

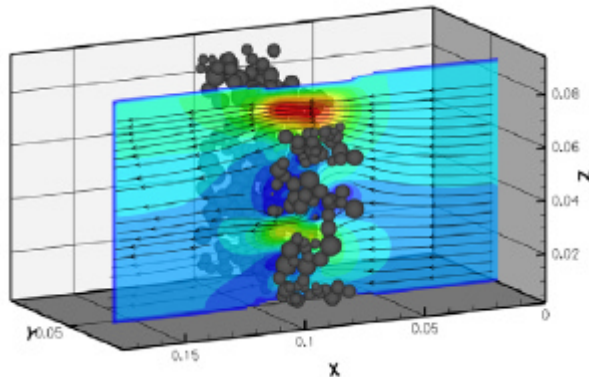
**ANNOUNCEMENT
CALL FOR CONTRIBUTIONS**

**12th WORKSHOP ON
TWO-PHASE FLOW
PREDICTIONS**

22. – 25. March 2010



**Zentrum für Ingenieurwissenschaften
Martin-Luther-Universität
Halle-Wittenberg
06099 Halle (Saale), Germany
www-mvt.iw.uni-halle.de**



Lattice-Boltzmann Simulation of the flow through an irregular particle packing

The series of Workshops started in 1984 at the Institute of Fluid Mechanics of the University of Erlangen/Nürnberg. The participation was limited to only a few people working in the field of particle dispersion in turbulent flows. An important objective was the performance and discussion of numerical calculations for pre-defined test cases. During the past 20 years numerical calculations of dispersed multiphase flows have received considerable interest in research and technical or industrial applications. For numerous companies in the process industries (e.g. chemical industry or food industry) computational fluid dynamics (CFD) for multiphase flow has become an important tool for process analysis, optimisation and design. Essential for reliable numerical calculations is the modelling of the underlying elementary processes, occurring on the scale of the particle, such as particle transport in turbulence, particle-wall collisions, inter-particle collisions, agglomeration, droplet/bubble collisions and coalescence as well as heat and mass transfer. This area is still in the stage of development. Important for model developments are theoretical analysis, direct numerical simulations and detailed experiments.

Organisers

Prof. Dr.-Ing. M. Sommerfeld

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Sponsorship

The Workshop will be co-sponsored by the ERCOFTAC (European Research Community on Flow Turbulence and Combustion). Young Ph.D. students may apply for financial support, which was provided by ERCOFTAC.

Location

The Workshop will be held at the Centre of Engineering Sciences of the Martin-Luther-University Halle-Wittenberg.

Content

The main objective of the Workshop is to bring together researchers working in the field of dispersed multiphase flow on a theoretical, numerical or experimental basis. Oral presentations and posters in the following areas are most welcome for the Workshop:

1. Modelling of dispersed turbulent two-phase flows (turbulence models, heat and mass transfer, particle-wall interaction, particle-particle interaction, bubble and droplet interactions, agglomeration, ...)
2. Recent developments on Euler/Euler and Euler/Lagrange approaches
3. Direct numerical simulations with interface resolution (solid particles, droplets and bubbles)
4. Direct and large eddy simulations of particulate flows (point-mass approach)
5. Application of numerical methods for two-phase flows in process engineering
6. Experimental studies on dispersed two-phase flows including new measurement techniques

During the 4-day Workshop 40 presentations, each 30 min including discussion can be accommodated. Additionally, about 15 posters may be accepted.

The selection of oral presentations and posters will be based upon an abstract of one DIN A4-page. The abstracts and any related correspondence should be sent to Prof. Dr.-Ing. M. Sommerfeld.

Test Case Calculations

An additional objective of the Workshop will be related to the validation of numerical predictions obtained by different model approaches and numerical codes. These validations will be based on pre-defined test cases for which experimental or numerical results (e.g. direct or large eddy simulations) exist. Several test cases will be selected and made available to the interested groups approximately four months prior to the Workshop on the homepage of the organisers (www-mvt.iw.uni-halle.de/english/index.php). The test cases are generally blind test cases and only boundary and inlet conditions will be provided. The following test cases are tentatively planned:

- Benchmark test on particle-laden channel flow with point-particle LES (prepared by: Prof. Soldati and Dr. Marchioli University of Udine, Italy; Dr. Kuerten Technische Universiteit Eindhoven, Netherlands)
- Confined particle-laden flow downstream a bluff body at several mass loadings (Boree et al. 2001, prepared by Prof. Simonin, IMFT)
- Dense particle-laden free jet with different solids loading (Prof. Sinclair Curtis, University of Florida, USA)

As a consequence of the recent developments it would be very interesting to compare besides Euler/Euler and Euler/Lagrange also RANS and LES approaches.

During the Workshop, the various numerical results for the test cases will be exhibited. The presentations are followed by a round table discussion to examine the performance of the various computer codes and models. The test case calculations can be regarded as a challenge to approach more complex problems in two-phase flow predictions and will hopefully stimulate further improvements and developments of numerical methods and models. After the Workshop the test case results will be also displayed at the homepage of the organiser.

The number of groups participating in one test case calculation is limited to about five. Any questions regarding the test cases may be sent to Prof. Dr.-Ing. M. Sommerfeld.

Registration fee

The registration fee for the Workshop is **300 Euro**, which includes the proceedings, refreshments during the breaks, lunches, an excursion and a common dinner in a historic place of the region. The registration fee should be paid by bank transfer. An invoice or receipt will be issued after the final registration.

Time Schedule

Availability of test case specification:
November 30, 2009

Final date for receipt of abstracts:
December 15, 2009

Authors informed concerning acceptance of presentation:
January 15, 2010

Final date for receipt of the test case results:
March 10, 2010

Final date for receipt of camera-ready manuscripts of the presentation (contributions received after this date cannot be included in the proceedings):
March 10, 2010

Proceedings

The proceedings will include papers of all accepted presentations and posters and will be provided on a CD at the Workshop registration.

Information

Recent information about the Workshop and the test cases can be obtained through internet:

<http://www-mvt.iw.uni-halle.de/english/index.php>

P R E - R E G I S T R A T I O N

12th Workshop on Two-Phase Flow Predictions

Halle (Saale), Germany, 22. – 25. March 2010

Name:

Affiliation:

Address:

Phone:

Fax:

E-mail:

- I plan to participate in the Workshop**
- I will submit an abstract**
- I plan to perform test case calculations**

In order to facilitate the Workshop preparations please send the pre-registration at your earliest convenience to:

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