9th Water Resource Recovery Modelling Seminar

Notre Dame, Indiana, USA | April 6 – 10, 2024

Submittal Deadline: June 19, 2023

For additional information, please see wrrmod2024conference.nd.edu

About the Event

The Water Resource Recovery Modelling (WRRmod) seminar provides a platform for sharing and discussion of cutting-edge research and innovative practices in the modelling of water resource recovery facilities (WRRF). The seminar brings together academia, engineering practice, software developers and utilities to facilitate engagement on model development, best modelling practices and changing future paradigms. The seminar has a single-track format with ample time for discussion. The goal is to encourage brainstorming and consensus building around the focus area for each session. As in previous editions, the number of attendees will be limited to 150 and participation is by invitation following an application review process.

Focus, Themes, and Key Topic Areas

A focus of WRRmod 2024 will be the discussion and advancement of best practices for the development and application of WRRF models to solve some of our most challenging environmental problems. When developing content, authors should consider how their application, development and/or research efforts impact the modelling of water resource recovery facilities. The technical themes for the conference will include decarbonization, greenhouse gas emissions, operational efficiency, nutrient removal, resource recovery, and watershed solutions. Submissions should focus on the development and use of models related to these key themes. Abstracts should clearly summarize the problem being solved and demonstrate the impact of the application and research with models on the wider water resource recovery industry. Submissions should address the conference themes and how the contribution advances modelling in one of the following key topic areas:

- Modeling for operations
- Implementing models for planning and design
- Mechanistic model development
- Application of models for fundamental research and knowledge development
- Data management for modelling and digital twins
- Data-driven modelling, artificial intelligence and hybrid modelling

Call for Content

Overall, the seminar will be structured with a young water professional (YWP) workshop on April 6. Parallel technical workshops will be held on April 7. The single-track technical session will take place Monday through Wednesday April 8 through 10, 2024. The technical session will consist of invited keynote speakers each day, accepted technical abstracts, and accepted session proposals. Technical abstracts will also be considered for poster presentation during a poster session

YWP Workshop

The YWP workshop will be developed by the YWP workshop chairs.

Workshop Proposals

The technical workshops will be selected based on quality, relevance, representativeness (e.g., academia/industry, gender, source of origin), thematic timeliness, and consensus-forming or debate-inducing potential. All workshops will be **half a day** and **migration of speakers between concurrent workshops will not be allowed**. The half a day format will provide the opportunity for workshops to focus on a single key question or theme, with the goal of facilitating more targeted conversations and debates. If a full day workshop is desired, two half day workshops may be proposed. However, the authors should ensure each half day session is beneficial without attending the companion workshop. To qualify, workshop proposals must adhere to the format described in the template on the WRRmod2024 website. Workshop proposals shall be submitted to the WRRmod2024 website portal, and also posted to the WRRmod2024 LinkedIn page to facilitate comments and discussion from potential attendees. The maximum acceptable length for a workshop proposal is 2 pages incorporating all text, references, figures and tables. This does not include abstracts for the proposed workshop speakers, which should be included in an appendix.

Technical Abstracts

Technical abstracts will be selected for presentation by the scientific committee based on novelty, practical applicability, and scientific quality. Authors are encouraged to highlight how their work contributes to solving a practical problem in the application of water resource recovery modelling for the identified topic areas. Accepted abstracts must provide a full manuscript to be included in the conference proceedings. To qualify, technical abstracts must adhere to the template on the WRRmod2024 website. Total technical abstract length will be four pages, including figures, tables, and references.

Session Proposals

Session proposals may be used when a collection of diverse modellers identify a key question or topic that could benefit from a facilitated discussion for consensus-building over an extended period of time. Proposed sessions be 1.5 hours in length and will largely adhere to the standard format of the WRRmod

seminar – two technical presentations followed by a 30-minute facilitated discussion. However, these sessions will also include a short introduction to frame the topic and the overall goal. Session proposals must include a summary introducing the key questions for discussion and the goals for the desired outcome, followed by abstracts describing the presentations that includes figures, tables, and key points that will be presented. The session proposal will also describe the plan for facilitated discussion during the 30-minute facilitated discussion period. Session proposals will be selected based on clarity of the need for consensus-building, quality of the technical content, diversity of perspectives presented, and the approach to debate and discussion facilitation. Accepted proposals will be required to submit a manuscript to be included in the conference proceedings that outlines the key technical points and basis for consensus building. Preliminary conclusions can be presented in this paper, with the intent that the conclusions would be updated based on discussions for further paper development. The proceedings will also include a session summary. To qualify, the overall session proposal must adhere to the templates on the WRRmod2024 website. Total session proposal length should not exceed six pages including session summary, facilitated discussion approach and presentation abstracts.

Steering Committee

Leon Downing (Black & Veatch, USA)
Tom Johnson (Jacobs, USA)
Adrienne Menniti (Clean Water Services, USA)
Rob Nerenberg (University of Notre Dame, USA)

Organizing Committee

Leila Barker (Clean Water Services, USA)
Patricia Perez-Calleja (CIMICO, Spain)

Scientific Committee

Experienced Water Professionals

Sara Arabi (Stantec, USA)
Giacomo Bellandi (AM-Team, Italy)
Lorenzo Benedetti (Waterways, Croatia)
Joshua Boltz (Woodard & Curran, USA)
Jun Chen (CSD Water Service, China)
Joaquim Comas (University of Girona and ICRA, Catalonia)
Yves Comeau (Polytechnique Montreal, Canada)
Daniela Conidi (EnviroSim, Canada)
John Copp (Primodal Inc., Canada)
Haydee De Clippeleir (DC Water, USA)
Jyoti Gautam (JSS Academy of Technical Education NOIDA, India)
Rajeev Goel (Hatch Ltd., Canada)
Ulf Jeppsson (IEA, Lund University, Sweden)
Eberhard Morgenroth (Eawag, Switzerland)
Ana Pena-Tijerina (Plummer, USA)
Anja Randelovic (University of Belgrade, Serbia)
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Leiv Rieger (inCTRL Solutions Inc., Canada)
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En Shi (Shenyang Jianzhu University, China)
Kimberly Solon (Ghent University, Belgium)
Kim Helleshøj Sørensen (AnoxKaldnes Veolia Water Technologies AB, Sweden)
George Sprouse (Metropolitan Council Environmental Services, USA)
Heather Stewart (Jacobs, USA)
Imre Takacs (Dynamita, France)
Sovanna Tik (Université Laval, Canada)
Elena Torfs (Université Laval, Canada)
Peter Vanrolleghem (Université Laval, Canada)
Matthew Wade (UK Health Security Agency, UK)
Liu Ye (The University of Queensland, Australia)
Dawei Yu (Chinese Academy of Sciences, China)

Young Water Professionals

Shalongo Angula (University of Cape Town, South Africa)
Kayla Bauhs (Brown and Caldwell, USA)
Gabriel Capson Tojo (INRAE, France)
Rebecca Chapa (Black & Veatch, USA)
Saba Daneshgar (Ghent University, Belgium)
Jeseth Delgado Vela (Howard University, USA)
Aryan Emaminejad (University of Illinois at Urbana Champaign, USA)
Mahmudul Hasan (Baltimore City Department of Public Works, USA)
Demi Ladipo-Obasa (DC Water/ The George Washington University, USA)
Noe Martinez (Austin Water, USA)
Ryan Sanford (DHI Water & Environment, USA)
Stephanie Schramm (HDR, USA)
Ferlisa Valentine (The Water Authority of Fiji, Fiji)
Christoffer Wärff (RISE Research Institutes of Sweden, Sweden)
Cheng Yang (Jacobs, USA)