RIVER FLOW 2022 - Full Program

Toronto time = EST (Eastern Standard Time); Coleman Award submissions marked with (**)

Tuesday – November 8th, Morning

08:15	Opening Ceremony				
08:45	**Keynote Lecture 1** **Unveiling the diversity of river systems in Lowland Amazonia: from basic science to engineering projects to achieve sustainable river-based development** ***Dr. Jorge D. Abad, Scientific Director, RED YAKU, Peru***				
09:45	Morning Break				
10:15	Parallel Sessions 1				
	A1: Flow in Straight and Compound Channels – Part I ***Chair: Donatella Termini*** ***University of Palermo, Italy***	**A2: Coherent Structures in Open-Channel Flow** ***Chair: Vincent Chu*** ***McGill University, Canada***	**C1: In-Stream Structures: Hydrodynamics, Scour and Riverbed Protection – Part I** ***Chair: Rob Ettema*** ***Colorado State University, USA***	**D1: Flow in Vegetated Channels** ***Chair: Jay Lacey*** ***Université Sherbrooke, Canada***	**E1: Contaminant Transport and Mixing Processes – Part I** ***Chair: Susan Gaskin*** ***McGill University, Canada***
10:20	Apparent shear force modelling in compound open channel using Support Vector Machine (**) ***R. Gaurav, B. Das, J. Khuntia, K. Devi***	Large-scale motion over spanwise heterogeneous bed roughness ***S. Chung, Q. Luo, T. Stoesser***	Discussion of various equilibrium concepts on scouring around hydraulic structures (**) ***C. Kannen, F. Seidel, M. Franca***	Effects of patch height on sediment entrainment mechanisms around a rectangular patch of vegetation ***M. Koken, G. Constantinescu***	Gravity currents flowing over a rough bed (**) ***M. Maggi, C. Adduce, M. Negretti***
10:40	Flow structure in a compound channel flow: benchmarking 2D and 3D numerical models ***I. Kimura, D. Bousmar et al. IAHR Working Group on Compound Channels***	Three-dimensional structures of ice-covered flow in a river bend: ***T. Le, B. Koyuncu***	Surface bed characteristics of circular pier scouring in different sediment mixtures under flow shallowness variations (**) ***S. Okhravi, Y. Velísková, S. Gohari, T. Fazeres-Ferradosa,***	Direct bed shear stress measurements in flows through rigid emergent vegetation (**) ***J. Aliaga, J. Aberle***	Influence of an emergent vertical obstacle on approaching gravity current (**) ***G. Di Lollo, C. Adduce, M. Brito, R. Ferreira, A. Ricardo***
11:00	Boundary shear stress induced by a ship propeller wake over rough and smooth bed surfaces ***F. Núñez, J. Macías, J. Aberle***	Cylindrical obstacle impacted by long waves: experimental observation of downstream vorticity and coherent structures ***F. De Serio, R. Basile***	Riverbed protection due to installation of stacked boulders on both sides of elliptical pier ***T. Ishitsuka, Y. Yasuda***	Anisotropy in turbulent flow through random and emergent rigid vegetation on rough beds ***N. Penna, F. Coscarella, R. Gaudio, P. Gualtieri***	Quantifying mixing processes at a river-lake interface: the case of the plunging negatively buoyant inflow of the Rhône R. into Lake Gen. (**) ***S. Thorez, K. Blanckaert, U. Lemmin, D. Barry***
11:20	A Rational estimation of the fully developed approach flow required for fluid-structure interaction studies in an open channel ***S. Das, R. Balachandar, R. Barron***	Large-scale motion in semi-filled pipes and very narrow channels at supercritical flow ***Y. Liu, T. Stoesser***	The impact of river ice submergence and length on local scour (**) ***D. Sirianni, C. Valela, C. Rennie, I. Nistor, H. Almansour***	Direct visualization of hyporheic exchange in an emergent vegetation canopy (**) ***S. Huang, J. Yang***	Density currents interacting with an array of in-line and emergent cylinders ***A. Ricardo, G. Giampa, R. Ferreira, J. Ramos, M. Brito***
11:40	***Discussion Period***	**Discussion Period**	Experimental study of turbulent flow characteristics around a circular compound bridge pier ***S. Reddy, V. Chandra***	Flow resistance in open channels with leafed flexible vegetation and large-scale bedforms (**) ***G. Artini, S. Francalanci, L. Solari, J. Aberle***	An improvement to the particle tracking velocimetry algorithm applied to the study of a shallow mixing layer (**) ***J. Restrepo-Grisales, S. Gaskin***
12:00			Live bed scour depth modelling around bridge pier using Support Vector Machine (**) ***Nil, A. Baranwal, B. Das***	**Discussion Period**	**Discussion Period**
			12:20 Discussion Period		
12:15	Lunch Break, IAHR Fluvial Hydraulics Committee Meeting				

Tuesday – November 8th, Afternoon

13:15	Parallel Sessions 2				
	A3: Flow in Straight and Compound Channels – Part I ***Chair: Katinka Koll*** ***TU Braunschweig, Germany***	**B1: Sediment Transport – Part I** ***Chair: Joe Aberle*** ***TU Braunschweig, Germany***	**B2: Large-Scale River Morphodynamics – Part I** ***Chair: Volker Weibrecht*** ***ETH Zürich, Switzerland***	**D2: Ecological Aspects of River Flows – Part I** ***Chair: Giovanni De Cesare*** ***EPFL, Switzerland***	**F1: Extreme Events and Effects of Climate Change – Part I** ***Chair: Pierfranco Costabile*** ***University of Calabria, Italy***
13:20	A new perspective on turbulent boundary layer profiles ***G. Smart***	Evaluation of critical shear stress in channel beds of fine gravel (**) ***B. Oviedo Lorío, R. Murillo-Muñoz***	Saturation of curvature-induced secondary currents in relatively sharp bends: a two-dimensional modelling approach (**) ***T. Lazzarin, D. Viero***	Flume study on hydro-morphologic changes provided by instream tree installations **I. Schnauder, K. Blanckaert**	The value of globally available data for flow predictions in small catchments: a case study of the Aa of Weerijs, The Netherlands ***L. Umutoni, A. Jonoski, I. Popescu***
13:40	An iterative method for estimating the velocity dip positions across a river ***A. Handique, A. Sarma, R. Bhattacharjya***	Modelling bedload particle travel lengths in rivers with different hydrologic regimes (**) ***E. Papangelakis, B. MacVicar, A. Montakhab, P. Ashmore***	Application of convective flow model to a real meandering bend (**) ***H. Zhang, W. Dai***	Fish trajectories over a full-scale model of a nature-like unstructured block ramp (**) ***R. Eikenberg, J. Aberle, P. Andreasson, D. Aldvén, L. Persson***	Changes in the flow processes in the rivers of the Mura-Drava-Danube transboundary biosphere reserve ***E. Tamás, L. Tadić***
14:00	Comparing shallow mixing layers over rough and smooth beds (**) ***B. Cerino, S. Proust, C. Berni, V. Nikora***	Spatial and temporal variations of suspended sediment concentrations from different floodplain environments (**) ***C. Salas, B. Rhoads***	Simulation of potential meandering belt width using a physics-based morphodynamic model ***H. Amini, F. Monegaglia, M. Redolfi, M. Tubino, G. Zolezzi, S. Lanzoni***	Predicting spawning habitat distribution of P. altivelisin in gravel-bed rivers by computational model ***M. Harada***	Threshold identification using daily streamflow records for two stations along the Niger River, West Africa ***A. Olusola, S. Ogunjo, S. Adelabu***
14:20	Investigation of turbulence characteristics and mixing layer thickness in gravel bed flows ***D. Termini, F. Lavignani, N. Benistati***	Estimation of suspended-sediment rating curves in the Ca River Basin, Vietnam (**) ***C. Pham Van, H. Le, D. Nguyen-Ngoc***	Restoration of channel meandering using current deflectors (**) ***Y. Pi, C. Wu, Y. Cho, C. Zhang***	Linear theory for the formation of aquatic vegetation patches in rivers ***C. Carbonari, G. Calvani, L. Solari***	High-resolution topographical data and high-performance-computing tools for the morphodynamical modelling of realistic flood events ***S. Martínez-Aranda, D. Vericat, R. Batalla, P. García-Navarro***
14:40	Free surface flow past a single bar in a gravel stream and related hyporheic flow (**) ***M. Ahadi, A.M. Ferreira da Silva, A. Button***	Fluvial erosion of cohesive glacial sediments: clays and tills from the Great Lakes and St. Lawrence Lowlands (**) ***L. Gonthier, D. Yeats, S. Gaskin***	Meandering rivers in the midwestern US that anabranch: prevalence, morphological characteristics and power regimes (**) ***T. Shukla, B. Rhoads***	Developing a new conservation management tool: the Mussel Biosensor ***E. Curley, R. Thomas, C. Adams, A. Stephen***	GPU simulation of flood and erosion risk mitigation strategies in olive-grove basins ***P. Bohorquez, F. Pérez-Latorre, I. González-Planet, R. Jiménez-Melero, G. Parra***
15:00	**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**
15:15	Afternoon Break				
15:30	Lab Visits: Universities of Waterloo, McGill and Ottawa				
16:00	Greet and Meet Session (REMO)				

Wednesday – November 9th, Morning

08:15	**Keynote Lecture 2** **Channel bed incision in engineered rivers: characteristics and mitigation** ***Dr. Astrid Blom, Professor, TU Delft, The Netherlands***				
09:15	Morning Break				
09:45	Parallel Sessions 3				
	B3: Innovative Measurement Techniques ***Chair: Patrick Grover*** ***BGC Engineering, Canada***	**B4: Sediment Transport – Part II** ***Chair: Rui Ferreira*** ***IST, Portugal***	**B5: Bifurcations and Confluences** ***Chair: George Constantinescu*** ***University of Iowa, USA***	**C2: In-Stream Structures: Hydrodynamics, Scour and Riverbed Protection – Part II** ***Chair: Wim Uijttewaal*** ***TU Delft, The Netherlands***	**F2: Extreme Events and Effects of Climate Change – Part II** ***Chair: Susanna Dazzi*** ***University of Parma, Italy***
9:50	Robust and accurate river flow measurement by Space-Time Image Velocimetry (STIV) with Improved Deep Learning Technique ***K. Watanabe, Y. Minami, M. Iguchi, I. Fujita***	Transport-supply ratios in river channels ***J. Haschenburger***	Flow partitioning at a bifurcation in the Upper Dutch Rhine (**) ***M. Chowdhury, A. Blom, R. Schielen***	Roll waves on a laminar sheet flow produced by local disturbance ***B. Yu, V. Chu***	Automatic calibration of a river reach in northern Italy by coupling a parallel 2D shallow water model and the PEST tool ***A. Ferrari, M. D'Oria, R. Vacondio, P. Mignosa***
10:10	Detection of morphological changes for Wadi channel bed in the arid region using SFM Photogrammetry (**) ***M. Al mamari, S. Kantoush, T. Sumi, M. Saber***	Living-Lab Rhine (LiLaR) – comparing Dutch and German sediment measurements in the border Rhine ***M. Struck, N. Huber, G. Hillebrand, P. Onjira, A. Winterscheid, J. Brils, R. Schielen, J. Mol, C. Bode, A. van den Hoek, F. Siering***	3D CFD modeling of bed changes at a laboratory channel confluence ***B. Balouchi, A. Mirzaahmadi, H. Bihs, N. Ruther***	An experimental study on scour beneath pipelines at river crossings ***M. Ahadi, A.M. Ferreira da Silva, P. Grover, K. Lockwood***	Lag time predictions using characteristic times deduced by the 2D Shallow Water Equations at basin-scale (**) ***K. Négyesi, E. D. Nagy, G. Barbero, G. Petaccia, C. Costanzo, P. Costabile***
10:30	Photogrammetry measurements of wave overtopping erosion on a seashore dike (**) ***M. Ebrahimi, M. Van Damme, S. Soares-Frazão***	Sediment balance for the supply-limited Meuse River ***H. Barneveld, T. Hoitink, R. Frings***	Observations and modeling of density-driven streamwise orientated vortices at a river confluence ***J. Duguay, P. Biron, J. Lacey***	Investigation of vorticity and coherent turbulent structure in a 90° lateral water diversion with and without a vane-field ***J. Baltazar, G. Bombar, E. Alves, A. Cardoso***	Influence of EURO-CORDEX ensemble on lumped flood impact indicators: a case study ***R. Padulano, G. Rianna, P. Mercogliano, P. Costabile, C. Costanzo, G. Del Giudice***
10:50	Retrieving channel geometry and flow properties of the Nicolet River from Satellite Multispectral Imagery ***B. Lak, S. Li***	Limits between surface and inner clogging of riverbed by fine sediment (**) ***R. Dubuis, G. De Cesare***	Bed morphology characterization of an anabranching bifurcation-confluence of the Solimões River, Brazil ***R. Gutierrez, F. Escusa, R. Almeida, M. Ianniruberto, C. Gualtieri***	Stability of consecutive stacked boulders behind Check Dams during flood stages ***N. Fuchino, Y. Yasuda***	Response of the Lower Rhine River to climate change over the period 2010-2050 (**) ***C. Ylla Arbós, A. Blom, R. Schielen***
11:10	**Discussion Period**	Experimental characterization of dry granular flows through sudden constrictions (**) ***S. Mendes, R. Farias, R. Aleixo, M. Larcher, T. Viseu, R. Ferreira***	Laboratory study of density-driven streamwise orientated vortices at a symmetric confluence ***J. Duguay, P. Biron, J. Lacey, C. Bergeron***	Impact of mud flow instabilities on hydraulic structures (**) ***B. Yu, V. Chu***	Flood hazard mapping in river mouths: the effect of river bar formation and the phase lag between tides and river discharge ***A. Ruiz-Reina, C. Zarzuelo, A. López-Ruiz***
11:30		**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**
11:45	Lunch Break				

Wednesday – November 9th, Afternoon

12:30	Video Clip Contest			
13:15	**Parallel Sessions 4**			
	A4: Physics and Modeling of Streamflows ***Chair: Samuel Li*** ***Concordia University, Canada***	**B6: Bed Forms** ***Chair: Gökçen Bombar*** ***Izmir Katip Çelebi University, Turkey***	**C3: Dams and Rivers: Sedimentation, Regulation, Restoration and Removal** ***Chair: Jason Duguay*** ***Concordia University***	**D3: Ecological Aspects of River Flows – Part II** ***Chair: Walter Bertoldi*** ***University of Trento, Italy***
13:20	Application of the extended Bernoulli equation to a potential flow in a rectangular contracted flume ***U. Teschke, F. Ruhr***	Dune bed statistical analysis using multibeam echosound survey data ***I. Cavalieri, L. Schippa***	Numerical modelling of navigable rivers: influence of navigation structures on the Meuse River flow ***A. Patil, J. Lambrechts, I. Draoui, F. Fiengo Perez, E. Deleersnijder***	Thermal responsiveness of small streams in frigid winters ***R. Ettema, E. Kempema***
13:40	The velocity of long wave in a channel of parabolic cross-section ***S. Sokolov***	Bedform morphology changes due to plastic pollution: preliminary observations and potential implications ***C. Russell, R. Fernández, D. Parsons, S. Gabbott***	Scale model study of simple energy dissipation features at low head dams ***M. Provan, P. Knox, A. Rayner, A. Cornett***	Quantification of environmental DNA transport over a river network ***L. Stancanelli, E. Ragno***
14:00	Mesh-free particle methods for simulation of fluvial processes, challenges and opportunities ***A. Shakibaeinia, M. Jandaghian***	Free alternate bars in a German sand bed river (**) ***T. Branss, J. Aberle, B. Hentschel***	Assessment of hydrological alteration in regulated water resources systems: a case study in the Júcar River basin (Spain) ***S. Ghannem, R. Bergillos, J. Paredes-Arquiola, A. Solera, J. Andreu***	Hydraulic attraction at a downstream bypass for European eels (**) ***S. Collier, R. Thomas, R. Wright, L. Carter, J. Bolland***
14:20	The discontinuous Galerkin method for river-delta continuum by means of a coupled 1D-2D shallow water model ***I. Draoui, J. Lambrechts, V. Legat, E. Deleersnijder***	Formation of repeating bedforms (bars-flats) in ephemeral channels: from field observations to modelling (**) ***G. Massera, A. Siviglia, M. Tubino, T. Cohen, J. Laronne, M. Dorman, I. Reid, D. Powell***	Numerical modelling investigation of low-water level events at a water intake near the Fort Frances-International Falls Dam **A. *Pilechi, E. Murphy***	Individual and collective plants motion in a submerged, staggered, flexible, artificial canopy ***L. Guiot, D. Doppler, J. Jerome, B. Löhrer. J. Frölich, N. Riviere***
14:40	Experimental and numerical investigation of the flow-structure of river surf waves ***P. Asiaban, C. Rennie, N. Egsgard***	Comparison of sand-bed river flow resistance calculations ***D. Froehlich***	Numerical modelling to estimate the reservoir sedimentation due to the implementation of Chepete dam in Beni River, Bolivia ***M. Jimenez, M. Heredia***	Experimental analysis on the stability of alternative gravel dikes during flood stages in channelized rivers (**) ***P. Beretta Piccoli, Y. Yasuda***
15:00	**Discussion Period**	**Discussion Period**	Managing negative values in reservoir inflow computation- a case study ***A. Shibu, S. Mukherjee***	Butterfly effect in a deterministic ecomorphodynamic model (**) ***I. Cunico, W. Bertoldi, A. Siviglia, F. Caponi***
			15:20 Discussion Period	**15:20 Discussion Period**
15:15	Afternoon Break			
15:45	Lab Visits: Universities of Sherbrooke and Queen's			
16:15	Social Hour (REMO)			

Thursday – November 10th, Morning

08:15	**Keynote Lecture 3** **What braiding reveals about river morphology, bedload and channel change** ***Dr. Peter Ashmore, Professor, University of Western Ontario, Canada***				
09:15	Morning Break				
09:45	Parallel Sessions 5				
	B7: Morphological Response to Human Activities ***Chair: Ronald Guierrez*** ***Pontifical Catholic Univ., Peru***	**B8: Bank Erosion and Protection** ***Chair: Pascale Biron*** ***Concordia University, Canada***	**D4: Stream Restoration and Conservation** ***Chair: Elli Papangelakis*** ***McMaster University, Canada***	**E2: Contaminant Transport and Mixing Processes – Part II** ***Chair: Mário Franca*** ***KIT, Germany***	**F3: Extreme Events and Effects of Climate Change – Part III** ***Chair: Michael Nones*** **Polish Acad. Sciences, Poland**
09:50	The effect of land use changes on the morphology of a small rural stream in southwestern Ontario, Canada ***S. Gardner, D. Nguyen, N. Sattolo, H. May, A. Binns, J. Levison***	Mechanistic 2D flow-erosion modelling of vegetated river banks **P. Perona, G. De Cesare, M. Schwarz**	Classification of mountain streams using Rosgen and Montgomery-Buffington methods (Case Study - Jajroud basin) ***M. Pirestani, A. Gashtasebi***	Sediment and chemical transport modeling of a hypothetical tailings dam breach spill in the lower Athabasca River (**) ***M. Taherparvar, A. Shakibaeinia, Y. Dibike***	How fast is “flashy”? Hydraulics of flood hydrographs in small urban rivers (**) ***A. Montakhab, B. MacVicar***
10:10	Predicting response of channel width along an urbanizing river channel ***V. Barlow, P. Ashmore, B. MacVicar***	Ship wave induced excess pore water pressure in riverbeds and banks - an investigation on silty sands ***J. Rothschink, O. Stelzer***	Designing channel corridors to improve hydroecological conditions in suburban streams ***J. Franssen, P. Villard***	Predicting sediment and heavy metal transport within the Lower Athabasca River using 1D numerical modelling ***S. Kashyap, A. Petty, C. Leidl, S. Depoe***	Understanding the impacts of hydraulic uncertainties on urban flood mapping (**) ***S. Abedin, B. MacVicar***
10:30	Evaluation of the impact of the Peruvian Waterway dredged channel in the bed morphodynamics of the Huallaga River ***H. Valverde, L. Guerrero, C. Frías, J. Abad***	Experimental characterization of root-reinforced riparian sediment deposits in a restored and widened river course ***G. De Cesare, M. Solioz, P. Perona***	Towards guidance on effective use of nature-based approaches to flood and erosion risk management in Canadian river basins ***I. Vouk, S. Ferguson, E. Murphy, A. Pilechi, M. Provan***	Water pollution during floods: a protocol for measuring concentration and calculating mass discharge across a straight street (**) ***C. Fagour, S. Proust, E. Mignot***	Numerical solution of Saint-Venant equations in flood wave prediction in the lower Tapi River, India ***S. Sahoo, K. Devi, J. Khuntia, K. Khatua***
10:50	Modelling the impact of sand extraction from large rivers ***A. Gasparotto, A. Nicholas, G. Sambrook Smith, A. Daham***	Geometric floodplain controls on riverbed elevation change within and between flood events (**) ***S. Ahrendt, A. Blom, R. van Denderen, R. Schielen, A. Horner-Devine***	Providing greater variability, degrees of freedom, retention and detention for resilience in restored stream corridors ***P. Villard, J. Franssen***	Different approaches for particle representation in plastic debris transport models ***C. Yan Toe, W. Uijttewaal, D. Wüthrich***	The impact of flood waves on hydraulic structures ***B. Yu, V. Chu***
11:10	Continuous monitoring of morphological changes from sediment augmentation by field measurements and flume experiments (**) ***C. Mörtl, G. De Cesare***	Bedform observations at the operative stage of a groyne system in the Madre de Dios River, Peru ***R. Gutierrez, F. Escusa, F. Núñez-Gonzáles, J. Moris, J. Jamanca***	Fulfilling Riverscape - a creative interdisciplinary approach ***T. Arborino, S. Nguyen, G. De Cesare, P. Perona***	An innovative point location method for particle tracking models with application to water quality modeling in rivers and coastal waters ***R. Boukhelif, A. Pilechi, S. Douglas***	Regional-scale 2D hydraulic modelling for the assessment of the residual flood hazard due to levee breaches ***S. Dazzi, P. Mignosa, M. Pianforini, R. Vacondio***
11:30	**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**
11:45	Lunch Break				

Thursday – November 10th, Afternoon				
13:00	Parallel Sessions 6			
	B9: Large-Scale River Morphodynamics – Part II ***Chair: Jorge Abad*** ***RED YAKU, Peru***	**B10: Debris and Dam-Break Flows** ***Chair: Sandra Soares-Frazão*** ***U. Cath. Louvain-la-Neuve, Belgium***	**C4: In-Stream Structures: Hydrodynamics, Scour and Riverbed Protection – Part III** ***Chair: Emmanuel Mignot*** ***INSA-LYON, France***	**D5: Large Wood in Rivers and Streams** ***Chair: Virginia Ruiz-Villanueva*** ***University of Lausanne, Switzerland***
13:05	A multi-scale braided river substrate map – case study in the Rangitata ***J. Rogers, J. Brasington, J. Hoyle, J. Tonkin***	Application of the SPH-Method to simulate debris flow in a torrent in Switzerland ***R. Züger, D. Farshi***	Superposition principle for the stage discharge relationships of complex weirs ***I. Bechoua, N. Rivière, Y. Peltier, E. Mignot***	Empirical prediction of large wood transport during flood events ***N. Steeb, A. Badoux, C. Rickli, D. Rickenmann***
13:25	Coevolution of morphology, flow conditions and pulsed transport in a laboratory-scale braided river: numerical simulations ***J. Tunnicliffe, P. Ashmore***	Numerical simulation of debris flows occurred in Marumori in 2019 and countermeasures against debris flow using the numerical simulation result ***H. Takebayashi, M. Fujita***	Similarity in longitudinal decays of free jump and submerged hydraulic jump ***S. Choi, S. Choi***	Variation of large wood load in a river affected by a volcanic eruption ***A. Iroumé, K. Sanchez, N. Ampuero, L. Picco***
13:45	Are we measuring morphological changes in gravel bed rivers with the appropriate frequency? ***E. Pandrin, W. Bertoldi***	Experimental study on the breach of landslide dams with different material compositions ***J. Yang, Z. Shi, S. Soares-Frazão, H. Zheng, D. Shen***	Riverbed protection due to consecutive stacked boulders at downstream of apron in movable weir ***S. Suzuki, Y. Yasuda***	Detecting instream wood transport by a custom Neural Network and Radio Frequency Identification (RFID) technology ***J. Aarnink, M. Vuaridel, V. Ruiz-Villanueva***
14:05	Dynamic river widening under variable bed-load supply ***C. Rachelly, D. Vetsch, R. Boes, V. Weibrecht***	Frozen in time: continuous measurements in a dam breach flow ***T. Alvarez, R. Aleixo, S. Mendes, S. Amaral, T. Viseu, R. Ferreira***	Fully Lagrangian mesh-free modelling of river ice interaction with control structures ***C. Billy, A. Shakibaeinia,T. Ghobrial***	Dynamics of submerged large wood debris in reservoirs and their potential risks to hydraulic structures ***S. Takata, T. Koshiba, T. Sumi***
14:25	Long-term reach-scale suspended sediment budget of a small creek with cohesive banks ***N. Al-Ghorani, M. Hassan, E. Langendoen***	Overtopping failure of a homogeneous earth-fill dam with two different breach sizes and rough downstream conditions ***E. Taşkaya, Z. Büyüker, B. Öztürk, G. Bombar, G. Tayfur***	Three-dimensional numerical modeling of a vertical slot fish pass with complex roughness distribution ***F. Scolari, S. Schwindt, S. Haun, S. Wieprecht***	Will woody debris accumulation alter the self-cleaning ability of a piano key weir? ***M. Panthi, B. Crookston***
14:45	**Discussion Period**	**Discussion Period**	**Discussion Period**	**Discussion Period**
15:00	Break			
15:15	Closing Ceremony			