Institute of Geophysics
Polish Academy of Sciences

IAHR International Association for Hydro-Environment Engineering and Research

IAHR YPN Poland Young Professionals Network

webinar

EXPERIMENTAL METHODS AND LABORATORY INSTRUMENTATION IN HYDRAULICS

13-15 April 2021

Website: igf.edu.pl/webinar.php

Registration:
https://www.eventbrite.it/e/experimental-methods-and-laboratory-instrumentations-in-hydraulics-tickets-142745316083

GENERAL PROGRAMME

April 13		April 14		April 15	
8:45*	Inaugural Sessions				
9:00 - 10:30	Keynote Presentations	9:00 - 10:30	Keynote Presentations	9:00 - 10:30	Keynote Presentations
10:30 - 11:00	Practitioner's Overview	10:30	Break	10:30 - 11:00	Practitioner's Overview
11:00	Break	10:40 - 11:55	Technical Session	11:00	Break
11:10 - 12:25	Technical Session			11:10	IAHR EMI Technical Committee
		11:55 - 12:30	Discussion	11:20 - 12:35	Technical Session
12:25 - 13:00	Discussion	12:30 - 13:00	Practitioner's Overview	12:35 - 13:00	Discussion
				13:00 - 13:10	Closing Remarks

*CET time

DETAILED PROGRAMME

April 13, Tuesday

Link:
https://zoom.us/j/98689189099?pwd=eUVVLytBN0VRM0NDYjZXREdqaVFSZz09

Hosts: Łukasz Przyborowski, Michael Nones

8:45 - 9:00: Opening session

Time	*Title*	*Presenter*
8:45	Institute of Geophysics Polish Academy of Sciences	**Mariusz Majdański**, Scientific Director IGF, Poland
8:50	IAHR Poland Young Professionals Network	**Arianna Varrani**, YPN Poland President, Poland

9:00 - 10:30: Keynote presentations

Time	*Title*	*Presenter*
9:00	Hydro-acoustic techniques in hydraulics engineering	**Massimo Guerrero**, Università di Bologna, Italy
9:45	Automating hydraulic engineering experiments	**Stuart Cameron**, University of Aberdeen, UK

10:30 - 11:00: Practitioner's Overview

Time	*Title*	*Presenter*
10:30	Particle Imaging Velocimetry and other imaging and illumination techniques	**Frank Michaux**, iLA_5150 GmbH, Germany

11:00 - 11:10: Coffee break

11:10 - 12:25: Technical session

Time	*Title*	*Authors*
11:10	Comparison of water velocity for a bore using laboratory tests of an electromagnetic current meter (ECM) and an acoustic Doppler velocimeter (ADV)	S. K. Thappeta, J. P. L. Johnson, E. Halfi, Y. Storz, J. B. Laronne
11:15	How can we investigate what we cannot scale? Introducing the concept of synoptic models for fluvial processes	I. Baselt
11:20	Some thoughts on assessing near bed surface flow hydrodynamics using instrumented particles	K. Al-Obaidi, M. Valyrakis
11:25	The assessment of Acoustic Doppler Velocimetry profiler from a user's perspective	D. Liu, K. Al-Obaidi, M. Valyrakis
11:30	Assessing the flow field around an oblong bridge pier. Vectrino acquisition time sensitivity analysis	A. M. Bento, J. P. Pêgo, L. Couto, T. Viseu
11:35	Q&A	
11:50	Comprehensive testing of suspended sediment analysis techniques to support monitoring activities in the Danube River	F. Pomázi, S. Baranya
11:55	Bedload transport quantification using image processing techniques	A. Ermilov, S. Conevski, M. Guerrero, S. Baranya, G. Fleit, N. Ruther
12:00	Experimental test bench for performance-assessment of large submersible and dry-action pumps used in waterways	J. Hardy, P. Dewallef, S. Erpicum, M. Pirotton, D. Parkinson, N. Taylor, C. Barnet, P. Treacy, O. Thomé, P. Archambeau, B. Dewals
12:05	Effect of orientation angle on flow field around submerged vertical square cylinder subjected to steady current over plane bed	K. P. Bauri, A. Sarkar
12:10	Q&A	

12:25 - 13:00: Discussion

April 14, Wednesday

Link:
https://zoom.us/j/95651799315?pwd=SjJtVlhyUTkvaXpNb1BnMVFoZFFMUT09

Hosts: Giulio Dolcetti, Michael Nones

9:00 - 10:30: Keynote presentations

Time	*Title*	*Presenter*
9:00	Uni and bi-directional exchange flows in a large scale rotating channel	**Claudia Adduce**, University of Roma Tre, Italy
9:45	The use of experimental measurements for the validation of transient models	**David Ferras**, IHE Delft, The Netherlands

10:30 - 10:40: Coffee break

10:40 - 12:30: Technical session

Time	*Title*	*Authors*
10:40	Hydrodynamic forces generated on a coarse spherical particle beneath a tidal bore	M. Z. Bin Riaz, S.-Q. Yang, M. Sivakumar
10:45	Videography modelling of the wave-structure interaction processes through cluster analysis	S. Mizar Formentin, M. G. Gaeta, G. Palma, M. Guerrero, R. De Vecchis, B. Zanuttigh
10:50	A novel shear plate for direct measurements of bottom shear stress induced by a model ship propeller	S. Niewerth, F. Núñez-Gonzalez, T. Llull, S. Lempa
10:55	Laboratory experiments on gravity currents interacting with upslope and overhang barriers	M. R. Maggi, C. Adduce, G. F. Lane-Serff
11:00	Non-intrusive density measurements applied to gravity currents interacting with an obstacle	M. C. De Falco, C. Adduce, M. R. Maggi

11:05	Q&A	
11:20	Turbulence anisotropy in a sinuous channel with downward seepage	J. Taye, B. Kumar
11:25	A lightweight, autonomous, down-looking wave gauge array in shallow lakes	M. Szilágyi, T. Krámer, T. Cinkler, A. Rehák, J. Józsa, M. Csonthó, Z. Nagy, Á. Jászberényi
11:30	Flow characterization around tandem piers on rigid bed channel	L. N. Pasupuleti, P. V. Timbadiya, P. L. Patel
11:35	Riparian plants' morphometry derived by RGB + structured-light 3D scanning within real vegetated flows	G. F. C. Lama, M. Crimaldi
11:40	Q&A	

11:55 - 12:30: Discussion

12:30 - 13:00: Practitioner's Overview

Time	*Title*	*Presenter*
12:30	Sediment in rivers: Instruments and measurements based on laser diffraction, acoustic backscatter and turbidity	**Ole Mikkelsen**, Sequoia Scientific Inc., USA

April 15, Thursday

Link:
https://zoom.us/j/95160983140?pwd=MEhuenRNTXNVYkVFOWJ6VGgzTHRvdz09

Hosts: Magdalena Mrokowska, Slaven Conevski

9:00 - 10:30: Keynote presentations

Time	*Title*	*Presenter*
9:00	Advancing the frontier of hydraulics experimentation using ferrofluids	**Laura Maria Stancanelli**, TU Delft, The Netherlands
9:45	Clogging of riverbeds – from complex field conditions to isolated processes in the laboratory	**Markus Noack**, Hochschule Karlsruhe, Germany

10:30 - 11:00: Practitioner's Overview

Time	*Title*	*Presenter*
10:30	Towards handheld instrumentation	**Marie Burckbuchler**, Ubertone, France

11:00 - 11:10: Coffee break

11:10 - 11:20: Committee on Experimental Methods and Instrumentation

Time	*Title*	*Presenter*
11:10	Activities of the IAHR Technical Committee on Experimental Methods and Instrumentation	**Rui Ferreira**, EMI, Portugal

11:20 - 13:00: Technical session

Time	*Title*	*Authors*
11:20	An advanced measurement method to investigate the dynamic development of sediment infiltration in an artificial riverbed	M. A. Mayar, S. Haun, M. Noack, S. Wieprecht
11:25	Breach geometry studies using depth detection technology	R. G. D. Campos, A. P. M. Saliba
11:30	High resolution measurements of the scour hole induced by a ski-bucket jet by means of structure from motion	E. Carvalho, S. Rosa, M. M. C. Lima, R. Aleixo
11:35	Assessing the transport of pollutants by means of imaging methods	F. Molteni, P. Winckler, M. Gallardo, A. Gubler, J. Sandoval, R. Aleixo
11:40	In-situ survey of an unstructured block ramp	R. Eikenberg, J. Aberle
11:45	Q&A	
12:00	Laser profilometry technique for nonintrusive and subaquaous 3D geometry reconstructions	I. Rifai, L. Kheloui, S. Bourban, S. Erpicum, P. Archambeau, M. Pirotton, D. Violeau, B. Dewals, K. El Kadi Abderrezzak
12:05	Automated spectra separation of dye mixtures	J. Pecly, C. Paiva
12:10	Laboratory investigations into stability and breaching of rockfill dams	G. H. Kiplesund, F. G. Sigtryggsdottir
12:15	Application of digital close-range photogrammetry to determine changes in gravel bed surface due to transient flow conditions	C. N. Phan, L. Książek, B. Mitka, M. Mrokowska, Ł. Przyborowski, M. Nones, A. Strużyński, S. Wojak, M. Wyrębek
12:20	Q&A	

12:35 - 13:00: Discussion

13:00 - 13:10: Closing remarks

Time	*Title*	*Presenter*
13:00	Closing remarks	**Michael Nones**, LOC