5th IAHR EUROPE CONGRESS
**New challenges
in hydraulic research
and engineering**
Trento 12-14 June, 2018

UNIVERSITY
OF TRENTO - Italy
Department of Civil, Environmental
and Mechanical Engineering

International Association
for Hydro-Environment
Engineering and Research
AIRH

Supported by
Spain Water and IWHR, China

Special session:

Alternative numerical methods for free-surface flows

Theme: Numerical models in Hydraulics and Fluid Mechanics

Conveners:

Damien VIOLEAU (EDF), Giacomo VICCIONE (Univ. Salerno), Michael DUMBSER (Univ. Trento)

We invite you to submit an abstract to this session, for which 4 speakers have already accepted to present their work (see below).

Short description on the session

This mini-symposium aims to promote communication between researchers working on the development and application of numerical methods for free-surface flows. Papers covering recent developments in mathematical theory, numerical implementations as well as novel or challenging applications would be welcome. Techniques of interest include, but are not limited to: Smoothed particle hydrodynamics (SPH), Moving particle semi-implicit (MPS), Dissipative Particle Dynamics (DPD), Lattice Boltzmann methods (LBM), Molecular Dynamics (MD), Vortex methods (VMs), Diffuse element method, Discrete element method (DEM), Element-free Galerkin method (EFGM), Reproducing kernel particle method (RKPM), hp-clouds, Natural element method (NEM), Material point method (MPM), Meshless local Petrov Galerkin (MLPG), Generalized finite difference method (GFDM), Particle-in-cell (PIC), Moving particle finite element method (MPFEM), Finite cloud method (FCM), Boundary node method (BNM), Boundary cloud method (BCM), Method of finite spheres (MFS), Radial Basis Functions (RBF).

List of invited participants

- M. La Rocca (Univ. Roma tre)
- S. Sibilla (Univ. Pavia)
- R. Vacondio (Univ. Parma)
- R. Carmigniani (Laboratoire d'Hydraulique Saint-Venant, France)

Useful information

- Four hours are scheduled for this session. The duration of oral presentations will be of 20 minutes (17 minutes of presentations + 3 of discussion).
- Each participant should prepare an abstract of two pages maximum (in attached the template). Complete papers will not be accepted.