

Joint HZDR & ANSYS Conference

15th Multiphase Flow Conference & Short Course

Multiphase Flows – Simulation, Experiment and Application
14 - 17 November 2017, Dresden

HZDR

HELMHOLTZ
ZENTRUM DRESDEN
ROSSENDORF

ANSYS

<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 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** - ISimQ GmbH
- **Dr. Thomas Esch** - ANSYS Germany
- **Dr. Thomas Frank** - ANSYS Germany
- **Prof. Dr. Uwe Hampel** - HZ Dresden-Rossendorf
- **Dr. Eckhard Krepper** - HZ Dresden-Rossendorf
- **Dr. Roland Rzehak** - HZ Dresden-Rossendorf
- **Dr. Thomas Höhne** - 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 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 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, 2017**. Please send your abstract to multiphase@hzdr.de.

Keynote Lectures

Simulation of fluid-fluid multiphase systems with CFD and PBM: current possibilities and open challenges

Prof. Dr. Daniele Marchisio – Politecnico di Torino, Institute of Chemical Engineering

High-pressure engine sprays: the impact of multicomponent fuel modeling

Prof. Dr.-Ing. Christian Hasse – TU Bergakademie Freiberg, Chair of Numerical thermo fluid dynamics

Registration & Fees

Important Dates

Deadline for abstracts	15 Sep, 2017
Deadline for registration	30 Sep, 2017

Registration

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

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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, 14 & 15 November, 2017

Industrial attendees	€ 495
Academic attendees	€ 300

Conference, 15 – 17 November, 2017

Industrial attendees	€ 250
Academic attendees	€ 150

Package price for Short Course and Conference

Industrial attendees	€ 585
Academic attendees	€ 355

A cancellation fee of € 95 will be charged for cancellations after **29 October, 2017**.