9h00 Opening speeches: Philippe Gourbesville, Chair of the Conference, Head of LOC, Pierre-Louis Viollet, Chair of SHF Scientific & Technical Committee

Plenary session

9H30 Keynote lectures: *Chair: Pierre-Louis Viollet (SHF)*

- ✓ A statistical approach to Downscaling of Daily rainfall process at an ungagged site, *Van.Tv.Nguyen, Myeong Ho Yeo, McGill University (Canada)*
- ✓ Potential, limits and perspectives of physical & numerical modeling, *Giovanni de Cesare, EPFL-ENAC-LCH (Switzerland),*

Coffee break   10H45 - 11H15

11H15 - 12H30   S1 - PHENOMENA & MODELING

Chair: Nicole Goutal (EDF)

- ✓ Comparison of 3 methods assessing the inundation caused by the erosion of an embankment, *André Paquier, IRSTEA – UR HHLY (France)*
- ✓ Digital simulation & experimental models: the experience of the Sauveterre fish pass, *Magali de Cachard, Sébastien Roux, Nicolas Boisson, CNR & Optifluides (France)*
- ✓ Methodology for climate change assessment of flood dynamics with deterministic hydrological model, *Ngoc Duong Vo, Philippe Gourbesville, Polytech' Nice (France)*
- ✓ Storm events of Nice bay; A numerical modeling of the interactions between wave, current and solid transport, *Rémi Dumasdelage, Olivier Delestre, Didier Clamond, Nice Municipality & Nice University (France)*

12H30 – SHORT ORAL POSTER PRESENTATIONS

Chair: Jean Cunge (SHF)

- • Estimation of suspended sediment load, *Omar Elahcene, Boualem Remini, Abdelali Terfous, University of Djelfa, University of Blida, (Algeria)*
- • One-dimensional model for sediment transport*, Alvaro Aldama, Adalberto Vaca, Dunia Gonzalez, CFE PYPSA CVA ICA (Ecuador)*

- Simulation of density flow and Velocity variation, *Fatih Ünes, Mustafa Demirci, M.Kemal University; Istanbul University (Turkey)*
- A numerical study of Flow over a side weir, *M.R. Namaee, Khaje Nasir University, (Iran)*
- 1 D Numerical simulation of Hydraulic Jump by Finite element method with mesh adaptations, *S. Jemai, J.L. Robert, Y. Hamdi, ENAT, Laval University, (Tunis-Canada)*

Lunch   12H45

14H00 - 16H30 Parallel sessions

S 2 - URBAN FLOODS

Chair: Patrick Sauvaget (ARTELIA)

- ✓ Evaluation of flow speeding urbanized areas and flood hazard mapping in flood risk prevention schemes, *Arnaud Koch, Quentin Strappazzon, Marc Delbec, Kevin Corsiez, Manuel Philippe, Prolog Ingenierie, DDT de la mer du Nord (France)*
- ✓ Urban scale uncertainty for runoff generation, *Jelena Batica, Philippe Gourbesville, Polytech' Nice (France)*
- ✓ Deterministic hydrological model for flood risk assessment of Mexico City; *Rafael Vargas, Philippe Gourbesville, Polytech' Nice (France)*
- ✓ Vulnerability index for urban flooding: a socio-economic- behavioral-political approach, *Mae B.B. Villordon, Philippe Gourbesville, Polytech' Nice (France)*
- ✓ Evaluation of adaptation strategies for urban Flooding in Central Taipei City in Taiwan, *Ming-Hsi Hsu, Chih-Hung Chen, Wen Cheng Liu, Taiwan University, (Taiwan)*

S 3 - RUNUP & SURGE PHENOMENA

Chair : Xavier Bertin : (La Rochelle University)

- ✓ Improvement to the treatment of wave setup, *H. Hajji, Delphine Cariou, GLOBOCEAN (France)*
- ✓ Surface waves determination from pressure measurements at the bottom, *Didier Clamond, Nice University (France)*
- ✓ Construction of a numerical wave data-bases ANEMOC-2 on the Mediterranean Sea, *Anne-Laure Tiberi-Wadier, Amelie Laugel, Michel Benoit, CEREMA/CETMEF, EDF R&D ENPC (France)*
- ✓ Evolution of surge levels inside harbor basins: The case of Le Havre harbour, *Vanessya Laborie, Philippe Sergent, François Hissel, CEREMA (France)*
- ✓ Physical modeling of resonance phenomena in the long wave dynamics, *Nizar Abcha, Alexander Ezersky, Efim Pelinovsky, UMR CNRS Caen, Russian Academy of Science (France & Russia)*
- ✓ Characteristics of Sumatra Squalls, *Duy Khiem Ly, Cheng Ann Tan, Singapore Univ - DHI (France & Singapore)*

Coffee break   16H00

16H30 - 18H30 Parallel sessions

S 4- RIVER FLOODS

Chair: André Paquier (IRSTEA)

- ✓ Uncertainty in hydrodynamic modelling of flooding in the lower Niger river with downstream sea level rise, *Zahra Musa, Ioanna Popescu, Arthur Mynett, UNESCO, IHE (Netherlands)*
- ✓ Data assimilation with an ensemble Kalman on an operation hydraulic network, *Sebastien Barthelemy, Sophie Ricchi, Nicole Goutal, Olivier Thual, Etienne Le Pape, CERFACS, EDF, SCHAPI, IMFT (France)*
- ✓ Fudaa-crue & crue 10: overview ON new concepts and tools for hydraulic modeling, *Pierre Balayn, J.M. Battista, Frederic Deniger, CNR et ADEXCEL Consulting (France)*
- ✓ Flood control using retention dams, *Majid Galoie, Artemis Motamedi, Graz University (Austria), Ispahan University (Iran)*
- ✓ AV2D: A data driven hydrological forecasting approach based on aggregate variables, *Wilfried Segretier, Martine Collard, University of West Indies & Guiana (France)*
- ✓ Numerical scheme for a viscous Shallow water system including new friction laws of second order, *Olivier Delestre, Ulrich Razafison, University of Nice, University of Franche-Comté (France)*

S 5 - UNCERTAINTIES

Chair: Thomas Wenka (BAW)

- ✓ Global sensitivity analysis with 2D hydraulic codes, *Morgan Abily, Olivier Delestre, Nathalie Bertrand, Polytech' Nice, Yann Richet, IRSN (France)*
- ✓ Runup and uncertainty quantification: sensitivity analysis via Anova decomposition, *Mario Ricchiuto, Pietro Congedo, INRIA (France)*
- ✓ Global sensitive case of the Var river Valley, *Morgan Abily, Olivier Delestre, Nathalie Bertrand, Polytech' Nice, IRSN (France)*
- ✓ Modeling of a navigation reach with unknown input, *Klaudia Horvath, Mines Telecom Institute, Karine Chuquet VNF (France)*
- ✓ Real-time Reservoir operation for Flood Management considering resemble stream flow prediction, *Nohara Daisuke, Yuya Nishioka, Tomoharu Hori, Kyoto University (Japan)*
- ✓ An efficient and modular approach dedicated to dam breaks, *Frederic Stilmant, Michel Pirotton, Benjamin Dewals, Liege University (Belgium)*

18H30   Cocktail - gathering around posters

THURSDAY JUNE 12, 2014 MORNING

COMMON SESSION WITH FAST TRANSIENTS
MODELISATON OPERATIONNELLE DES GRANDS TRANSITOIRES HYDRAULIQUES
EN ANGLAIS, AVEC TRADUCTION SIMULTANEE
IN ENGLISH WITH SIMULTANEOUS TRANSLATION

9H00 Welcome speech: Daniel Loudière, Chairman of SHF

9H15 Keynote lectures :

Chair : Philippe Gourbesville (Polytech' Nice)

En anglais sauf la conférence introductive / In English with exception of the first keynote

- Exposé introductif relatif aux besoins des services de l'État en matière de modélisation numérique opérationnelle des grands transitoires hydrauliques, *François Duquesne, SCHAPI (France)*
- 2 D & 3D modeling in German Inland waterways, *Thomas Wenka, BAW (Germany)*
- Storm surges & coastal flooding : status and challenges, *Xavier Bertin, La Rochelle University (France)*
- Dam and levee failures: an overview of flood wave propagation, *André Paquier, IRSTEA, Nicole Goutal, EDF (France)*
- Parameter regionalization for a process oriented distributed model dedicated to flash floods, *Denis Dartus, IMFT, P.A. Garambois, University of Toulouse (France)*
- Modeling of fast hydraulic transients : issues, challenges, perspectives, *Yves Zech, Sandra Soares, Sylvie Van Emelen, Catholic University of Louvain (Belgium)*

SHF AWARDS CEREMONY

(Grand Prix Hydrotechnique and Pierre Massé award)

13H00   Lunch

THURSDAY 12 JUNE AFTERNOON

14H30 - 16H15   S 6: 3D MODELING, MODELS COUPLING & PARALLEL COMPUTING

Chair: Yves Zech (Catholic University of Louvain)

14H30   Keynote lecture:

Smoothed Particle Hydrodynamics: fresh insights in CFD, *Damien Violeau, EDF (France)*

- ✓ Validation of a SPH model for free surface flows, *Louis Goffin, Sebastien Erpicum, Benjamin Dewals, Michel Pirotton, Pierre Archambeau, University of Liege (Belgium)*

- ✓ Building of a simulator to study low-head hydropower plants performance, Olivier Bertrand, *Fabrice Loiseau, Pierre Roumieu, Emmanuelle Lopez, ARTELIA, ALSTOM, CNR, JKL (France)*
- ✓ 3D computational modeling of the Galaube Dam spillway, *Adrien Gellibert, Nicolas Pepin, Jeremy Savatier, ISL Ingenierie (France)*
- ✓ 3D numerical simulation of a real dam reservoir: Thermal stratified flow, *Fatih Ünes, Mustafa Demirci, Mustafa Kemal University (Turkey)*
- ✓ Comparison and validation of two parallelization approaches of FullSWOF_2D software, *Olivier Delestre, Helene Coullon, Morgan Abily, Lab. J.A. Dieudonne, University of Orleans, University of Nice (France)*

16H15   Coffee break

- ✓ Numerical simulation of hydrodynamics and residence time in alpine lake with 3D model, *Wen-Cheng Liu, Ming-Hsi Hsu, Wei-Bo Chen, National Taiwan University, Taiwan Typhoon & Flood research Institute (Taiwan)*
- ✓ Coupling a 3-D Navier Stokes to a 1D shallow water, *Mehdi Pierre Daou, Eric Blayo; Antoine Rousseau, Nicole Goutal, ARTELIA, INRIA, EDF R&D (France)*
- ✓ 1D, 2D & 3D modeling of PAC - UPC Laboratory, *Manuel Gomez, Eduardo Martinez, Technical University of Catalonia (Spain)*

19H30 - Conference dinner

FRIDAY JUNE 13, 2014

9H00 Keynote lecture:

Presentation on multi-phase CFD Solver Neptune_CFD, N. Mechitoua, EDF, Philippe Montarnal, CEA (*France*)

- ✓ Large Eddy simulation of cavitating Throttle flow, *Wilfried Edelbauer, Jure Struci, Alexander Morozov, AVL AST LIST GmbH (Germany)*

9H50 - 10H20   Coffee Break

10H20 - 12H00   S 7 - TWO PHASE FLOWS & CAVITATION

Chair: Guy Caignaert (Arts & Métiers)

Part one

- ✓ RANS computations of a cavitating tip Vortex, *Jean Decaix, G. Balarac, C. Münch, HEVS (Germany)*
- ✓ Numerical modeling of aerated cavitation using compressible homogeneous equilibrium model, *Petar Tomov, Sofiane Khelladi, Ch. Sarraf, Farid Bakir, ENSAM - PARISTECH (France)*
- ✓ Experimental and numerical modeling of free-surface Turbulent Flows in full air core water vortices, *Sean Mulligan, Richard Sherlock, John Casserly, Institute of Technology (Ireland)*
- ✓ Calibration of an air entrainment model for CFD spillway applications, *Daniel Valero, Raphael Garcia Bartual, Polytechnic University of Valance, UPV (Spain)*

12H00   Lunch

13H30 - 15H00   S 7 - TWO PHASE FLOWS & CAVITATION

Part two   *Chair: Véronique Roig (IMFT)*

- ✓ 3D numerical simulations of particle-water interaction using a virtual approach, *Varvara Roubtsova, Mohamed Chekired, Hydro-Quebec (Canada)*
- ✓ A stochastic model for particle deposition in turbulent flows and clogging effects, *Celine Caruyer, Jean-Pierre Minier, Mathieu Guingo, EDF - R&D (France), Christophe Henry, Institute of Fluid Flow Machinery (Poland)*
- ✓ Towards numerical simulation of snow showers of jet-engine fuel systems, *Ewan Marechal, Sofiane Khelladi, Florent Ravelet, Olivier Delepierre-Massue, ENSAM - SNECMA (France)*
- ✓ Multifield approach and interface locating method for two-phase flows in nuclear power plant, Stéphane *Mimouni¸ Romain Denèfle, Solène Fleau, EDF, R&D Stéphane Vincent, I2M University de Bordeaux (France)*

15H00 - END OF CONFERENCE

Organizing Committee:

Guy Caignaert (Arts et Métiers ParisTech)

Jean Cunge (Expert)

Isabelle Flour (EDF)

Philippe Gourbesville (Polytech' Nice Sophia,

Chair of Committee)

Nicole Goutal (EDF)

Dominique Laurence (EDF)

Fabrice Lebas (Polytech' Nice)

André Paquier (IRSTEA)

Jean-Georges Philipps (SHF)

Véronique Roig (IMFT Toulouse)

Didier Roult (CNR)

Patrick Sauvaget (ARTELIA Group)

Neda Sheibani (SHF)

Pierre-Louis Viollet (SHF, Chair of Scientific

& Technical Committee)

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