods for multiphase flows.

The experimental part will provide knowledge on the selection, installation and use of modern gas-liquid measurement techniques and instruments, such as wire-mesh sensors, needle probes, process microscopy and gamma-ray computed tomography along with the application of data analysis tools. The numerical part will focus on finite-volume methods for Euler-Euler and Euler-Lagrange multiphase flow predictions, and on the associated mathematical models.

The Short Course will address the interests of engineers, chemists, physicists and technicians active in research and design, who want to be informed on modern design methods and tools for multiphase flows.

The first day of the Short Course will focus on general topics; on the second day one group will specialise on experimental techniques including laboratory practices, while the other group will dive deeper into multi-scale modelling approaches.

Lecture Topics

- Eulerian Multiphase Flow Models
- Lagrangian Multiphase Flow Models
- Interfacial Heat & Mass Transfer Models
- Measurement Techniques and Experimental Investigations for Multiphase Flows
- Practical Calculations of Bubble Column Flows and Spray Propagation
- Multi-scale modelling techniques like GENTOP, MUSIG and IAD models

Lecturers

- **Dr. Georg Scheuerer**
- **Dr. Thomas Esch**
- **Dr. Thomas Frank**
- **Prof. Dr. Uwe Hampel**
- **Dr. Eckhard Krepper**
- **Dr. Roland Rzehak**
- **Dr. Thomas Höhne**
- **Dr. Dirk Lucas**

Programme Highlight

A highlight of the shortcourse will be a visit to the TOPFLOW and LIMMCAST experimental facilities of HZDR.

Conference

The conference will take place after the Short Course from Wednesday noon until Friday noon.

Multiphase flows occur in a large variety of industrial products, for instance in the chemical and process industry, in power generation, and in the automotive industry. In order to improve quality of these products, to accelerate their development, and to increase their safety, it is important to better understand, model, and simulate multiphase flows.

The goals of the conference are to discuss the state of the art in multiphase flow research and applications, and to foster discussion and exchange of knowledge. Special sessions will be devoted to the subject of multi-scale modelling. Experts from the experimental side, from modelling and simulation, as well as experts from the application field are invited to present their research and results to a worldwide audience.

General topics of interest include

- Simulation technology for multiphase flows
 - Phase interaction models
 - Turbulence models
 - Solution algorithms
 - Multi-scale modelling techniques
- Application of simulation methods to multiphase flow problems
- Experimental investigations of multiphase and magnetohydrodynamic flows
- Measurement methods for multiphase and magnetohydrodynamic flows

Call for Abstracts

Oral and poster presentations are welcome. The submission of the single-sided abstract is required before **Sep 15 2018**. Please use the form on the website for the abstract submission. Poster awards will be granted to the best 3 posters.

Keynote Lectures

- **Modelling and applications of hydrodynamic cavitation**
Prof. Vivek Ranade, Queen's University Belfast
- **Towards LES of multiphase flows with moving interfaces**
Prof. Markus Klein, Universität der Bundeswehr München

Registration & Fees

Important Dates

Deadline for abstracts **15 Sep, 2018**
Early bird registration ends **30 Sep, 2018**

Please consider that the number of seats is limited!

Registration

Please register at our website:
www.hzdr.de/multiphase

Contact



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The registration fees include

- Attendees will receive available presentations
- Transfers between hotels and HZDR
- Coffee breaks and lunches
- Short Course dinner and/or
- Conference dinner

You will receive further information on the Short Course and Conference with your confirmation letter. Possible forms of payment: credit card, invoice or bank transfer.

Short Course, 13 & 14 November, 2018

Industrial attendees € 520
Academic attendees € 325
(registrations after Sep 30: + € 50)

Conference, 14 - 16 November, 2018

Industrial attendees € 275
Academic attendees € 175
(registrations after Sep 30: + € 50)

Package price for Short Course and Conference

Industrial attendees € 635
Academic attendees € 405
(registrations after Sep 30: + € 100)