Joint HZDR & ANSYS Conference

14th Multiphase Flow Conference & Short Course

Simulation, Experiment and Application
08 - 10 November 2016, Dresden

http://www.hzdr.de/multiphase

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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 € 89,00 incl. breakfast
- **Ibis Königstein Dresden**
  Single room € 59,00 incl. breakfast

The Dresdner Frauenkirche ("Church of Our Lady")

Short Course

Our 1.5 d short course 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, gamma-ray computed tomography and process microscopy 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. Markus Braun** - ANSYS Germany
- **Dr. Thomas Esch** - ANSYS Germany
- **Prof. Dr. Uwe Hampel** - HZ Dresden-Rossendorf
- **Dr. Thomas Höhne** - HZ Dresden-Rossendorf
- **Dr. Eckhard Krepper** - HZ Dresden-Rossendorf
- **Dr. Dirk Lucas** - HZ Dresden-Rossendorf

Programme Highlight

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

Conference

The conference is the second part of the workshop and will take place from the second day noon until the third day evening.

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 Papers

Contributions should be submitted in form of presentation slides. Complementary white papers are welcome. For submission a 1-page abstract is required by **15 September, 2016.** Please send your abstract to multiphase@hzdr.de.

Keynote Lecture

Resolving industrial multiphase flow assurance challenges: Useful simulations of system evolution – the need for a pragmatic multi-level modelling approach
Prof. Dr. Stein Tore Johansen – SINTEF, Trondheim, Norway

Simulation of multiphase melt flows – applications and challenges from the industrial point of view
Prof. Dr.-Ing. Hans-Jürgen Odenthal – SMS group GmbH, Düsseldorf

Registration & Fees

Important Dates

Deadline submitting presentation abstracts	**15 Sep, 2016**
Notification of acceptance	**30 Sep, 2016**
Deadline for registration	**28 Oct, 2016**

Registration

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

Contact

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The registration fees include

- Transfers between hotels and HZDR
- Coffee breaks and lunches
- Short Course dinner

and/or

- Evening event on **9 November, 2016"**

You will receive further information on the short course and conference with your confirmation letter. Possible forms of payment: credit card, bank transfer or debit advice.

Short Course, 08 & 09 November, 2016 (half day on 09th)

Industrial attendees	€ 495
Academic attendees	€ 300

Conference, 09 & 10 November, 2016 (half day on 09th)

Industrial attendees	€ 225
Academic attendees	€ 100

Package price for Short Course and Conference

Industrial attendees	€ 575
Academic attendees	€ 350

A cancellation fee of € 95 will be charged for cancellations after **28 October, 2016.**