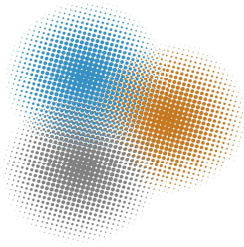


MPM 2019

8 – 10 January 2019, Cambridge, UK

How to register and submit contributions

Authors are invited to submit their contributions on any of the conference topics. Submissions and conference registration can only be performed via the conference website:
<http://www.mpm2019.eu>



Contact:

Anura3D MPM Research Community

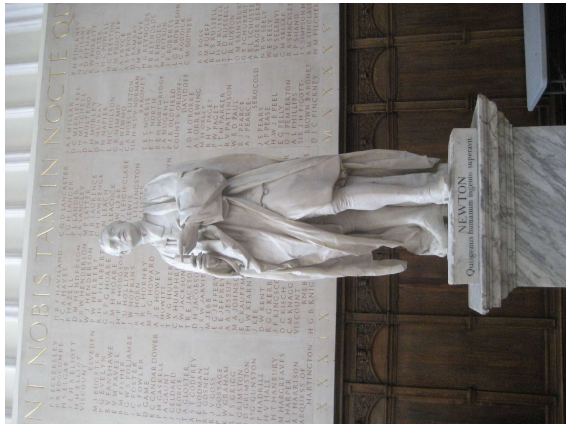
Conference Secretariat MPM 2019

Engineering Department

Trumpington Street, Cambridge CB2 1PZ

United Kingdom

info@Anura3D.com



Location

The conference will take place at Churchill College, University of Cambridge, UK. The City of Cambridge is in the south east of England, 80 kilometers north of London. It is well served by road and rail links, and is within an easy distance of major London airports.

The University of Cambridge comprises more than 150 departments, faculties, schools and other institutions, plus a central administration and 31 independent and autonomous colleges. The collegiate structure gives a strong sense of community, and the University is at the forefront of international scholarship and research. Throughout the last 800 years, its contribution to the world has ranged from the discovery of the mechanism of blood circulation to the structure of DNA, from the great philosophers of the early 15th Century to the groundbreaking work of its many Nobel Prize winners. The Geotechnical and Environmental Engineering Group has developed world-class laboratory facilities and computational models to study the soil/water/structure interaction. The Group owns the Geotechnical and Environmental Laboratory on the main Engineering Department site off Trumpington Street and the Schofield Centre on the High Cross site in West Cambridge.

Churchill College is one of the 31 constituent colleges of the University of Cambridge. The College was founded in 1960 as the Commonwealth memorial to Sir Winston Churchill, reflecting his desire to advance education, learning and research, especially in the field of science and technology, in a modern and forward-looking College. The Conference Team of the College (www.chu.cam.ac.uk/conferences) provides conference support and on-site accommodation.

Anura3D MPM Research Community



MPM 2019

2nd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction

8 – 10 January 2019, Cambridge, UK



www.mpm2019.eu

- Dongfang Liang
- Krishna Kumar
- Giulia Viggiani
- Gianmario Sorrentino
- Alexander Rohe
- Giovanna Biscontin
- Xuanyu Zhao
- Lucy Harris

Objectives

We are delighted to invite you to join us at the second International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction organised by the Anura3D MPM Research Community (www.Anura3D.com) in January 2019 in Cambridge (MPM2019). This is the second international conference organised by the Community, following a series of workshops and symposia, sponsored by the FP7 Marie-Curie project MPM-DREDGE, and the success of MPM2017 held in Delft in January 2017.

The aim of the conference is to provide an international forum for presenting and discussing the latest developments in both the fundamental theories and the applications of state-of-the-art computational methods that can be conveniently used for solving a variety of large deformation problems in geotechnical engineering, free surface flow problems in hydraulic engineering and dynamic coupling problems. Special focus is on the numerical modelling of interaction between soils, water and structures where the interface and transition between solids and fluids play an essential role.

Papers on any aspect of these subjects are welcome. Active discussion on key topics will be facilitated through invited keynote lectures. In addition, members of the Anura3D MPM Research Community will present the highlights of their research in the past two years. The conference will be accompanied by the launch of an edited text book 'The Material Point Method for Geotechnical Engineering: a Practical Guide', and followed by an Anura3D software training course on Friday 11 January 2019. We promise all participants an unforgettable experience in Cambridge.

Conference Topics

Papers should be related but are not limited to the main themes of the conference: numerical modelling of soil-water-structure interaction, large deformation of soil, and free surface flow. They can be about the fundamental theories or practical applications with an emphasis on one of the following topics. They can be of experimental nature if the results are valuable for benchmarking and verifying computational models.



Numerical formulations:

- Material Point Method (MPM)
- Other numerical methods for modelling large deformation in geomechanics and moving boundaries in fluid mechanics, e.g. Smoothed Particle Hydrodynamics (SPH), Moving Particle Semi-implicit (MPS) method, Discrete Element Method (DEM), lattice Boltzmann method, particle finite element method, Arbitrary Lagrangian-Eulerian (ALE) method, Volume of Fluid (VOF) method, level set method, immersed boundary method.
- Coupling analyses in geomechanics and fluid mechanics
- Constitutive models
- Seepage flow
- Sediment transport and deposition, erosion & scour
- Soil-water interface mechanics

Experiments, benchmarks and case studies:

- Experimental investigation of large deformation problems at field, model or laboratory scale
- Forensic engineering: reverse analysis of failure events and natural hazards
- Case studies and benchmark solutions for large deformation problems

Applications in geotechnical and hydraulic engineering:

- Slope liquefaction and breaching
- Dredging processes, jetting, cutting
- Installation problems on- and offshore, pile installation, sheet pile walls
- Impact problems (soil compaction, failing wind turbines, etc.)
- Landslides
- Dike and breakwater stability and reinforcement
- Soil investigation, e.g. pile load testing, CPT simulation, etc.

Important Dates

01/07/2018	Submission of first draft (2-3 pages)
01/09/2018	Notification of review results
01/10/2018	Submission of final paper (3-4 pages) Deadline for early payment
8-10/01/2019	Conference days
11/01/2019	Anura3D training course

Scientific Committee

- Kenichi Soga (University of California Berkeley, USA)
- Ipo Ritsema (Deltares, Netherlands)
- Eduardo Alonso (Univ. Politècnica de Catalunya, Spain)
- Jürgen Grabe (Techn. Univ. Hamburg-Harburg, Germany)
- Paolo Simonini (Università degli Studi di Padova, Italy)
- Wim Uijtewaald (Delft Univ. of Technology, Netherlands)
- Dongfang Liang (University of Cambridge, UK)
- Sabatino Cuomo (University of Salerno, Italy)
- Alba Yerro (Virginia Tech, USA)

Preliminary Registration Fees

Registration fees are expressed in pound sterling. Early registration applies if paid before 1 October 2018.

Delegates	£550 (regular)	£450 (early)
Reduced fee (*)	£400 (regular)	£350 (early)
Students	£350 (regular)	£300 (early)

(*) reduced rates apply for members of the Anura3D MPM Research Community

The registration fee includes:

- A copy of conference proceedings
Daily servings of tea/coffee/biscuits (8-10 January)
Two-course fork buffet lunches (8-10 January)
Reception with Canapés and drinks (Tuesday, 8 January)
Three-course conference dinner (Wednesday, 9 January)

The above registration fee does not include the following:

- Extra conference dinner places (9 January) £50 per person
Training course (Friday, 11 January): £100 per person
City tour and punting on River Cam £100 per person
Accommodation can be booked at [www.chu.cam.ac.uk/
conferences/facilities/accommodation](http://www.chu.cam.ac.uk/conferences/facilities/accommodation).