4. Extreme events

Theme	Subtheme	Session
4. Extreme events	4.1 Flood Hazard	4.1.1 Flood Hazard - Flood hazard (4.1)
	4.2 Urban flooding	4.2.1 Urban flooding - Urban flooding (4.2)
	4.3 Recent advances in characterization and modelling of floods from multiple sources (Special Session)	4.3.1 Recent advances in characterization and modelling of floods from multiple sources (Special Session) - Recent advances in characterization and modelling of floods from multiple sources (4.3)
	4.4 Climate adaptation	4.4.1 Climate adaptation - Climate adaptation (4.4)

4.1 4.1.1 Flood Hazard - Flood hazard

1. Numerical simulation of inundation process of a heavy precipitation event: A case study of August 2014 in West Rapti River basin, Nepal, *Rocky Talchabhadel, Hajime Nakagawa, Kenji Kawaike, Kazuki Yamanoi, Rajaram Prajapati.*
2. An application of "Big Data" in flood risk management, *David Morrison, Kerri McClymont, Lindsay Beevers.*
3. Historic flood reconstructions for a safer future: the use of three types of surrogate models, *Anouk Bomers, Ralph M.J. Schielen, Suzanne J.M.H. Hulscher.*
4. Numerical analysis of river flood defences, *Pedro Martin-Moreta, Daphine Karugaba, Sheikh Badji, Matthew Eliman, Richard Honeychurch.*
5. Effects of a river intervention on water levels in a bifurcating river system, *Matthijs R.A. Gensen, Jord J. Warmink, Fredrik Huthoff, Suzanne J.M.H. Hulscher.*
6. Experimental investigation of flow in a compound channel with symmetric diverging floodplains, *Bhabani Shankar DAS, Kamalini DEVI, Jnana Ranjan KHUNTIA, Kishanjit Kumar Khatua.*
7. Characteristics of active sediment transport processes in extreme flood hazards, *Daisuke Harada, Shinji Egashira, Hiroyuki Itou.*

4.2 4.2.1 Urban flooding - Urban flooding

1. Hydraulic model experimental study of flooding flows at the Shirakawa river in July 2012, *Ryuichi Hirakawa, Terunori Ohmoto, Xiang Chen.*
2. Influence of model geometric distortion in laboratory scale modelling of urban flooding, *Xuefang LI, Sébastien Erpicum, Emmanuel Mignot, Pierre Archambeau, Adrien Poupardin, Nicolas Rivière, Michel Pirotton, Benjamin DEWALS.*
3. Experimental analysis of urban flood intrusion into buildings, *Emmanuel Mignot, Loick Camusson, Nicolas Rivière.*
4. Influence of a porous urban block on urban flood flow patterns, *Miguel Ángel Mejía Morales, Emmanuel Mignot, André Paquier, Sébastien PROUST.*
5. Porous Shallow Water modeling in differential form: computation of cell-based conveyance porosity fields in a real urban layout, *Daniele P. Viero, Alessia Ferrari, Renato Vacondio, Andrea Defina, Paolo Mignosa.*
6. Citizen science-based urban flood monitoring in Hanumante River, Nepal, *Rajaram Prajapati, Rocky Talchabhadel.*
7. A 1D-2D hydrodynamic model for sewer-overland coupled flow using GPU technology, *Javier Fernández-Pato, Pilar García-Navarro.*
8. Application of hydroinformatic tools to assess flood flow conditions under a medieval masonry arch bridge, *José Pinho, Daniel Oliveira, Vaz Tomé.*

4.3 4.3.1 Recent advances in characterization and modelling of floods from multiple sources (Special Session) - Recent advances in characterization and modelling of floods from multiple sources

1. A new framework for defining a priori grids in 2D runoff models at basin scale, *Domenico Ferraro, Pierfranco Costabile, Carmelina Costanzo, G. Petaccia, Francesco Macchione.*
2. Constructing a representative one-dimensional hydraulic model that approximates the results of a detailed two-dimensional hydraulic model, *Gaven Tang, Wolf Ploeger, Peter Onyshko.*

3. Inundation modelling for fluvial and pluvial flooding during typhoons - a case study in Shanghai city, *Qian Ke, Jeremy Bricker, Qinghua Ye, Thierry Hohmann, Thanasis Kallioras, Varinia Sutter.*

4. Evaluating future climate-driven changes in flood hazard in Northwest Spain coastal river reaches, *María Bermúdez, Luis Cea, Javier Sopelana.*

5. Wave propagation in porous structures based on ISPH method, *Melissa Ramos Ortega, Anthony Beaudoin, Serge Huberson.*

4.4 4.4.1 Climate adaptation - Climate adaptation

1. Climate Adaptation of Canadian Floodplain Maps, *Muhammad Khaliq.*

2. Impacts of climate change and land use on riverine sediment inputs into coastal ecosystems, *Eliana Jorquera, Angelo Breda, José F. Rodríguez, Patricia M. Saco.*

3. Flooding, climate change impacts and development: lower upper Nepean River, *Maria Pinto.*

4. Analyzing future extreme floods for the Mississippi River Basin, *Ahmad Ali Tavakoly, Elissa Yeates, James Lewis, Sara Lytle.*

5. Applying adaptive design for the replacement of a weir in the Meuse River - a case study, *Ruben Frijns, Hessel Voortman, Henry Tuin, Jeremy Bricker.*

6. Securing the long-term sustainability of black-tailed godwits at the Nene Washes, UK, against climate change and its impact on hydrological conditions, *Nikolaus Clemenz, David Ocio, Charlotte Hudson, Hannah Ward, Charlie Kitchin.*