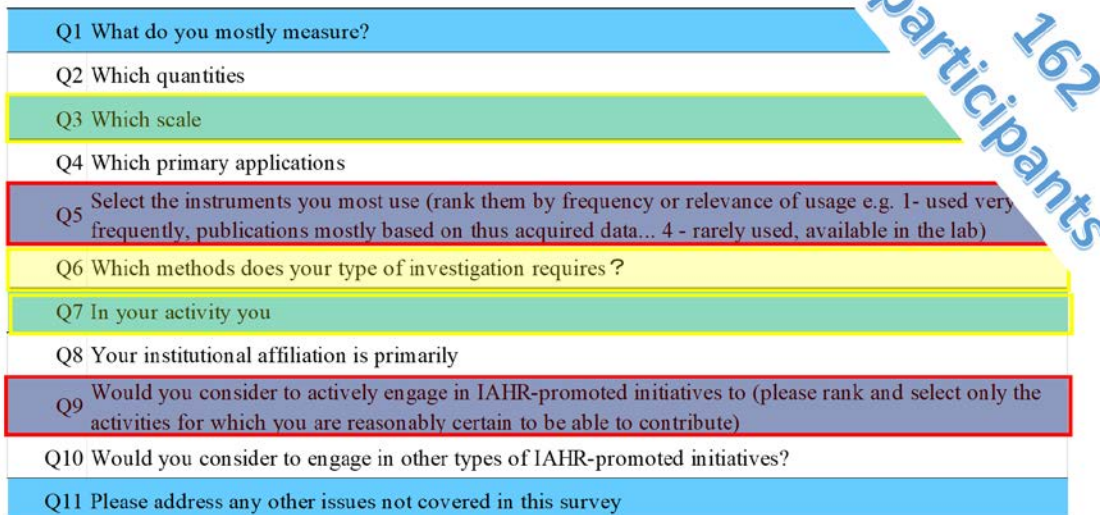


IAHR Experimental Methods and Instrumentation Committee

Minutes of EMI Technical Committee meeting during IAHR World Congress, Sunday 20th, August 2023, 16:00 Central European Time (15:00 Lisbon Time, 11:00 Buenos Aires and Brasilia) – Hydraulic Laboratory of BOKU, Am Brigittenauer Sporn 3, 1200 Wien

1. Information

The results of conducted analysis about EMI survey to IAHR community (Figure 1) were presented in full details by The Chairman, Massimo Guerrero. Particular attention was given to answers which sorted different responses from 162 participants and delineating the possible initiatives to be engaged in IAHR activity: Q3, Q5, Q6, Q7, Q9



Q1	What do you mostly measure?
Q2	Which quantities
Q3	Which scale
Q4	Which primary applications
Q5	Select the instruments you most use (rank them by frequency or relevance of usage e.g. 1- used very frequently, publications mostly based on thus acquired data... 4 - rarely used, available in the lab)
Q6	Which methods does your type of investigation requires ?
Q7	In your activity you
Q8	Your institutional affiliation is primarily
Q9	Would you consider to actively engage in IAHR-promoted initiatives to (please rank and select only the activities for which you are reasonably certain to be able to contribute)
Q10	Would you consider to engage in other types of IAHR-promoted initiatives?
Q11	Please address any other issues not covered in this survey

Figure 1: EMI survey to IAHR community

k-means clustering was applied to partition the observations eventually into two main groups:

1. Sharing database/software/facilities initiatives focusing on laser/optical/image-based devices should be proposed to LAB ORIENTED/THEORETICAL RESEARCHERS
2. Instrumentation driven efforts such as beta testing/instr. development/start up boosting focusing on ultrasound instrumentations would be better answer to FIELD RESEARCHERS/INSTRUMENTAL USER needs

Past-Chair Rui Ferreira suggested to publish these results on Hydrolink to further attract especially young colleagues from different sectors (i.e., academia and industry) in collaborating to EMI future initiatives.

Aiming at promoting follow-up initiatives, a discussion focused on the need of distributing specific tasks among LT members and interested colleagues associated to IAHR. These tasks will promote and realize EMI future initiatives. Particularly relevant, aiming at facilitating the sharing of knowledge/data/open scripts/software/tools/instrumentation, two project calls were briefly presented.

2. Initiatives beyond IAHR

Michael Nones presented the call **CHIST-ERA 2023, Topic 1** <https://www.chistera.eu/call-2023-draft-topics-keywords>

This call will support initiatives in the area of in the areas of “data collection, data model definition and implementation, efficient data structures for information representation, or software engineering for information systems development” that answers to the need of facilitating experimental data sharing in our Community. The call will be published end 2023. Michael Nones is in charge for reporting about that to the Committee.

The Vice-Chair Margaret Chen presented the call **MSCA-DN (Doctoral Networks)** <https://marie-skłodowska-curie-actions.ec.europa.eu/actions/doctoral-networks>

“The objective of Doctoral Networks is to implement doctoral programmes by partnerships of organisations from different sectors across Europe and beyond to train highly skilled doctoral candidates, stimulate their creativity, enhance their innovation capacities and boost their employability in the long-term” that answer to the need of facilitating experimental methods knowledge sharing in our Community. The call close on 28 November and is open on yearly basis. Margaret Chen is in charge of reporting about that to the Committee.

It was decided that Michael Nones and Margaret Chen will prepare a short conceptual report on possible proposal for these calls. Rui Aleixo gave his availability to collaborate on MSCN-DN and Isabella Shalko on both initiatives.

3. EMI Initiatives

Within the same discussion, in addition to applying to those call, a possible follow-up action to EMI Survey was suggested by Slaven Conevski. The idea is to prepare a framework for metadata production regarding experimental data, methods and tools focusing on a specific topic. Slaven Conevski is in charge to test and gather the interest of colleagues to be engaged in a new **Working Group for such initiative regarding ADCP/Ultrasound devices for sediment transport measurement in the field** (i.e., bed-load and suspended-load).

Yannic Fuchs from TUM reported about the **W.A.T.E.R. Summer School** that take place at the Oskar-von-Miller Research Institute for Hydraulic Engineering in Obernach, Germany (TUM) 25-28 July, 2023 (Figure 2).



Figure 2: Oskar-von-Miller Research Institute for Hydraulic Engineering in Obernach, Germany (TUM)

This 7th edition was particularly relevant in terms of available experimental setup (indoor and outdoor) and the proposed methodology: five experimental set-ups run in parallel and the theoretical background was presented at the set-up while developing the hand-on experience. This made possible to tailor and adapt this presentation depending on specific group need and made the knowledge exchange more effective. A publication on Hydrolink about the W.A.T.E.R. 7th edition is suggested. Rui Aleixo, Yannic Fuchs and Margaret Chen are available to collaborate on that.

Given the success of W.A.T.E.R. summer school seven editions carried out in Europe, a future edition is envisaged in the Americas, possibly in 2026. An investigation is required about the actual feasibility of conducting the W.A.T.E.R. summer school overseas. To this objective Isabella Shalko and Tais Yamasaki suggested to contact Johannes Janzen and Tobias Bleninger which organized the Gerhard Jirka summer school in Brazil in 2018. W.A.T.E.R. 8th edition will be in Strasburg; Marie Burckbuchler from Ubertone is in charge for facilitating the supporting of the hosting organization that will be led by Anne Pallares (Université de Haute Alsace and Fluid Mechanics team of ICube laboratory - University of Strasbourg).

4. IAHR events and initiatives

Michael Nones reported about the **YP Challenge 2023 edition** which was about PIV dataset and relied on Ana Margarida Ricardo (IST U. Lisboa) on-line mentoring. Only one participant was able to complete the proposed assignment. The Challenge will be repeated in 2024 possible widening topic/mentoring wise to eventually achieve a more active participation.

The Fluid Mechanics TC is keen in developing on-line mentoring in collaboration with other TC (e.g. EMI and Fluvial).

The envisaged contribution of EMI to **WATER Monograph of IAHR** regarding Optical Flow and ADCP for sediment transport are in doubts due to the lack of an agreement with Taylor and Francis Editor. Both Rui Ferreira (Optical Flow Monograph proposer) and Colin Rennie (within the authors group of ADCP monograph) expressed sceptical comments about the scientific impact of those initiatives. Review papers in published journals were suggested instead to effectively promote EMI contribute to knowledge advancement on instrumentation/experimental topics.

5. Summary of decision taken

Michael Nones and Margaret Chen will prepare a short conceptual report on possible proposal for **CHIST-ERA 2023, Topic 1** and **MSCN-DN** calls respectively. Rui Aleixo gave his availability to collaborate on MSCN-DN and Isabella Shalko on both initiatives.

Slaven Conevski is in charge to test and gather the interest of colleagues to be engaged in a new **Working Group for such initiative regarding ADCP/Ultrasound devices for sediment transport measurement in the field** (i.e., bed-load and suspended-load).

Rui Aleixo, Margret Chen and Yannic Fuchs are in charge of preparing a contribution about **W.A.T.E.R. summer school 7th edition to be published on Hydrolink**.

Massimo Guerrero is in charge of contacting the **IAHR WATER monograph** task force to report about discussed criticisms and eventually re-discuss EMI contribute.

28th August 2023

Massimo Guerrero, EMI Chair

Margaret Chen, EMI Vice-Chair

Rui M.L. Ferreira, EMI Past Chair

All participants reviewed the minutes and agreed with its content.

Annex: list of participants to the meeting

LT members

Rui Aleixo (from remote)

Marie Burckbuchler (from remote)

Slaven Conevski



Michael Nones

Isabella Shalko (from remote)

Tais Yamasaki (from remote)

Massimo Guerrero, EMI Chair

Margaret Chen, EMI Vice-Chair

Rui M.L. Ferreira, EMI Past Chair (from remote)

Non-LT Members

Irene Cavalieri

Antonia Dollmeier

Yannic Fuchs

Colin Rennie

Leonardo Schippa

Mohammed Ostad Mirza Tehrani