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## Venue:

THESIS-2016 will be held on Korakuen Campus of Chuo University. The site is located in the center of Tokyo.

Research and Development Initiative (RDI)  
Chuo University  
1-13-27 Kasuga, Bunkyo-ku,  
Tokyo 112-8551 Japan



## Symposium Website:

For updated information on paper submission, registration, program, map, etc. please visit symposium website:

<http://c-faculty.chuo-u.ac.jp/~ths2016/>

Further inquiries can be made via e-mail at [ths2016@tamacc.chuo-u.ac.jp](mailto:ths2016@tamacc.chuo-u.ac.jp)

## Registration fees:

50,000 JPY: Members (JSCE, IAHR, SHF)  
65,000 JPY: Normal participants  
25,000 JPY: Ph.D. Students

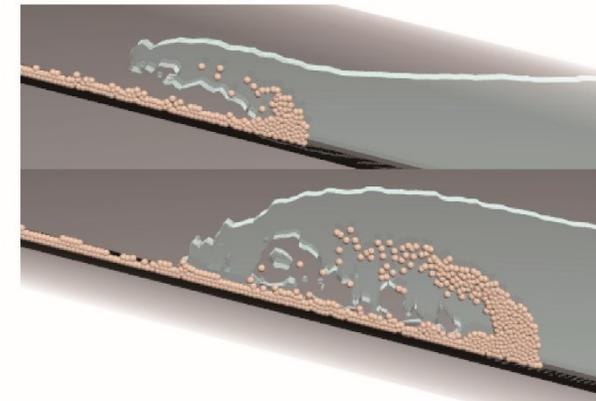
# THESIS-2016

## Two-phase modelling for Sediment dynamics

*The 3rd symposium on two-phase modelling for sediment dynamics in geophysical flows*

Tokyo, Japan

September 12-14, 2016



Hosted by RDI(Chuo University)

Co-hosted by JSCE, IAHR, SHF



# The 3rd symposium on two-phase modelling for sediment dynamics in geophysical flows

Considerable attention has been paid to the relevance of sediment transport dynamics to a wide range of geophysical applications: the sediment deposition and re-suspension processes in rivers and estuaries, the morphological evolution of waterways and coastal zones, debris flows, the formation and displacement of turbidity maxima in estuaries, the impacts of sediment drainage, sediment transport and topographical changes due to tsunamis, and the process of breaching in dyke- and dam-break flows.

The method generally regarded as offering the greatest promise involves a two-phase approach that is capable of describing the physical processes of sediment transport more realistically than a single-phase approach.

THESIS symposia (THESIS-2011, THESIS-2013) were successfully held in Chatou, France, to provide a forum for discussing and exchanging experience and knowledge within the international research community, with the goal of developing two-phase approaches to sediment dynamics in geophysical flows.

THESIS-2016 will be held in Tokyo. This symposium will focus on the state-of-the-art of the two-phase approach for sediment dynamics. We look forward to welcoming you to THESIS-2016.

## Keynote lectures:

*“Accurate particle method for computational sediment dynamics”*

(Hitoshi Gotoh, Kyoto University, Japan)

*“A multi-dimensional multiphase sediment transport modeling framework- an open-source community modeling effort”*

(Tian-Jian Hsu, University of Delaware, USA)

*“High-fidelity simulation of particle-laden flows”*

(Kun Luo, Zhejiang University, Hangzhou, China)

## Workshop:

The workshop will focus on both conventional and novel models for sediment transport to enhance their accuracy and application to geophysical flows.

**Date:** Tuesday, 13 September 2016

**Time:** 15:50-17:40 in Room 1 (main room)

**Workshop Topics:** Conventional and novel sediment transport models, bed load and suspended load, and sediment mixture and armoring

## Symposium Theme & Topics:

This symposium will cover the following research topics, all of which are based on the perspective of a two-phase approach to sediment dynamics, in which the dynamics of water and the solid-particles phases are considered with interphase interactions and momentum transfer.

### A. Fundamentals

Physical processes, mathematical formulations and parameterizations, analytical solutions

### B. Modelling

Numerical simulation, turbulence modelling

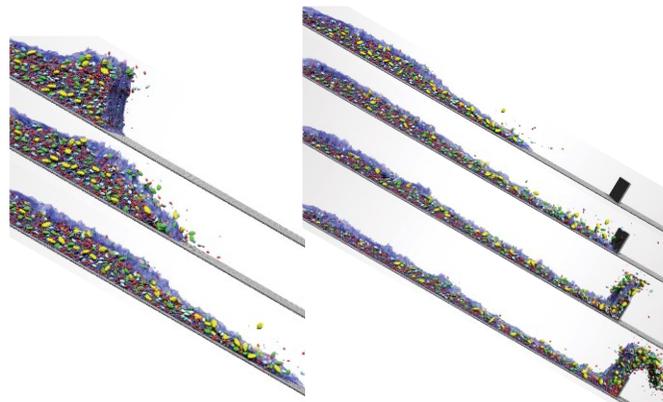
### C. Measurements

Experimental techniques in the laboratory, measuring methods in the field

### D. Environmental applications

(D1) Sheet flows, highly concentrated flows, Nutrient/contaminants transported by sediments

(D2) Internal flows (erosion around pipelines and hydraulic sluices) and groundwater flows (porous media), Vegetated channels, riverbank restoration, Landslide/debris flows, Breaching processes in dyke-overlap and dyke-break flows, Tsunami with sediment transport



## Key Dates:

◆ 12 February 2016:  
abstract submission

◆ 15 April 2016:  
abstract acceptance

◆ 17 June 2016:  
Extended abstract submission

◆ 12-14 September 2016:  
Symposium

## Abstract submission:

Abstracts (of between 200 and 1000 words) should be submitted before February 12, 2016 through the symposium website. They should provide detailed information on the objectives of the study, the methodology, the main results and major conclusions.

**They should also mention the names and affiliations of the authors, as well as e-mail address of the corresponding author.**

- All accepted extended abstracts (4-page papers) will be published in the symposium proceedings (USB memory).
- The most notable papers presented at the symposium will be selected and the authors will be invited to submit full papers for publication in a special issue of “Advances in Water Resources”

## Form and size of the symposium:

- Language: English
- Presentation forms: Oral and poster
- Plenary keynote lectures and a workshop
- Duration: 3 days