



Institute of Geophysics  
Polish Academy of Sciences



International Association  
for Hydro-Environment  
Engineering and Research



Poland  
Young  
Professionals  
Network

webinar

# EXPERIMENTAL METHODS AND LABORATORY INSTRUMENTATION IN HYDRAULICS

13-15 April 2020

Website: [igf.edu.pl/webinar.php](http://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	11:55 - 12:30		11:10	IAHR EMI Technical Committee
12:25 - 13:00		Discussion	12:30 - 13:00	12:20 - 12:35	Technical Session
				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>

**8:45 - 9:00: Opening session**

<i>Time</i>	<i>Title</i>	<i>Presenter</i>
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		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)	<a href="#">S. K. Thoppeta</a> , J. P. L. Johnson, E. Halfi, Y. Storz, J. B. Laronne
11:15	How can we investigate what we cannot scale?	<a href="#">I. Baselt</a>
11:20	Some thoughts on assessing near bed surface flow hydrodynamics using instrumented particles	<a href="#">K. Al-Obaidi</a> , M. Valyrakis
11:25	The assessment of Acoustic Doppler Velocimetry profiler from a user's perspective	<a href="#">D. Liu</a> , K. Al-Obaidi, M. Valyrakis
11:30	Assessing the flow field around an oblong bridge pier. Vectrino acquisition time sensitivity analysis	<a href="#">A. M. Bento</a> , 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	<a href="#">E. Pomázi</a> , S. Baranya
11:55	Bedload transport quantification using image processing techniques	<a href="#">A. Ermilov</a> , 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	<a href="#">J. Hardy</a> , 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	<a href="#">K. P. Bauri</a> , A. Sarkar
12:10	Q&A	

12:25 - 13:00: Discussion

# April 14, Wednesday

Link:

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

## 9:00 - 10:30: Keynote presentations

Time	Title	Presenter
9:00	Uni and bi-directional exchange flows in a large scale rotating channel	<b>Claudia Adduce</b> , University of Roma Tre, Italy
9:45		<b>David Ferras</b> , 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	<u>M. Z. Bin Riaz</u> , S.-Q. Yang, M. Sivakumar
10:45	Videography modelling of the wave-structure interaction processes through cluster analysis	<u>S. Mizar Formentin</u> , 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	<u>S. Niewerth</u> , F. Núñez-Gonzalez, T. Llull, S. Lempa
10:55	Laboratory experiments on gravity currents interacting with upslope and overhang barriers	<u>M. R. Maggi</u> , C. Adduce, G. F. Lane-Serff
11:00	Non-intrusive density measurements applied to gravity currents interacting with an obstacle	<u>M. C. De Falco</u> , C. Adduce, M. R. Maggi
11:05	Q&A	
11:20	Turbulence anisotropy in a sinuous channel with downward seepage	<u>J. Taye</u> , B. Kumar

11:25	A lightweight, autonomous, down-looking wave gauge array in shallow lakes	<u>M. Szilágyi</u> , T. Krámer, T. Cinkler, A. Rehák, J. Józsa, M. Csonthó, Z. Nagy, A. Jászberényi
11:30	Flow characterization around tandem piers on rigid bed channel	<u>L. N. Pasupuleti</u> , P. V. Timbadiya, P. L. Patel
11:35	Riparian plants' morphometric traits derived by structured-light 3D scanning within real vegetated flows	<u>G. F. C. Lama</u> , M. Crimaldi
11:40	Q&A	

11:55 - 12:30: Discussion

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

Time	Title	Presenter
12:30		Ole Mikkelsen, Sequoia Scientific Inc., USA

# April 15, Thursday

Link:

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

## 9:00 - 10:30: Keynote presentations

Time	Title	Presenter
9:00		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		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	<u>M. A. Mayar</u> , S. Haun, M. Noack, S. Wieprecht
11:25	Breach geometry studies using depth detection technology	<u>R. G. D. Campos</u> , 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	<u>E. Carvalho</u> , S. Rosa, M. M. C. Lima, R. Aleixo
11:35	Assessing the transport of pollutants by means of imaging methods	<u>F. Molteni</u> , P. Winckler, M. Gallardo, A. Gubler, J. Sandoval, R. Aleixo
11:40	In-situ survey of an unstructured block ramp	<u>R. Eikenberg</u> , J. Aberle
11:45	Q&A	
12:00	Laser profilometry technique for nonintrusive and subaqueous 3D geometry reconstructions	<u>I. Rifaj</u> , L. Kheloui, S. Bourban, S. Erpicum, P. Archambeau, M. Piroton, D. Violeau, B. Dewals, K. El Kadi Abderrezzak
12:05	Automated spectra separation of dye mixtures	<u>J. Pecly</u> , C. Paiva
12:10	Laboratory investigations into stability and breaching of rockfill dams	<u>G. H. Kiplesund</u>
12:15	Application of digital close-range photogrammetry to determine changes in gravel bed surface due to transient flow conditions	<u>C. N. Phan</u> , 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		Name Surname, LOC