## **PROGRAM IGHEM Vancouver (Version 6)**

| Initial StressAugust 12, 2024Monday8:00 - 8:55Registration: Isabel MacInnes Ballroom in the Walter Gage Commonsblock<br>5556 Student Union BIVd, Vancouver, BC9:00 - 9:05Land acknowledgement<br>Jan Buermans, Conference Chair9:06 - 9:10Words of welcome on behalf of the UBC's Civil Engineering department<br>Faheem Sadeque9:10 - 9:20Introducing words<br>Thomas Staubil, President of IGHEM<br>Bit of Progress Site "C" a 1,100 MW Greenfield Hydro Plant<br>Katie Taylor10:00 - 10:30Coffee BreakSession 1Experience with field testing I<br>A Summary of Guarantee Fulfillment in Turbine Performance - Analyzing 15 Years<br>of Turbine Efficiency Measurements<br>Harald Hulaas, Ingvild Lunder, Erik Nielsen11:00 - 11:30Experience with Gomparative Discharge Evaluation in Hydro Power Plants<br>André Abgottspon, Thomas Staubil, Urban Gerold11:30 - 12:00Discharge Flow Measurement of CNR's Low Head Bulb Turbine at Beaucaire<br>Hydropower Plant<br>Pierre Roumieu, Theophane Foggia, Eric Lepy, Marie de Vignes, Boris Havard12:00 - 14:30Bulb Turbine Performance Evaluation<br>Gregor Höfer, Bernhard List14:00 - 14:30Relative Flow Measurement with the Pitot Principle by Means of Sampling Probe<br>and Spiral Case Inlet Pressure<br>Efstathios Sidiropoulos, Marco Eissner14:30 - 15:00Field Performance Test Experience using Acoustic Flow Measurement in<br>Penstock<br>Albert Mikhail, Steve Mockler, Oliver Betz | August 11, 2024 | Sunday  |
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|  | 15:00 - 15:30   | Coffee Break  |

| Session 3       | Innovation  |
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| 15:30 - 16:00   | Simultaneous Calibration of Relative Flow Metering Systems within a Hydraulic<br>Network<br>Johannes Lanzersdorfer  |
| 16:00 - 16:30   | Data Acquisition Method for Use of Paroscientific Transducers in Pressure-Time<br>Measurement<br>Eugenio Cuesta, Jean-Sébastian Dufour  |
| 16:30 - 17:00   | Integrating Computational Fuid Dynamics, Artificial Intelligence, and<br>Experimental Testing for Revolutionary Hydraulic Pump Optimization: A Novel<br>Approach<br>Roberto Meira Jr, M. Machada, N. A. Renno |
| 17:00 - 17:30   | Open Discussion Round on Weirs, Standardized Differential Pressure Device,<br>Volumetric Gauging Method, Electromagnetic Flow meters<br>All   |
| 20:00 -         | <b>Gala Dinner:</b> Wildlight Restaurant, #107-5380 University Blvd<br><u>www.wildlightrestaurant.ca</u>  |
| August 13, 2024 | Tuesday   |
| Session 4       | Pressure-time method  |
| 8:30 - 9:00     | Extension of the Pressure Time Method to 3-Dimensional Flows<br>Merhad Kalantar Neyestanaki, Georgiana Dunca, Pontus Jonsson, Michel J.<br>Cervantes  |
| 9:00 - 9:30     | Comparison of Pressure Differential Determination Methods for the Pressure-<br>Time Method<br>Petr Ševčík, Lukáš Rinka  |
| 9:30 - 10:00    | Comparison of the Acoustic Transit Time and Pressure-Time Discharge<br>Measurements<br>Harald Hulaas, Ingvild Lunder, Erik Nilsen   |
| 10:00-10:30     | Coffee Break  |
| Session 5       | Acoustic flow metering  |
| 10:30 - 11:00   | Analysis of the Flow Conditions in the Ova Spin Pumped Storage Plant and their<br>Impact on Acoustic Discharge Measurement<br>Florian Fahrni, Thomas Staubli, Urban Gerold                                    |
| 11:00 - 11:30   | ASFM Discharge Measurement at CNR's Montélimar and Beauchastel Hydropower<br>Plants<br>Dave Billenness, Pierre Roumieau, Jan Buermans, David Lemon  |
| 11:30 - 12:00   | Turbine Efficiency Measurements for Low Head Hydroelectric Units using<br>Acoustic Flow Method<br>Albert Mikhail, Marc Mantha, Oliver Betz  |
| 12:00 - 13:30   | Lunch   |
| Session 6       | Local velocity measurements   |

| 13:30 - 14:00   | Current Meters Discharge Measurements Downstream the Units – Test Cases and<br>General Evaluations<br>Gianalberto Grego, Fabrizio Ormando, Fabio F. Muciaccia   |
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| 14:00 - 14:30   | Acoustic Doppler Velocimeters for Point Velocity Measurement in Non-Ideal<br>Intakes<br>Milan Bijeljanin, Devon Danielson, Xue Fan, Gilles Proulx   |
| 14:30 - 15:00   | Acoustic Flow Metering with Clamp-On Transducers: General Considerations and<br>Uncertainty<br>Jürgen Skripalle   |
| 15:00 - 15:30   | Coffee Break  |
| Session 7       | Thermodynamic method and miscellaneous  |
| 15:30 - 16:00   | Reducing Parasitical Heat Flow to Seabird SBE 38 by Means of Insulation for<br>Thermodynamic Efficiency measurements<br>Jakob Hieke, Nathanael Weckerlein, Marco Eissner  |
| 16:00 - 16:30   | Open Discussion Round on Use of CFD in Efficiency Measurements<br>All   |
| 16:30 - 16:45   | Closing words<br>Thomas Staubli, President of IGHEM   |
| August 14, 2024 | Wednesday   |
| 06:30- Late     | Technical Tour<br>Meet outside the Gage Suites, UBC<br>Ferry: Tsawwassen to Swartz Bay<br>ASL AQFLow plant tour, Saanichton, BC<br>Lunch provided<br>Visit Victoria Inner Harbour<br>Visit to Gold Stream Provincial Park, Langford<br>Return to Tsawwassen |