



New trends in simulation

www.simhydro.org



La Société Hydrotechnique de France is organising in collaboration with Polytech' Nice-Sophia Antipolis **SIMHYDRO 2012** which will be held in Nice from 12th to 14th of September 2012

Following the first Simhydro conference, which was focused on uncertainties and coupling in hydroinformatics and environmental flow modelling, the purpose of **SIMHYDRO 2012** is to enlarge the debate on the new frontiers of simulation, following the development of increasingly detailed and accessible field-data, and high performance computation, allowing to enrich the simulations and open the pathway to multiphysics, multiscale, and methods interaction and improve capability and relevance of model predictions

Again, practitioners, stakeholders, researchers and engineers will be welcome to exchange their views. *Presentations of practical and challenging application studies are encouraged.*

Day 1 : New trends in modelling for marine, river and urban Hydraulics

▪ Coupling of models

Multiscale, multiphysics coupling; far and near-field coupling. Interactions with scale models.

▪ Data and models

How current practices are being modified by new types of data:

- Sensors networks, real-time data
- High density DEM ; LIDAR and laser techniques
- Progress in the use of data assimilation
- Applications to water and risk management systems

▪ Uncertainties

- Models application domains, uncertainties, identification and quantification, from data to results. Progress in the use of data assimilation

Day 2 : The stakeholders and practitioners of simulation

▪ Round table 1: New requirements for hydroinformatics

- Expressions from project owners

▪ Round table 2 : From simulation to decision

- Communication to stakeholders

- **Perspectives for the future of methods and tools**
 - The development of high performance computation (HPC)
 - Integration frameworks for data and models
 - Cloud computing

Day 3: 3D models and applications

- **3D modelling of hydraulic machines**
 - Choice of the models for specific applications
- **Modelling the near-field of hydraulic structures**
 - Navier-Stokes modelling versus SPH and Lagrangian models. Free-surface modelling.
- **Modelling complex phenomena**
 - Air entrainment, multiphase flows, coupling with structures or sediments
- **Large-scale 3D modelling**
 - Lakes, estuaries.... Perspective for the development of 3D models in areas today only covered by 2D models.

Almost 250 participants from France and all over the world are expected to attend this conference.

Our partners:



The conference will be an opportunity for public concerned by themes of different sessions to present their projects, products as well as the progress realized in their domain. A hall with a permanent broadband, screens and projection facilities as well as tables and seats will be allocated to each exhibitor throughout the conference. Visits during coffee breaks make dialogues and exchange possible between the participants and the exhibitors.

Société Hydrotechnique de France is in charge of the organisation of these workshops supported by Polytech'Nice-Sophia Antipolis.

We invite you to use the opportunity to book your personal space as soon as possible. To do this you just have to fill in the enclosed form. The conference site is regularly updated on www.symhydro.org

You can contact
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 J.G. Philipps: j.g.philipps@shf-hydro.org
 for any further information.

Looking forward to meeting you in Nice.

Registration form for exhibitors:

Company.....
Address.....
.....
Tel..... Fax.....
E-mail.....
Person to contact
Name.....
Address.....
.....
Tel..... Fax.....
E-mail.....

Nature of presentation:

- Flyers Material DVD/films Other
- (With a brief descriptive on the products to be exhibited).*

For each workshop:

- an allocated and specified space
- exhibitor contacts included in the list of participants of the conference;
- the registration fee for the workshop concerns the person present on the stand;
- . For other participants of the same company; payment of registration fees is needed;
- proceedings and CDrom included in the price of the registration fees;
- **possibility of a link from SHF site to the exhibitor's website.**

Registration:

- Stand reservation: before June 29th **1 500 €**
- Stand reservation after June 29th **1 750 €**
- I enclose the logo of my company (WORD file).

We kindly invite you to check **Société Hydrotechnique de France** Website:
www.shf-hydro.org