



Program

Tuesday 12th June								
	<i>auditorium</i>	<i>Room Yellow</i>	<i>Room Purple</i>	<i>Room Red</i>	<i>Room Blue</i>	<i>Room Green</i>	<i>Hall</i>	
9:00-10:00	Opening	--	--	--	--	--	--	
10:00-11:00	General Keynote A. Rinaldo	--	--	--	--	--	--	
11:00-11:30	Coffee break							
11:30-13:00	FM.1	G.6	G.2	SM.1	ST.8	HM.2	posters	
13:00-14:15	Lunch							
14:15-16:15	FM.1	G.6	NM.2	FM.3	ST.8	HM.2		
16:15-16:45	Coffee break							
16:45-18:45	FM.1	G.6	G.2	FM.4	ST.3	G.3		
18:45-20:00		Leadership Team meeting	--	--	--	--	--	
19:00-20:00	Welcome party Pre-concert light dinner							
20:00-21:30	Concert							

Wednesday 13th June								
	<i>auditorium</i>	<i>Room Yellow</i>	<i>Room Purple</i>	<i>Room Red</i>	<i>Room Blue</i>	<i>Room Green</i>	<i>Hall</i>	
8:30-10:30	HM.4	G.7	HS.6	SM.7	NM.1	FH.2	posters	
10:30-11:00	Coffee break							
11:00-12:00	HM.4	G.7	G.3	SM.7	NM.1	FH.2		
12:00-13:00	General Keynote R. Stocker	--	--	--	--	--		
13:00-14:15	Lunch							
14:15-16:15	HM.4	HS.1	FH.1	SM.5	HS.5	ST.1		
16:15-16:45	Coffee break							
16:45-18:45	HM.4	HS.1	FH.1	FM.2	HS.2	ST.1		
18:45-20:00		--	--	--	--	--	--	
20:00-22:00	Social dinner							

Thursday 14th June								
	<i>auditorium</i>	<i>Room Yellow</i>	<i>Room Purple</i>	<i>Room Red</i>	<i>Room Blue</i>	<i>Room Green</i>	<i>Hall</i>	
8:30-10:30	--	ST.5	HM.3	HS.4	ST.6	G.1	posters	
10:30-11:00	Coffee break							
11:00-13:00	--	ST.5	HM.3	HS.7	G.3	G.1		
13:00-14:15	Lunch							
14:15-16:00	closing and awards	--	--	--	--	--		



Auditorium Tuesday 12/06/2018		
9:00	10:00	welcome and opening
10:00	11:00	Keynote River networks as ecological corridors. A. Rinaldo, EPLF and University of Padova
		FM.1 Buoyancy-driven flows Conveners: A. J S Cuthbertson ; C. Adduce ; J. Laanearu; D. Malcangio
11:30	11:45	Geomorphic implications of a gravity current flowing on a mobile bed. J. Zordan; C. Juez; A.J. Schleiss; M.J. Franca.
11:45	12:00	Ekman drainage in numerical studies of dense water cascading on a slope. J. Berntsen; G. Alendal.
12:00	12:15	Wind entrainment in volcanic ash plumes: near real-time estimate and applications. F. Dioguardi; S. Engwell; N. Jones.
12:15	12:30	The front condition for Non-Boussinesq Gravity Currents. J. McElwaine; N.A. Konopliv; E. Meiburg.
12:30	12:45	Mixing in a density-driven current flowing over a rough bottom. C. Cenedese ; R. Nokes; J. Hyatt.
12:45	13:00	Collapse of particle-laden buoyant plumes in a stratified environment. D. Apsley; G. Lane-Serff.
13:00	14:15	Lunch
		FM.1 Buoyancy-driven flows Conveners: A. J S Cuthbertson ; C. Adduce ; J. Laanearu; D. Malcangio
14:15	14:30	Large Eddy Simulations on breaking internal solitary waves. C. Adduce; G La Forgia; T. Tokyay; G. Constantinescu.
14:30	14:45	Response of a highly-stratified microtidal estuary to sudden changes in the riverflow. N. Krvavica; I. Ružić; N. Ožanić.
14:45	15:00	Laboratory experiments on gravity currents interacting with an upsloping bottom. C. Adduce; M.C. De Falco; L. Ottolenghi.
15:00	15:15	Distinctive features of horizontal and vertical velocity profiles in turbidity and saline density currents. S. Nomura; H. Sakaguch; S. Venuleo; G. De Cesare; J. Hitomi; Y. Murai; Y. Tasaka; Y. Takeda.
15:15	15:30	Convective currents between open water and vegetation due to solar radiation. V. Papaioannou; P. Prinos
15:30	15:45	On the velocity structure of density currents over rough beds. R. Nasrollahpour; M. Hidayat Bin Jamal; Z. Bin Ismail; J.S. Khan.
15:45	16:00	Stratification and the dynamics of gravity currents. R. Dorrell.
16:00	16:15	Turbidity current dynamics in sinuous submarine channels. R. Kelly; R. Dorrell; A. Burns; W. McCaffrey.
16:15	16:45	Coffee break
		FM.1 Buoyancy-driven flows Conveners: A. J S Cuthbertson ; C. Adduce ; J. Laanearu; D. Malcangio
16:45	17:00	Modelling restricted exchange flows and saline blockage over a submerged sill. A. J. S. Cuthbertson; J. Laanearu.
17:00	17:15	Evaluation of RANS turbulence models for buoyancy driven lows using Star-CCM+. A. de Loor; R.E. Uittenbogaard; A.C. Bijlsma.
17:15	17:30	Pulse propagation in quasi-laminar gravity currents. P. Allen; R. Dorrell; O. Harlen; G. Keevil; R. Thomas; W. McCaffrey.
17:30	17:45	Shape factor in the pressure term in SWEs revisited. D. Pokrajac; S. Venuleo; T. Tokyay; G. Constantinescu; M. Franca.
17:45	18:00	A scale model study assessing the performance of a bubble screen mitigating salinity driven lock exchange. P. Van der Ven; G. Oldenzel.
18:00	18:15	Turbulence in the body of pseudo-steady gravity currents. C. Marshall; G. M. Keevil; R. Dorrell; S. M. Tobias; J. Peakall; S. Dutta.
18:15	18:30	Remote sensing and coastal morphodynamic modelling. M. Benincasa; F. Falcini; C. Adduce; G. Sannino; R. Santoleri.
		Posters
18:30	18:35	Laboratory studies of dense gravity current propagation over porous bed layers. A. Cuthbertson; J. Wilson; D. Arnour; G. Starrs.
		Computational analysis of negative buoyant jets in crossflow. D. Malcangio; M.B. Meftah; F. De Serio; M. Mossa.



Room Yellow Tuesday 12/06/2018

		G.6 Numerical models in Hydraulics and Fluid Mechanics Conveners: M. Greco; M.G. Tanda.
11:30	11:45	Experimental and numerical analysis of lined plunge pool spillways: Mesh dependency and sensitivity analysis using FLOW-3D. N. Latchireddi; J. F. de Melo; A. N. Pinheiro.
11:45	12:00	A comparison of numerical methods for compressible flows in viscoelastic pipes. G. Bertaglia; A. Valiani; V. Caleffi; M. Ioriatti; M. Dumbser.
12:00	12:15	Study of flow field in vortex settling basins (VSBs) by numerical modeling. N.S.R. Nikou; A.N. Ziaei; J.M. McDonough.
12:15	12:30	How good are shallow water models at capturing the effect of small-scale obstacles on urban flooding in crossroads? M. Bruwier; P. Archambeau; S. Erpicum; M. Piroton; B. Dewals; P.H. Bazin; A. Paquier; E. Mignot.
12:30	12:45	Flow resistance in urban flooding. S. D'Agostino; A. Defina.
12:45	13:00	Dual SPPhysics simulations of supercritical free-surface confluences. G. Novak; G. Rak; M. Četina; D. Žagar.
13:00	14:15	Lunch
		G.6 Numerical models in Hydraulics and Fluid Mechanics Conveners: M. Greco; M.G. Tanda.
14:15	14:30	Effective numerical modelling of transcritical flows. J. Shuttleworth; R. Ahmadian; R. Falconer.
14:30	14:45	Transient unsaturated seepage analysis of river levees. I. Butera; M. Climaci; M. G. Tanda.
14:45	15:00	The effect of boundary conditions in weakly compressible smoothed particle hydrodynamics. R. Wana; J. Hughes; D. Graham.
15:00	15:15	On the accuracy of two methods to resolve numerically bed roughness in LES. A. Hajaali; Z. Xie; P.Ouro; T.Stoesser.
15:15	15:30	GPGPU-based hydrodynamic modeling and uncertainty propagation assessment: an example for flood risk analysis. D. Vanzo; S. Peter; A. Siviglia; D.Vetsch.
15:30	15:45	Dam-break on channel contractions and expansions. A. Valiani; V. Caleffi.
15:45	16:00	Influence of bed discordance on head losses in an open channel confluence. P. X. Ramos; L. Schindfessel; J. P. Pêgo; T. De Mulder.
		Posters
16:00	16:05	Steady state numerical model of pollutant intrusion in a pressurized water distribution network bifurcation. J.Jesus Mora-Rodriguez; X. Delgado Galván; G. Carreño Aguilera; M.Perez-Sánchez; P.A. López-Jiménez. Flow over sharp-crested weirs: a numerical approach. S. Jafarinik; A.R. Zarrati; M. J. Ostad Mirza Tehrani; M. R. Jalili Ghazizadeh.
16:15	16:45	Coffee break
		G.6 Numerical models in Hydraulics and Fluid Mechanics Conveners: M. Greco; M.G. Tanda.
16:45	17:00	Mathematical model data used for an evaluation of CSO and inflow/infiltration. I. Mrnčo; T. Gibala; I. Mydlová; K. Kalinák.
17:00	17:15	Effects of the dynamic bed on hydrodynamic modelling in the Inn River. S. Giehl; M. D. Bui; P. Rutschmann
17:15	17:30	Numerical issues in 2DH simulations of flows in non-rectangular channels. M. Greco; A. Vacca; M. Iervolino; C. Di Cristo; A. Leopardi.
17:30	17:45	Surface-piercing strut hydrodynamic by smoothed particle hydrodynamics. R. Angelini Rota Roselli; G. Vernengo; S. Brizzolara; R. Guercio.
17:45	18:00	Assessing flood risk probability in urban environments using a new GPU parallelized dual drainage model. I. Fraga; J.A. García-Rodríguez; A.M. Ferreira; C. Vázquez; M. Castro.
18:00	18:15	Modeling shallow water flows on general terrains. I. Fent; S. Lanzoni; M. Putti; C. Gregoretti.



Room Purple Tuesday 12/06/2018		
		G.2 Drought and floods extremes events and climate change Conveners: R. Ranzi; R. Rigon.
11:30	11:45	Climate change assessment for streamflow in Kon – Ha Thanh river watershed, Vietnam. H.C. Vu; N.D. Vo; Q.B. Nguyen; P. Gourbesville.
11:45	12:00	Nitrous oxide emissions from riverine networks with droughts. D. Tonina; A. Marzadri; A. Bellin; M.M. Dee; J.L. Tank.
12:00	12:15	Climate change impact on extreme hydro-hazards: a systemic and coherent approach. L. Collet; S. Harrigan; G. Formetta; C. Prudhomme; L. Beevers.
12:15	12:30	Pluvial flooding in urban areas: effective hazard assessment services. S. Santato; J. Mysiak; M. Amadio; S. Bagli; P. Mazzoli; R.T. da Costa; A. Castellarin; A. Domeneghetti; G. Humer; A. Reithofer.
12:30	12:45	A complex network analysis to assess high streamflow events influenced by atmospheric circulation patterns. F. Cioffi; F. Conticello; U. Lall; B. Merz.
12:45	13:00	Assessment of changes in flooding magnitude and frequency in Northwest Spain coastal river reaches under climate change M. Bermúdez; E. Van Uytven; L. Cea; P. Willems; J. Puertas..
13:00	14:15	Lunch
		NM.2 New trends data collection and analysis for environmental and industrial applications Convener: A. Radice.
14:15	14:30	Application of laser scanning for measuring turbulent water surface topography. G. Rak; M. Hočevár; F. Steinman.
14:30	14:45	Dynamic mapping of surface topography at rainfall events. A. Varrani; D. Caviedes-Vouillème; C. Hinz.
14:45	15:00	Assessment of ship induced waves means of video imagery methods. G. Fleit; S. Baranya;
15:00	15:15	Characterizing mixing properties in large rivers based on UAV measured Lagrangian surface flow data. M. Zsugyel; G. Lükő; S. Baranya.
15:15	15:30	Geochemical and sedimentological characterization of sediments from the Ridracoli lake, Emilia-Romagna, Italy. S. Toller; E. Dinelli; I. Vasumini.
15:30	15:45	Testing a citizen science approach for estimating white water kayak flow requirements in a regulated river catchment. P. Zinke; I. Seifert-Dähnn.
15:45	16:00	A single hydro-morphologic laboratory experiment as a review of different image-processing methods. A. Radice; B. Zanchi.
16:00	16:15	Discussion
16:15	16:45	Coffee break
		G.2 Drought and floods extremes events and climate change Conveners: R. Ranzi; R. Rigon.
16:45	17:00	Assessment of Bostanci flood integrated 1D/2D modelling. H. Zaifoğlu; B. Akintuğ; A.M. Yanmaz.
17:00	17:15	Effect of climate change on the groundwater levels: evaluation of local changes as a function of antecedent precipitation indices. V. Todaro; M. D'Oria; M.G. Tanda.
17:15	17:30	Runoff regimes, droughts and floods in the Adda river (1845-2016) in a climate variability context. R. Ranzi; E.M. Mihailidi; M. Tomirotti.
17:30	17:45	Statistical analysis of flooding using hybrid downscaling. M. del Jesus; S. Navas; J. Diez-Sierra.
		Posters
17:45	17:50	Trend analysis of extreme precipitation indices for Northern Cyprus. H. Zaifoğlu; B. Akintuğ; A. M. Yanmaz.



Room Red-- Tuesday 12/06/2018

		SM.1 Airborne LiDAR bathymetry: New approaches and their application Conveners: M. Aufleger; R. Klar; K. Baumgartner.
11:30	11:45	A review of airborne laser bathymetry sensors. G. Mandlbürger.
11:45	12:00	Recent developments in LiDAR bathymetry. H.G. Maas; D. Mader; K. Richter; P. Westfeld.
12:00	12:15	Challenges and opportunities for single wavelength full wave LiDAR bathymetry. R. Schwarz; M. Pfennigbauer.
12:15	12:30	Mapping the riverscape . D. Tonina; J. McKean; W. Wright; R. Benjankar; R. Carmichael.
12:30	12:45	Topobathymetric laser scan of the river Mangfall: Deriving a 2D-CFDmesh from a point cloud with terabyte size. W. Dobler; F. Steinbacher; R. Baran; W. Bengler; M. Aufleger.
12:45	13:00	Application of airborne LiDAR bathymetry data – Case study on the Mareit/Mareta, Italy. K. Baumgartner; R. Klar; M. Aufleger; G. Zolezzi; D. Faro.
13:00	14:15	Lunch
		FM.3 Hydraulic engineering and biological fluids: a fast expanding research area Conveners: E. Toro; F. M. Susin.
14:15	14:30	Introduction by conveners
14:30	14:45	The augmented FSI system for blood flow in compliant vessels. G. Bertaglia; A. Valiani; V. Caleffi.
14:45	15:00	The effect of active and passive dysfunction on right ventricle performance. G. Comunale; M. Padalino; B. Castaldi; P. Peruzzo; F. M. Susin.
15:00	15:15	In-vitro and in-silico modelling of hemodynamics in a deformable aorta. P. Peruzzo; L. Di Micco; S. Bonvini; F.M. Susin.
15:15	15:30	Experimental research on the effects of catheter in the evaluation of urodynamic data. L. Lotti; M. Milanesi; V. Li Marzi; L. Solari; E. Paris; S. Serni.
15:30	15:45	A holistic multi-scale mathematical model of the murine fluid systems: understanding the pathophysiology of idiopathic intracranial hypertension. C. Contarino; E. F. Toro; A. Louveau; S. Da Mesquita; D. Raper; I. Smirnov; J. Kipnis; N. Agarwal
15:45	16:00	Idiopathic intracranial hypertension and transverse sinus stenosis: a study combining in-vivo measurements and mathematical modeling. A. Avezzi; E. F. Toro; C. Contarino; K. C. Liu; T. J. Buell
16:00	16:15	The selfish-brain hypothesis as possible cause of hypertension: a modeling study. M. Celant; E.F. Toro; L.O. Muller; P.J. Blanco.
		Posters
16:15	16:20	Uncertainty Quantification methodology for blood flow in elastic vessels. M. Petrella; S. Tokareva; E.F. Toro.
		Microbial tracer transport as particles with biphasic-decay. A. A. Bakar; R. Ahmadian.
16:20	16:45	Coffee break
		FM.4 Turbulence and Interactions in River Hydraulics Conveners: V. Armenio; V. Nikora; G. Costantinescu.
16:45	17:00	Turbulent mixing in curved channels. F. Campomaggiore; V. Armenio; S. Lanzoni.
17:00	17:15	Velocity features in ice jammed bridge piers. I. Carnacina.
17:15	17:30	Local scour around long vertical wall abutments and the phenomenology of turbulence. F. Coscarella; C. Manes; R. Gaudio.
17:30	17:45	Physical modelling of flow and geomorphological conditions along an arched bridge with a scoured abutment. G. Gilja; M. Valyrakis; P. Michalis; D. Bekić; N. Kuspilić; E. McKeogh.
17:45	18:00	First results on the effect of particle shape on sediment transport. R. Jain; S. Tschisgale; J. Fröhlich.
18:00	18:15	Internal structure of flow past a bar in a gravel stream. A.M. Ferreira da Silva; M.S. Ahadi; A. Button.
18:15	18:30	Towards a characterization of turbulence structure in hydraulic jumps BIV imaging method. J.T. Garcia; A. Viguera-Rodríguez; L.G. Castillo; J.M. Carrillo.



Room Blue-- Tuesday 12/06/2018

		ST.8 The added value of ecohydraulics and geomorphology to assess river processes and ecological river restoration. Conveners: M. Papa; A. Goltara; M. Bussettini; A. Harby.
11:30	11:45	Introduction by conveners
11:45	12:00	Multi-temporal analysis of sediment connectivity in Blanco River (Chile). L. Martini; L. Picco; M. Cavalli; A. Iroumé.
12:00	12:15	Predicting sediment transport response to future hydropower reservoirs in the Zambezi River and related downstream morphological changes. A. Lucía; C. Zarfl; L. Raghiero; M. Tubino; G. Zolezzi; S. Bizzi; R. Schmitt; A. Castelletti.
12:15	12:30	The role of roots in river bars within channelized, regulated rivers. A. J. Serlet; A. M. Gurnell; G. Zolezzi.
12:30	12:45	Exploiting SAR data for the monitoring of river hydrodynamics. M. N. Papa; F. Mitidieri; G. Ruello; D. Amitrano.
12:45	13:00	discussion
13:00	14:15	Lunch
		ST.8 The added value of ecohydraulics and geomorphology to assess river processes and ecological river restoration. Conveners: M. Papa; A. Goltara; M. Bussettini; A. Harby.
14:15	14:30	River geomorphology aspects and design of transportation infrastructures. A. Cappelli; F. Cabas; C. Cesali; M. Segato; E. Frank.
14:30	14:45	Ecological flow estimation in Latvian-Lithuanian transboundary river basin. J. Kriauciuniene; V. Akstinas; D. Jakimavicius; T. Virbickas.
14:45	15:00	Estimation and mitigation of hydropeaking flow alterations: a case study. N. Letizia; G. Crispino; C. Gisonni.
15:00	15:15	An operational method for assessing riverbed stability after (partial) dam removal in threshold channels. L. Goffin; P. Archambeau; M. Piroton; S. Erpicum; B. Dewals.
15:15	15:30	On resuspension and control of reservoir sediments. Surface Waves and Pressure Point Absorbers. F. J. Arias, S. De Las Heras.
15:30	15:45	Space-time scale dependences phenomena in the framework of river restoration projects the "Lac des Gaves" case study. R. Yassine; H. Roux; L. Cassan; F. Pérès; O. Frysou.
15:45	16:00	Stream restoration and vegetation water use: do riparian trees use groundwater? J. Frentress; M. Engel; A. Andreoli; M. Tagliavini; S. Zerbe; F. Comiti; D. Penna; I. van Meerveld; W. Bertoldi.
16:00	16:15	The WEQUAL project: an innovative method for river ecological quality assessment. F. Ferraiolo; R. Valentini; G. Ristorto; G. Sauli; R. Corso; R. Gallo; F. Mazzetto.
16:15	16:45	Coffee break
		ST.3 Mixing and transport processes in vegetated rivers Convener: D. Termini.
16:45	17:00	Experimental investigation of flow turbulent structure in a high-amplitude vegetated meandering laboratory flume. D. Termini.
17:00	17:15	Large-eddy simulation of an open-channel flow with rigid submerged vegetation. A. Monti; M. Omidyeganeh; A. Pinelli.
17:15	17:30	Experimental study of the incipient sediment transport with emergent vegetation. H. Wu.
17:30	17:45	Effect of Myriophyllum species on downstream turbulence in a natural river. Ł. Przyborowski; A. M. Łoboda; R. J. Bialik.
17:45	18:00	Flow resistance in open channel with rigid emergent vegetation. A. D'Ippolito; A. Lauria; G. Alfonsi; F. Calomino.
18:00	18:15	Validation of a multi-layer approach to predict the velocity profile in a canopy characterized heterogeneous roughness elements. S. Niewerth; M. Schröder; J. Aberle.
18:15	18:30	The bed shear stress inside and around a circular patch of vegetation. M. Kloesch; E. Busch; P. Gmeiner; M. Glas; M. Haimann; C. Sindelar; G. Egger; H. Habersack.
		Poster
18:30	18:35	Vorticity in flows with rigid emergent vegetation. F. De Serio; M. B. Meftah; D. Malcangio; M. Mossa.



Room Green-- Tuesday 12/06/2018

		HM.2 Hydro-meteorological extremes in small mountain catchments: modelling, prediction and uncertainty Conveners: G. Di Baldassarre; R.Rigon.
11:30	11:50	Sensitivity analysis and assessment of uncertainty in radar rainfall estimates for flash flood-triggering storms. M. Borga.
11:50	12:05	A backward dynamical methodology for estimation of rainfall threshold associated to debris-flow. G. Rosatti ; D. Zugliani; M. Pirulli.
12:05	12:20	Spatio-Temporal Variability of Extreme Precipitation in Nepal. R. Talchabhadel; R. Karki; B. Raj Thapa; M. Maharjan; B. Parajuli.
12:20	12:35	Extreme Rainfall Distributions through a Metastatistical Approach: Optimization and Comparisons with the Traditional Theory. A. Miniussi; M. Marani.
12:35	12:50	Extreme Torrential Flooding at Simbach on June 1st, 2016 –findings of a detailed event analysis. J. Hübl; A. Rimböck; R. Höhne.
12:50	13:05	The hydrological response of rocky headwater catchments to summer convective rainfalls. M. Bernard; C. Gregoretti; M. Berti; A. Simoni; S. Lanzoni.
13:05	14:15	Lunch
		HM.2 Hydro-meteorological extremes in small mountain catchments: modelling, prediction and uncertainty Conveners: G. Di Baldassarre; R.Rigon.
14:15	14:30	Numerical modelling of hydrodynamic and hydromorphological processes for a torrential stream in the Austrian Alps. S. Gegenleithner; J. Schneider; C. Dorfmann.
14:30	14:45	Hydrological extremes monitoring using GEOframe-NewAge. M. Bancheri; G. Susanna; M. Leonardo; M. Salvatore.
14:45	15:00	On complex network computation of mountain catchments. F. Serafin; M. Bancheri; O. David; R. Rigon.
15:00	15:15	Modelling the hydrological effects of vegetation on hillslope stability. G. Bertoldi; G. Formetta; E. Bortoli
15:15	15:30	Assessment of variability in trends of flows and suspended sediment concentrations under the impact of climate changes in the Upper Indus Basin (UIB) during the past three decades 1980-2010. W.U. Hussan; F. Seidel; I. Klasen; M. K. Shahzad; F. Nestmann.
15:30	15:45	Effect of rainfall and calibration uncertainties in flood warning systems forecasts. I. Fraga; J. A. García; A. Ferreira; C. Vázquez-Cendón.
		Posters
15:45	16:05	Hydro-meteorological extremes in the Adige river basin, Italy. D. Gozzi; K. Breinl; G. Di Baldassarre.
		Analysis of flash flood events through the reconstruction of real events hyetographs and hydrologic modelling. E. Caporali; M. Lompi; M. Isola; B. Mazzanti.
		Assessment and application of mechanics based flood hazards during flood events. R. Ahmadian; B. Meng; R. Falconer.
		Hydrological monitoring of a small mountainous Mediterranean catchment: First experiences in the Giampileri catchment in Sicily, Italy. B. Bonaccorso; G. T. Aronica.
16:05	16:45	Coffee break
		G.3 Ecohydraulics Conveners: A. Crosato; A. Marzadri.
16:45	17:00	Investigation of the hydrodynamic effects of bed slope in vertical slot fishways 3D numerical simulations. E. Quaranta; C. Katopodis; R. Revelli; C. Comoglio.
17:00	17:15	Assessing the hydrodynamic performance of vegetation physical models: an experimental study of seaweed blades. D. Vettori; V. Nikora.
17:15	17:30	Use of polypropylene fiber against hillslope erosion induced groundwater by seepage. O. Akay; A. T. Özer
17:30	17:45	A Two-dimensional Numerical and Experimental Study on Fish-Friendly Hydrodynamic Fine Screens. S. Kucukali; R. Hassinger; A. Turan.
17:45	18:00	The geomorphic signatures of vegetation on the plano-altimetric equilibrium of a tidal channel. A. Sgarabotto; A. D'Alpaos; S. Lanzoni.
18:00	18:15	Turbulence kinetic energy reduction in vertical slot fish passages with flexible bristle elements. S. Kucukali; R. Hassinger; G. Ekren.
18:15	18:30	Predicting the spatial pattern of aquatic plant species in rivers using environmental key factors. R. Wortelboer.



Auditorium Wednesday 13/06/2018

		HM.4 Water temperature in a changing climate: processes, implications, and managing strategies Conveners: S. Piccolroaz ; M. Toffolon. Co-chair: Martin Schmid.
08:30	08:45	A spatially-explicit stream temperature model for ecohydrological applications. L. Carraro; A. Rinaldo; M. Toffolon; E. Bertuzzo.
08:45	09:00	Prediction of the thermal regime of the Po river under climate change. G. Zolezzi; A. Agnetti; F. Tugnoli; S. Pecora
09:00	09:15	Thermal load of the Sava River in Slovenia after construction of a chain of run-of-the-river HPPs . A. Sirca; R. Rajar.
09:15	09:30	Joint dependence between river water temperature, air temperature, and discharge in the Yangtze River: The role of the Three Gorges Dam. H. Cai; Z. Liu.
09:30	09:45	Water temperature and oxygen alterations of Zambezi River under Water-Energy-Food nexus scenarios. E. Calamita; R. S. Winton; M. Schmid; B. Wehri.
09:45	10:15	Long term changes of annual maximum lake surface water temperatures in 22 peri-alpine lakes of Austria (INVITED). M. T. Dokulil.
		Poster
10:15	10:30	A finite volume model for the simulation of water quality in rivers. B. G. Gordillo Guambaña; M. Morales-Hernández; P. García-Navarro
		Analysis of suitable thermal conditions for the use of reservoirs' selective withdrawal in Switzerland: present state and future scenarios. G. Dalpiaz; M. Toffolon; A. Siviglia
		Assessing the impact of the Three Gorges Dam on Yangtze River's water temperature. S. Piccolroaz; H. Cai; F. Liu; M. Toffolon
		Analysis of uncertainty sources in projecting lake surface water temperature: Application to the Laurentian Great Lakes. F. Piccioni; S. Piccolroaz; M. Toffolon; B. Majone
		Sentinel species of climate change in glacier-fed streams. V. Lencioni; E. Stella; A. Franceschini; A. Bellin
		Response of water temperature to past and future climate variability in Lithuanian rivers. D. Šarauskienė; A. Jurgelėnaitė; D. Meilutytė-Lukauskienė
10:30	11:00	coffee break
		HM.4 Water temperature in a changing climate: processes, implications, and managing strategies Conveners: S. Piccolroaz ; M. Toffolon. Co-chair: Leon Boegman.
		Posters
11:00	11:15	Thermal patterns of a narrow lake in a rotating Earth. M. Amadori; M. Toffolon; S. Piccolroaz; H. Dijkstra; M. Bresciani; C. Giardino
		Application of the General Lake Model (GLM) to a large set of French water bodies. J. Prats; N. Reynaud; P.A. Danis
		Thermal discontinuities along a lowland river: the importance of land use. R. Arora; M. Toffolon; K. Tockner; M. Venohr.
		Thermal buoyant jet in semi-anthropogenic hydrological regime: a river case. L. Adami; S. Sibilla
		Impact of the monitoring methodologies on the estimation of the riverine phosphorus load delivered to a lake. G. Valerio; M. Pilotti.



		Deep-water renewal in Crater Lake (USA) under current and future climate scenario. S. Piccolroaz; T.M. Wood; S.A. Wherry; S.F. Girdner
11:15	11:30	Lake SST: a satellite-derived water surface temperature data set to study the thermal behaviour of French water bodies. J. Prats; N. Reynaud; T. Peroux; D. Rebière; T. Tormos; P. A. Danis.
11:30	11:45	Reservoir thermal impact captured by satellite images. B. Marti-Cardona; J. Prats.
11:45	12:00	On the use of averaged indices to estimate lakes' warming. M. Toffolon; S. Piccolroaz; E. Calamita.
12:00	13:00	Keynote: Plankton hydraulics. Roman Stocker, ETH Zurich and M.I.T.
13:00	14:15	Lunch
		HM.4 Water temperature in a changing climate: processes, implications, and managing strategies Conveners: S. Piccolroaz ; M. Toffolon. Co-chair: Martin Dokulil.
14:15	14:45	Using lakes for heating and cooling: potential and impacts in a changing climate. M. Schmid; A. Gaudard; A. Wüest.
14:45	15:00	Numerical modelling forecasts of mixing regime evolution under climate change scenarios for deep subalpine Lake Maggiore. A. Fenocchi; S. Sibilla; C. Dresti; M. Rogora.
15:00	15:15	Factors affecting lakes climate response. L. R. Vinnå; A. Wüest; D. Bouffard.
15:15	15:30	Coupled climate change and pumped-storage effects on temperature and stratification. U. G. Kobler; A. Wüest; M. Schmid.
15:30	15:45	How climate warming affects nutrient budgets of deep lakes. R. Schwefel; B. Müller; H. Boisgontier; A. Wüest.
15:45	16:00	A model to assess the impact of phytoplankton blooms on lake thermal dynamics. G. A. López Moreira Mazacotte; M. Toffolon; F. Hölker
16:00	16:15	Future prediction of hypolimnetic dissolved oxygen concentration in small lakes L. Boegman; A. Jabbari; M. MacKay
16:15	16:45	Coffee break
		HM.4 Water temperature in a changing climate: processes, implications, and managing strategies Conveners: S. Piccolroaz ; M. Toffolon. Co-chair: Jordi Prats.
16:45	17:00	Thermal modelling to help target mitigation strategies for early life stages salmonid survival in hydropeaking rivers. R. Casas-Mulet; S. J. Saltveit; K. T. Alfredsen.
17:00	17:15	Active response of freshwater invertebrates to hydro-and thermopeaking in a laboratory flume. M. Holzner; F.G. Michalec; D. Sidler.
17:15	17:30	Fiber optics distributed temperature sensing for spatio-temporal analysis of thermal footprints of groundwater-stream water exchange. J. Gaona Garcia; J. Lewandowski; A. Bellin.
17:30	17:45	A robust and efficient two-dimensional numerical model for the simulation of river pollutant and thermal dynamics. A. Siviglia; D. Vanzo; E. F. Toro.
17:45	18:00	Stratification and mixing regime of a shallow polymictic lake. B. Vinçon-Leite; F. Piccioni; B. J. Lemaire; Y. Hong; D. Plec; C. Casenave; F. Soullignac.



18:00	18:15	On the feedback between water turbidity and microphytobenthos proliferation in shallow tidal environments. M. Pivato; L. Carniello; P. D'Odorico.
18:15	18:30	Water and sediment temperature dynamics in shallow water basins: the role of advection and the heat flux at the water-sediment interface. M. Pivato; L. Carniello; S. Silvestri; D. Viero; M. Marani.

Room Yellow Wednesday 13/06/2018

		G.7 Rivers and sediment transport Conveners: A. H. Cardoso; P. Rowinski.
8:30	8:45	Discharge analysis of the Mwogere river (Burundi) the velocity-area method. J.B. Niyonzima; P. Hendrick.
8:45	9:00	Some reasons of the structures failure in flow because of the scour. B. Gjunsburgs; G. Jaudzems; J. Parilkova.
9:00	9:15	Morphology Study of Ab-Nik River based on Rosgen and Montgomery-Buffington Classification. A. Gashtasebi; M. R. Pirestani; A. H. Noori; H. Salilalzakerin.
9:15	9:30	Effect of the sediment transport ratio on the bed morphology of movable bed open-channel confluences. G. Bombar; A. H. Cardoso.
9:30	9:45	Static equilibrium over rough beds with initial bedload transport. M. Trevisson; O. Eiff.
9:45	10:00	Numerical investigation of bedload transport processes during flood events at the Drau River. K. Glock; M. Tritthart; R. Rindler; M. Liedermann; H. Habersack.
10:00	10:15	Numerical simulation of bedform dynamics in large rivers. S. Baranya
10:15	10:30	Evolution of local pier scour under unsteady flow conditions. A.M. Bento; J. P. Pêgo; T. Viseu; L. Couto.
10:30	11:00	Coffee break
		G.7 Rivers and sediment transport Conveners: A. H. Cardoso; P. Rowinski.
11:00	11:15	Morphodynamics of glacier-fed rivers. M. Welber; W. Bertoldi.
11:15	11:30	Determination of meander planform parameters from the simulation results with curvilinear structured grid. M. S. Banda; S. Niewerth; J. Aberle.
		Posters
11:30	11:45	Multi-scale modelling of rivers as supporting tool for water resources management. M. Nones; A. Varrani.
		Can thermography imager monitors the geometry of deformed shear layer at high and intermediate relative depths in compound channel flows? A. Saad Mulahasan; B. Thorsten Stoesser.
		Velocity profiles of flow measurements over a laboratory gravel bed. S. Nassrullah; B. Bockelmann-Evans; T. Stoesser.
		Tracing bedload transport in high gradient Andean stream. D. Oss Cazzador; R. Rainato; L. Picco; L. Mao.

12:00	13:00	Keynote (Auditorium) Plankton hydraulics. R. Stocker
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13:00	14:15	Lunch
		HS.1 Emerging challenges and opportunities in hydropower production Conveners: M. Righetti; K. el-Kadi Abderrezzak.
14:15	14:35	Invited speech: Building climate change resilience in Hydropower and dams. P. Karki, World Bank Group
14:35	14:55	Invited speech: Managing hydrological risk in hydropower generation. L. Canale, World Bank Group
14:55	15:10	Discussion



15:10	15:25	Asymmetric orifice in a surge tank -tap the full potential. R. Gabl; M. Righetti
15:25	15:40	Sediment entrapment into surge tanks: an experimental study. G.R. Pisaturo; M. Righetti; R. Gabl; F. Zanforlin.
15:40	15:55	Numerical performance assessment of a centrifugal pump as turbine (PAT). F. Pugliese; F. De Paola; N. Fontana; M. Giugni; G. Marini; J. Fernández Francos.
15:55	16:10	Prediction of the precessing vortex core in the draft tube of a model hydro turbine based on linear stability theory. K. Oberleithner; F. Lückoff; J.S. Müller; I. Litvinov; S. Shtork; S. Alekseenko.
16:10	16:25	Clarification of rules for runoff regulation water reservoir. A. Cavalli; V. Ilinich; I. Veliev; A. Timonina.
16:25	16:45	Coffee break
		HS.1 Emerging challenges and opportunities in hydropower production Conveners: M. Righetti; K. el-Kadi Abderrezzak.
16:45	17:05	Flow behaviors of Rusfors spillway before and after modifications. J. Yang; P. Teng.
17:05	17:20	Analysis of water intake structures for small hydro power plants. G. Mičeta; U. Karadžić; L. Milačić; L. Bošković; M. Knežević.
17:20	17:35	BEQs and BEL: two new opportunities in pumped-storage hydropower. R. Klar; B. Steidl; M. Aufleger.
17:35	17:50	Lab experiments on hydraulic regulation for PRs turbines. T. Tucciarelli; M. Sinagra; G. Morreale; P. Amato.
17:50	18:05	Preliminary investigation of an innovative power take-off for low speed water wheels. I. Butera; E. Quaranta; G. Muller; I. Butera; L. Capecchi; W. Franco.
18:05	18:20	Zuppinger water wheel for low-head hydropower applications. S. Paudel; N. Saenger.
18:20	18:35	Energy from Climate changes: Erosion friendly concept. S. Rizzi; G. Pasqualotto; D. Saccon.
18:35	18:50	Parametric study on the influence of jet-like inflows and outflows on fine sediment settling S. L. Vorlet; S. Guillén Ludeña; P. Manso; A. J. Schleiss.
		Posters
18:50	18:55	A 3D numerical model for simulating hydrodynamics downstream of hydropower plants. G. R. Pisaturo.



Room Purple Wednesday 13/06/2018

		HS.6 Dynamic impact on fluvial structures Conveners: G. Piton; G. Rossi.
8:45	9:00	Debris flow structure interactions on mountain slopes and reservoirs. S.P. Pudasaini; P. Kattel; J. Kafle
9:00	9:15	Effect of flow rate on skimming flow properties over an abrupt slope change on a stepped spillway. M. Ostad Mirza Tehrani; J. Matos; M. Pfister, A.J. Schleiss; A.R. Zarrati.
9:15	9:30	Dynamic interaction between fluid-like flows and structures during impact: analytical modelling and numerical simulations. F. Federico; C. Cesali.
9:30	9:45	Mini Skirt Check Dam: an innovative protective structure against debris flows. C. Morstabilini; F. Ferraiolo; A. Armanini.
9:45	10:00	Austrian Standard Regulations for the design of check dams under impact torrential processes. J. Hübl; G. Nagl.
10:00	10:15	Coupling check dams with retaining structures for large wood in streams: evidences in clear water. S. Meninno; R.B. Canelas; A.H. Cardoso.
10:15	10:30	An attempt to classify malfunctions of steep channel flows justifying building of open check dams or other torrent control works. G. Piton; A. Recking; J.M. Tacnet.
		Posters
10:30	10:35	Evolution of the types of filters in check dams for the control of solid and wood transport in the Province of Trento A. Manica; S. Consiglio; R. Moreschini.
		Hydraulic and mechanical behaviour of selective check dams filters: post-event analysis A. Manica; S. Consiglio; R. Moreschini.
		Examples of structures for the timber retention in the Province of Trento A. Manica; S. Consiglio; R. Moreschini.
10:35	11:00	Coffee break
		G.3 Ecohydraulics Conveners: A. Crosato; A. Marzadri.
11:00	11:15	A periodic approach to river geometry and its implication for At-Many-stations Hydraulic Geometry. M. Mahdade; N. Le Moine; R. Moussa.
11:15	11:30	Report on the behavior of the embankment built in 1983 in the Piraí river to protect the city of Santa Cruz de la Sierra, Bolivia. G. Fracassi.
11:30	11:45	Recovery of agricultural areas eroded in the Bolivian rivers Chico, Cotagaita and San Juan del Oro. G. Fracassi.
11:45	12:00	A water vortex power plant as ethohydraulic test site. N. Mueller; J. Stamm; F. Wagner.

12:00	13:00	Keynote (Auditorium) Plankton hydraulics. R. Stocker, M.I.T and E.T.H. Zurich
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13:00	14:15	Lunch
		FH.1 Dike breach inducing floods: processes and numerical modelling Conveners: I. Rifai; B. Dewals; K. El Kadi Abderrezzak.
		Invited speeches (Room Yellow): Building climate change resilience in hydropower and dams. P. Karki, World Bank Group Managing hydrologic risk in hydropower generation. L. Canale, World Bank Group
14:15	15:00	
15:00	15:15	Longshore Variability of Diverse Loading and Resistance of Coastal Barriers & Implications for Breaching under Extreme Storm Surges. S.M. Elsayed; H. Oumeraci.
15:15	15:30	The effect of dike breaches on downstream discharge partitioning near a river bifurcation A. Bomers; S. Hulscher; R. Lammersen; R. Schielen.



5th IAHR EUROPE CONGRESS

New challenges in hydraulic research and engineering

Trento 12-14 June, 2018



15:30	15:45	2D numerical modelling of fluvial dike breach overtopping. T. Alvarez; D. Conde; S. Amaral; T. Viseu; R.M.L. Ferreira.
15:45	16:00	Experimental and numerical modelling of fluvial dike breaching due to flow overtopping. I. Rifai; K. El Kadi Abderrezzak; D. Violéau; S. Ercicum; P. Archambeau; B. Dewals; M. Pirotton.
16:00	16:15	Hydrological risk analysis for the characterization of overtopping for a river levee. M. Isola; E. Caporali; L. Garrote.
16:15	16:45	Coffee break
		FH.1 Dike breach inducing floods: processes and numerical modelling Conveners: I. Rifai; B. Dewals; K. El Kadi Abderrezzak.
16:45	17:00	Simulation of the December 2017 flood on the Enza River using a 2D SWE code coupled with a levee breach erosion model. S. Dazzi; F. Aureli; R. Vacondio; P. Mignosa.
17:00	17:15	The influence of biota on earth levee stability. V. Pennisi; A. Cancelliere; R.E. Musumeci; E. Foti; S.J. McLelland.
17:15	17:30	Three-dimensional evolution of a dam-break flow: construction and calibration of a physical model. S. Cordero; A. Cagninei; D. Poggi.
17:30	17:45	Influence of modified single spur dike with different alignment on flow characteristics. M. Mostafa; B. Hou; A. Tominaga.
17:45	18:00	Image analysis detection applied to dam breach experiments. S. Amaral; T. Alvarez; T. Viseu; R.M.L. Ferreira.
18:00	18:15	Assessing flow hazard throw sensitivity analysis of river breaches: application to the Garonne River. V. Bacchi; L. Pheulpin; N. Bertrand.
18:15	18:30	Breaching of non-cohesive embankments due to overtopping flow considering fine and coarse sediment particles. C. Robledo; S. M. Elsayed; A. Rhaman; I. Nistor; M. Brühl.



Room Red Wednesday 13/06/2018

		SM.7 River basin management Conveners: D. CM Augustijn; V. Hrissanthou.
8:30	8:45	Integrating cascading effects of floods in policy making: a case study for Emilia Romagna, Italy. G. Pescaroli; M. Nones.
8:45	9:00	Method for cascading effect analysis in flooding events. B. Arvidsson; J. Johansson; N. Guldåker; L. Svegrup.
9:00	9:15	Rivers damming for water storage: cascading effects on coastal instability. The case of the Ionic coast of the Basilicata region. G. Spilotro; I. Argentiero; R. Pellicani; M.D. Fidelibus; A. Parisi.
9:15	9:30	Expect the unexpected: cascading vulnerability scenarios to manage water resources. A. Parisi; V. Monno; M.D. Fidelibus.
9:30	9:45	Learning from the past: The Secchia River case study. M. Nones.
9:45	10:00	Estimation of the Muskingum routing coefficients including lateral inflow using fuzzy linear regression. M. Spiliotis; A. Sordo-Word; L. Garrote.
10:00	10:15	Fuzzy implications via fuzzy estimators for the eutrophication study of a Greek lake. .G. Ellina; G. Papatshinopoulos; B.K. Papadopoulos; B.S.G. Papadopoulos; E.G. Abartzaki.
10:15	10:30	Total sediment concentration as a fuzzy curve based on the unit stream power theory of Yang. M. Spiliotis; K. Kaffas; V. Hrissanthou.
10:30	11:00	Coffee break
		SM.7 River basin management Conveners: D. CM Augustijn; V. Hrissanthou.
11:00	11:15	Application of fuzzy logic to large organic matter recruitment in forested river basins. V. Ruiz-Villanueva; M. Stoffel.
11:15	11:30	Parametric model of wood-induced backwater in lowland streams. T.J. Geertsema; P.J.J.F. Torfs; A.J. Teuling; A.J.F. Hoitink; J.P.C. Eekhout.
11:30	11:45	A simple estimation of side channel development. R.P. van Denderen; S.J.M.H. Hulscher; R.M.J. Schielen.
11:45	12:00	River Care: Researching measures to prepare multi-functional rivers for the next century. D.C.M. Augustijn; S.J.M.H. Hulscher; R.M.J. Schielen.

12:00	13:00	Keynote (Auditorium) Plankton hydraulics. R. Stocker, M.I.T and E.TH. Zurich
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13:00	14:15	Lunch
		SM.5 Multidisciplinary approaches in the service of water resources: what we can steal from other disciplines to improve water management Convener: E.A. Celegon.
14:15	15:00	Invited speeches (Room Yellow): Building climate change resilience in hydropower and dams. P. Karki, World Bank Group Managing hydrologic risk in hydropower generation. L. Canale, World Bank Group
15:00	15:15	Business analysis to create better business outcomes. M. Maritato.
15:15	15:30	Project Management Organization: PM's stuff to Improve Research Project Outcomes. G. Beghini
15:30	15:45	The concreteness of intangible realities –Impact of soft skills on success-oriented research projects. M. Dazzi
15:45	16:00	Why a Ph.D. should work in an irrigation consortium . C. Taglioretti.



5th IAHR EUROPE CONGRESS

New challenges in hydraulic research and engineering

Trento 12-14 June, 2018



16:00	16:15	Catastrophe risk models bring probabilistic modelling of natural disasters from academia to the industry. L. Nicotina.
16:15	16:45	Coffee break
		FM.2 Heat and mass transport under complex natural conditions Conveners: M.B. Kalinowska; K. Västilä.
16:45	17:00	Introduction by conveners
17:00	17:15	Heat and mass transport under complex natural conditions–review. P. Rowiński; M.Kalinowska; L.K. Västilä.
17:15	17:30	Parameter estimation of the Transient Storage Model: sensitivity to discretisation. S. Wallis; R. Manson
17:30	17:45	Estimation of the longitudinal dispersion coefficient in a small stream. S. Wallis; A. Heron
17:45	18:00	A non-dimensional model for longitudinal dispersion in emergent vegetation based on stem-spacing. F. Sonnenwald; V. Stovin; I. Guymer
18:00	18:15	Experimental investigation of turbulent flow structure in a partially vegetated channel with natural-like flexible plant stands. G. Caroppi; K. Västilä; J. Järvelä; P. Rowiński
18:15	18:30	Mathematical modeling of 2D dissolved matter transport in a variable velocity field on the example of Martwa Wisła in the region of isthmus. P. Zima.
		Posters
18:30	18:35	Catchment scale modelling of pharmaceuticals in rivers. E. Diamantini; S. Mallucci; A. Bellin



Room Blue Wednesday 13/06/2018

		NM.1 Alternative numerical methods for free-surface flows Conveners: D. Violeau; G. Viccione; M.Dumbser.
9:15	9:30	Simulating dry granular flows with duals physics. G. Viccione; B. Tagliaferro.
9:30	9:45	Three-dimensional dam-break simulations using Lattice Boltzmann method. S. Miliani; P. Prestinanzi; M. La Rocca; A. Montessori.
9:45	10:00	Implementation of a Lattice Boltzmann method for multiphase flows with high density and viscosity ratios. N.H. Jumaa; D. I. Graham.
10:00	10:15	Validation of the Dam-Break Flow over Triangular Bottom Obstacle using SPH. K. Dal; S. Evangelista; S. Kocaman.
10:15	10:30	Discussion
10:30	11:00	Coffee break
		NM.1 Alternative numerical methods for free-surface flows Conveners: D. Violeau; G. Viccione; M.Dumbser.
11:00	11:15	Wave pump: SPH modeling of waves above a submerged plate. R. Carmigniani; D. Violeau.
11:15	11:30	Particle methods for the simulation of free surface flows. A. Lares De Tetto; F. Salazar; I. Iaconeta; R. Rossi; E. Oñate.
11:30	11:45	Combining consistent kernel gradients with variable resolution in WCSPH for hydrodynamic problems. M. Leonardi; T. Rung; J.M. Dominguez.
11:45	12:00	Reinterpretation of first order consistent δ -SPH formulation in the framework of Godunov methods. R. Vacondio; M.D. Green; J. Peiró.
12:00	13:00	Keynote (Auditorium) Plankton hydraulics. R. Stocker, M.I.T and E.T.H. Zurich
13:00	14:15	Lunch
		HS.5 Sediment management at run-of-river hydropower plants Conveners: V. Cavedon; M. Righetti.
		Invited speeches (Room Yellow):
14:15	15:00	Building climate change resilience in hydropower and dams. P. Karki, World Bank Group Managing hydrologic risk in hydropower generation. L. Canale, World Bank Group
15:00	15:15	Sediment management at intakes of small hydro power plants between ambitions and reality. W. Gostner.
15:15	15:30	Inductive method to optimize sediment management of river weirs in South Tyrol: optimization of maintenance operations. L. Merlino; V. Cavedon; G. Vignoli; C. Lanni; S. Simoni.
15:30	15:45	Flushing operations of hydroelectric sluice gates: an experimental analysis. G. R. Pisaturo; M. Righetti.
15:45	16:00	Implementing the concept of sediment balance for reliable predicting future river development and management: A hydro-morphological study in the Saalach River. M. Reisenbüchler; M. D. Bui; D. Skublics; P. Rutschmann.
16:00	16:15	Sediment management measures at a mean-sized river in Austria. J. Schneider; S. Gegenleithner; H. Badura; G. Harb.
16:15	16:45	Coffee break
		HS.2 Hydraulics of agricultural waterways (irrigation and drainage networks) Convener: G. Belaud.
16:45	17:00	Introduction by convener
17:00	17:15	Estimation of flow discharge using water surface velocity in reclamation canals: a case study. M. Nones; S. Cipolla; M. Maglionico.
17:15	17:30	Numerical Exploration of 3D-flow through baffles distributors. D. Dorchie; P. Le Fauchoux; G. Belaud.
17:30	17:45	Ultra low-head hydropower for water saving irrigation systems. G. Muller; J. Michavila.
17:45	18:00	Hydraulic network management simulation for fish continuity. L. Guiot; L. Cassan.
18:00	18:15	Digital image analysis for studying eco-hydraulic processes in open channels. F. Vinatier; G. Rudi; G. Belaud; J.S. Bailly.
18:15	18:30	Discussion



Room Green Wednesday 13/06/2018

		FH.2 New hydraulic engineering contributions to flood resilience and mitigation Conveners: B. Dewals; D. Molinari; F. Ballio; S.Haun.
9:00	9:20	Engineering society flood preparedness and Civil Protection activities. C. Arrighi; F. Castelli; M. Pregnotato; R.J. Dawson.
9:20	9:35	A brief review of urban flood experimental models, with a focus on laboratory models at the district level. X. Li; S. Erpicum; P. Archambeau; M. Bruwier; M. Piroton; B. Dewals.
9:35	9:50	Decision making for flood management of Medjerda high valley. A. Sahar; A. Mehrez; H. Olfa; H. Hamadi.
9:50	10:05	Optimum mode of operation of run-of-river HPPs chain during flood waters. M. Brenčič; D. Goršak; G. Rak.
10:05	10:20	On flood damage models validation and uncertainty assessment: the case of the 2002 flood in Lodi (Northern Italy). M. Galliani; A.R. Scorzini; D. Molinari; G. Minucci.
		Poster
10:20	10:30	Hydraulic and socioeconomic effects of lamination tanks along Pescara river. F. Iezzi; V. Di Biase; E. Primavera; L. D'Alfonso.
		High-resolution flood simulations on the middle-lower portion of the Po River, Italy. I. Shustikova; A. Domeneghetti; A. Castellarin; J. Neal; P. Bates.
		Performance evaluation of flood protection measures along the Goldersbach stream using 2D hydraulic modelling. M.P. Doucet; M. Noack; S. Wiprecht; S. Haun.
		Simplified pluvial flood risk assessment in a complex urban environment by means of a dynamic coupled hydrological-hydraulic model: case study of Mexico City. M. Arosio; M.L.V. Martina; E. Carboni; E. Creaco.
		Supervised flood attenuation in presence of reservoirs: a ranking method. S. Cordero; D. Ganora; P. Claps.
		Comparison of the Experimental Results with SPH Method for Sequential Dam-Break Problem K. Dal; S. Kocaman.
10:30	11:00	coffee break
		FH.2 New hydraulic engineering contributions to flood resilience and mitigation Conveners: B. Dewals; D. Molinari; F. Ballio; S.Haun.
11:00	11:15	Thresholds of people stability to floods from web based observations. L. Milanese; M. Pilotti.
11:15	11:30	Community Based Approach in the Emergency planning: the case of Liguria region (Italy). M. Morando; E. Trasforini; M. Altamura; C. Franciosi; M. Giambelli.
11:30	11:45	Flood simulation and risk analysis based on semantic 3D city models (FloRiCiMo). T. Heyer; H. Hammoudi; R. Tatis Muvdi; J. Stamm; A. Schilling; S. Trometer.
11:45	12:00	Transport resilience to flood-induced bridge failures. M. Pregnotato; V. Sarhosis; V. Glenis; C. Kilsby; D. Hetherington.

12:00	13:00	Keynote (Auditorium) Plankton hydraulics. R. Stocker, M.I.T and E.TH. Zurich
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13:00	14:15	Lunch
		ST.1 Driftwood dynamics in fluvial systems Conveners: S. Sibilla; S. Meninno; R. Canelas.
14:15	14:35	Combining remote sensing, numerical and physical modelling to improve the knowledge of large wood dynamics in braided rivers. V. Ruiz-Villanueva; C. Gamberini; W. Bertoldi; E. Bladè; M. Stoffel.
14:35	14:55	Role of channel morphology on large wood mobility in mountain rivers: a field experiment. A. Andreoli; F. Comiti; A. Lucia; B. Mazzorana
14:55	15:15	Experimental study on wood logs interaction with different barriers. G. Rossi; A. Armanini



5th IAHR EUROPE CONGRESS

New challenges in hydraulic research and engineering

Trento 12-14 June, 2018



15:15	15:30	On the production of woody debris in the Ombrone Grossetano river during the 24 - 25 August 2015 flood event. S. Francalanci; D. Melini; S. Moretti; E. Paris; L. Solari.
15:30	15:45	Large Wood dynamics and abundance in the Blanco Este River affected volcanic eruption, Chile. D. Zanettin; A. Iroumé; L. Picco.
15:45	16:00	Empirical predictions of large wood transport during flood events. N. Steeb; A. Badoux; C. Rickli; D. Rickenmann.
16:00	16:15	Numerical modelling of large wood dynamics in the braided Piave River (Italy): the important role of roots. T. Comper; L. Picco; V. Ruiz Villanueva; E. Blade i Castellet.
		Posters
16:15	16:20	Evaluating large wood balance in highly disturbed stream channels. A. Iroumé; E. Wohl; B. Mazzorana; L. Picco.
		Measurement and quantification of fluvial wood deposits using UAVs and structure from motion in the Blanco River (Chile). D. Sanhueza; A. Iroumé; H. Ulloa; L. Picco; V. Ruiz-Villanueva.
16:20	16:45	Coffee break
		ST.1 Driftwood dynamics in fluvial systems Conveners: S. Sibilla; S. Meninno; R. Canelas.
16:45	17:00	Modelling the displacement of large wood in the Rienz River. E. Persi; G. Petaccia; S. Sibilla; A. Lucía; A. Andreoli; F. Comiti.
17:00	17:15	Large wood transport in two torrents during a severe flash flood in Braunsbach, Germany 2016. A. Lucía; M. Schwientek; J. Eberle; C. Zarfl.
17:15	17:30	Effects of floaters on the free surface profiles of river flows. P. Sammarco; M. Di Risio.
17:30	17:45	Large wood dynamics in a bended channel: experiments and numerical simulations. S. Meninno; A. Armanini; E. Persi; G. Petaccia; S. Sibilla; G. Rebellato.



Room Yellow Thursday 14/06/2018

		ST.5 New insights on sediment transport and on gravity driven granular flows Convener: A. Armanini; S. P. Pudasaini.
9:00	9:15	Velocity profiles of solid-liquid mixtures in the grain-inertial range. L.M. Stancanelli; C. Gregoret; S. Lanzoni.
9:15	9:30	Velocity and volume fraction measurements for free surface dry granular flows in straight channel. L. Sarno; L. Carleo; M.N. Papa; P. Villani; Y. Tai.
9:30	9:45	Full analytical models for drag and virtual mass force. S. P. Pudasaini.
9:45	10:00	Dry granular flows over a loose bed in stationary and homogeneous conditions. S. Meninno; A. Armanini; M. Larcher.
10:00	10:15	Saint-Venant simulations of granular flows over a basal surface with topography. I.R. Ionescu; O. Lupascu; S. Vasile.
10:15	10:30	Numerical simulation of a mixed flowing-powder avalanche. S. Gurjar; S. Mishra; P. Bartelt.
10:30	11:00	Coffee break
		ST.5 New insights on sediment transport and on gravity driven granular flows Convener: A. Armanini; S. P. Pudasaini.
11:00	11:15	Grain size dependent yield stress modelling on the rheology of debris-flows. L. Schippa.
11:15	11:30	An analytical expression for slope-induced morphological diffusion. S. Maldonado; A.G.L. Borthwick.
11:30	11:45	How bars generate sediment transport pulses in gravel-bed channels. B. Dhont; C. Ancey; P. Bohorquez.
11:45	12:00	Morphology and migration of subaqueous dunes at laboratory scale. G. Oliveto; M.C. Marino.
12:00	12:15	Development of an Artificial-Neural-Network-based concept for hydro-morphodynamic modelling in rivers. K. Kaveh; M.D. Bui; P. Rutschmann.
12:15	12:30	A new numerical model for sediment transport in gravel-bed rivers. V.H. Bui; M.D. Bui; P. Rutschmann.
12:30	12:45	Food waste particles: An under-explored class of sediment transport. A. Legge; H. Jensen; S. Tait; R. Ashley; A. Nichols.
12:45	13:00	Flow regimes of jet-flipping phenomenon in a local scour hole. S. Jin-Hua; S.Y. Lim; X.K. Wang.
		Posters
13:00	13:05	Size segregation in dense, layered granular flows. M. Larcher; J.T. Jenkins. A coordinate EU project on defence structures for debris flow and driftwood accounting for the effects of climate change. A. Armanini; K. Breinl; R.B. Canelas; A.H. Cardoso; G. di Baldassarre; M. Larcher; E. Nucci; J. Matos; E. Persi; S. Meninno; R. Rigon; G. Rosatti; G. Rossi; S. Sibilla
13:05	14:15	Lunch



Room Purple Thursday 14/06/2018

		HM.3 Machine learning applied to hydraulic and hydrological modelling Conveners: V. Bellos; J. P. Carbajal.
9:00	9:15	Water level predictions using neural networks in critical gauges of the Rhine River, Germany. E. Matta; R. Duda; C. Scheer; Y. Ma; D. Meißner; Q. Zhang; H. Schellenberg; A. Schmid; A. Hassan; R. Hinkelmann
9:15	9:30	Data pre-processing combined with Artificial Neural Network to improve the performance of time series modelling. D. T. Anh; M. D. Bui; P. Rutschmann
9:30	9:45	Regular and extreme daily rainfall prediction Machine Learning techniques. J. Díez; M. del Jesus
9:45	10:00	Using a simplex-type optimization method to calibrate a hydrodynamic model for rainfall-runoff simulations. A. Hassan; I. Özgen; R. Hinkelmann
10:00	10:15	Comparison of seawater intrusion metamodels based on machine learning methods. G. Kopsiaftis; E. Protopapadakis; N. Doulamis; A. Mantoglou
10:15	10:30	Principles of planning – an application of simulation-optimization approach in choosing of optimal solutions in water resources systems planning. J. Berbić; E. Ocvirk; G. Gilja
10:30	11:00	Coffee break
		HM.3 Machine learning applied to hydraulic and hydrological modelling Conveners: V. Bellos; J. P. Carbajal.
11:00	11:15	Learning non-linearities from flow simulators. A. Moreno-Rodenas; V. Bellos; J. Langeveld; F. Clemens
11:15	11:30	Surrogate stochastic modelling with emphasis on the dependence structure; benchmark application to flood inundation. P. Dimitriadis; V. Bellos; D. Koutsoyiannis
11:30	11:45	Flood prediction in a compound channel using machine learning techniques. V. Bellos; J. P. Carbajal; J. P. Leitao
11:45	12:00	Fast early flood warning systems exploiting catchment specific behavior. S. Rusca; J. P. Carbajal
12:00	12:15	Application of least squares support vector machine regression for historical reconstruction and real-time prediction of flood inundation. M. Bermúdez; L. Cea; J. Puertas; J. Sopenana; S. Ruano
12:15	12:30	Application of machine learning in the analysis of arced labyrinth weirs. F. Salazar; B. Crookston
12:30	12:45	Developing a comprehensive risk-based method for selecting the most desirable water supply scenario; Study of Kashafrud River Basin. R.J. Sabbaghian.
12:45	13:00	An overview of the role of Machine Learning in hydraulic and hydrological modeling. J. P. Carbajal; V. Bellos
13:00	14:15	Lunch



Room Red Thursday 14/06/2018

		HS.4 Recent advances in marine renewable energy Conveners: F. Taveira-Pinto; P. Rosa-Santos; T. Fazerer-Ferradosa.
8:30	8:45	The CECO Wave Energy Converter: Recent Developments. P. Rosa-Santos; C. Rodrigues; F. Taveira-Pinto; M. López; V. Ramos
8:45	9:00	Recent developments of an Overtopping BReakwater for Energy Conversion (OBREC). D. Vicinanza; P. Contestabile; E. Di Lauro.
9:00	9:15	A suite of numerical tools for combined simulation of near and far field effects of farms of wave energy converters. V. Stratigaki; P. Troch; Verbrugge; Balitsky; Verao Fernandez; Devolder.
9:15	9:30	New tools for wave farm planning: resource, performance and integrated coastal management. R. Carballo; N. Arean; M. Álvarez; A. Castro; M. López; G. Iglesias.
9:30	9:45	Large scale experiments to improve monopile scour protection design adapted to climate change– methodology and first results. C. E. Arboleda Chavez; P. Troch ; V. Stratigaki ; C. Arboleda ; M. Wu ; L. De Vos ; P. Rosa-Santos; T. Fazerer-Ferradosa; F. Taveira-Pinto; A. Schendel ; M. Wezel ; T. Schlurmann ; A. Bolle ; L. Baelus ; L. das Neves ; P. Haerens ; R. Whitehouse.
9:45	10:00	The effects of dredging on tidal stream energy exploitation: A case study in Galicia (NW Spain). M. Álvarez; R. Carballo Sánchez; J. V. Ramos Castro; N. Areán Varela; M. Rorres Lavandeira; G. Iglesias Rodríguez.
10:00	10:15	Hydro-Environmental Comparisons for Different Operational Schemes of Swansea Bay Lagoon using TELEMAC2D. B. Guo; R. Ahmadian; R. A Falconer.
		Posters
10:15	10:25	Life Cycle Assessment of a tidal barrage. E. Fenrich; C. Cimatoribus; B. Bockelmann-Evans.
		Theoretical and numerical CFD investigation of an innovative buoyancy driven hydraulic turbine. E. Quaranta.
10:25	10:35	Final discussion, wrapping up and session closure.
10:35	11:00	Coffee break
		HS.7 Experimental investigation of sewer structures hydraulics: tools, techniques and results Convener: C. Gisonni; R. Carvalho.
11:00	11:15	Machine learning models in complex wastewater hydraulics problems. F. Granata; R. Gargano; C. Tricarico; F. Di Nunno; S. Santopietro; G. de Marinis.
11:15	11:30	A 2D Spectral volume shallow water equations model. L. Cozzolino; V. Pepe; G. Varra; L. Cozzolino; R. Della Morte; L. Cimorelli; D. Pianese.
11:30	11:45	Choking features of supercritical junction manholes. G. Crispino; C. Gisonni; M. Pfister.
11:45	12:00	Performance of different gully bottom pipe outlet characteristics. R. F. Carvalho; P. Lopes; M.N.A. Beg; J. Leandro.
12:00	12:15	Discharge coefficients and energy dissipation in different squaremanhole' outlets. Rita F.Carvalho; J.Leandro; L.David.
12:15	12:30	Hydrodynamics of shallow reservoirs: recent advances. Benjamin Dewals; S. Erpicum; V. Ferrara; M. Westhoff; P. Archambeau; M. Piroton.
12:30	12:45	Influence of flow characteristics on the sedimentation efficiency of fine-grained particle fractions in rectangular storm water treatment tanks. N. Voßwinkel; B. Micke; M. Wietbüscher; S. Gordon; R. Mohn.
12:45	13:00	Evaluation of engineered wetlands and filter drains as low impact development (LID) technologies for stormwater management in refugee camps. K. Tota-Maharaj; O. Opeyemi Ajibade.
		Poster
13:00	13:05	Parametric stress distribution in 3D printed polymer quadric-surfaced sludge digesters. N. Ramroop; K. Tota-Maharaj; G. Anoyatis.
13:05	14:15	Lunch



Room Blue Thursday 14/06/2018

		ST.6 The role of fine sediments on river morphodynamics and habitats Conveners: F. Bregoli; A. Crosato; B. van Maren.
9:15	9:30	An Assessment of Flocc Settling Velocities from Five Estuaries. A. Mehta; E.J. Hayter.
9:30	9:45	Undisturbed measurements of fine sediment infiltration masses using Gamma ray attenuation (GRA). M. Noack; M.A. Mayar; S. Wieprecht.
9:45	10:00	Down into the deep? The hyporheic zone as an invertebrate refuge during a fine sediment disturbance. T. Milner; G. Bunting; I. Maddock; I. Jones.
10:00	10:15	Altered suspended sediment load and vegetation distribution change the morphology of the Mara Wetland, Tanzania. F. Bregoli; A. Crosato; P. Paron; M. McClain.
10:15	10:30	Optimization of the design of the Hedwige-Proserpolder depoldering: a multi-model approach. J. Vanlede; W. Vandenbruwaene; A. Van Rooijen; O. Gourgue; S. Temmerman.
10:30	11:00	Coffee break
		G.3 Ecohydraulics Conveners: A. Crosato; A. Marzadri.
11:00	11:15	Outlining a hydromorphological classification system for lakes and reservoirs. J. Charmasson; T.H. Bakken; L.H. Schönfelder.
11:15	11:30	Quantifying flow-ecology relationship in the Adige River basin. S. Larsen; E. Stella; B. Majone; A. Bellin; M.C. Bruno; G. Zolezzi.
11:30	11:45	Biomorphological relationships from convective accelerated rivers. G. Calvani; P. Perona; C. Shick; L. Solari.
11:45	12:00	Improving fish upstream passage findability at hydropower plants considering turbine operation related turbulence and flow distribution. F. Geiger; S. Roenneberg; M. Cuchet; P. Rutschmann.
12:00	12:15	Impact of hydromorphological pressure on selected Latvian rivers. J. Jekabsone; T. Kolcova; A. Klaseva; M. Cicendajeva; M. Vehi.
12:15	12:30	Aeration related energy dissipation and scale effects in plunge pools. G. Muller.
12:30	12:45	Distribution of aliphatic hydrocarbons in coastal surface sediments of Nayband bay. S. Partani; R. Mokhtari; A. H. S. Dehaghani.
		posters
12:45	12:55	Water Flow Capacity of Expanded Insulation Corkboard. C. Carvalho; A. Tadeu; N. Simões.
		Adapting to global change: integrated management of ecological flow regimes for European eel (<i>A. anguilla</i>) and Eastern Iberian chub (<i>S. valentinus</i>) over invasive fish species F. Martínez-Capel; R. Muñoz-Mas; E. J. Belda; H. Macian-Sorribes; M. Ruiz-Rodriguez; M. Pulido-Velazquez; J. Vieira.
		Comparing numerical models for the simulation of hyporheic residence times and metabolic activity. R. Nora; F. Molkenthin.
		Velocity distribution and mixing layer in partially vegetated channel. S.R. Arques.
		Porous aquifer thickness and fractured aquifer detection electromagnetic methods in the highlands of Bolivia. E. Gomez.
12:55	14:15	Lunch



Room Green Thursday 14/06/2018		
		G.1 Coastal engineering Conveners: L. Cappiotti; M. Mossa.
8:30	8:45	Morphological evolution of an engineered sandy beach with a sloped seawall. L.M. Stancanelli; R.E. Musumeci; E. Foti; R. Briganti.
8:45	9:00	Effect of propeller wash on seabed velocities in the Koper Bay. L. Pavlin; V. Malacic; M. Perkovic; D. Zagar
9:00	9:15	Operational characteristics Optimisation of Tidal Range Schemes. J. Xue; R. Ahmadian; R.A. Falconer.
9:15	9:30	Shoreline change estimation in Da Nang bay, Vietnam, using satellite image. Q.B. Nguyen; N. D. VO; P. Gourbesville.
9:30	9:45	Numerical study of the shoreline morphology evolution of Jesolo beach (Italy). M.G. Gaeta; A. Paci; R. Archetti; S. Carniel; D. Bonaldo; A. Pedroncini; L. Cusato.
9:45	10:00	Impact of waves on coastal areas, lessons from UK and USA case studies. N. Leonardi; C. Donatelli; X. Li.
10:00	10:15	Modelling wind-wave in the Venice Lagoon from 1611 to present: relationship with salt-marsh lateral erosion rate. L. Tommasini; L. Carniello; M. Roner; M. Ghinassi; A. D'Alpaos
10:15	10:30	Overtides, bidirectional flows and lateral tributaries: disentangling the role of tidal asymmetries on meander evolution. A. Finotello; A. Canestrelli; L. Carniello; M. Ghinassi; A. D'Alpaos.
10:30	11:00	Coffee break
		G.1 Coastal engineering Conveners: L. Cappiotti; M. Mossa.
11:00	11:15	Impact of hydromorphological pressure on selected Latvian rivers. J. Jekabsone; A. Klaseva; M. Cicendajeva; M. Vehi.
11:15	11:30	Experimental and numerical study on breaking leading-depression waves. Y.S. Park; J.C. Harris.
11:30	11:45	Wave impact on oriented impervious buildings. D. Wüthrich; C.Y. Arbos; M. Pfister; A. Schleiss
11:45	12:00	Effects of the wave climate on a multiple sandbar system. L. Soldini; E. Perugini; M.L. Palmsten; C. Lorenzoni; J. Calantoni; M. Brocchini.
12:00	12:15	Nonlinear resonance and energy production of wave surge converters. S. Michele; P. Sammarco.
12:15	12:30	Local and Non-local geomorphic effects of Marine Hydrokinetic Turbines: from a single turbine to a power plant array. M. Musa; M. Heisel; C. Hill; M. Guala.
12:30	12:45	Application of a numerical model system for wave-induced beach evolution under severe storms: The case of Marina dei Ronchi (Italy). D. Pelli; L. Cappiotti.
		Poster
12:45	12:50	Sediment movement over rippled sandy bottom – experiments and numerical modelling B. Stachurska; R. Staroszczyk.
12:50	14:15	Lunch