Keeping up with the future: What's the best way to advance process modelling?

YWP Workshop: Strengthening the YWP community and YWP skillsets.

Expected discussions and results

YWP Workshop: This workshop will have two main parts with the main goals of exposing YWPs to existing and new models, engaging YWPs in the development of new models and model integration, helping YWPs gain modeling skills through interactive activities and discussions, and strengthening the YWP community. The first part of the workshop uses small groups and interactive demonstrations to cover important, current issues in wastewater modeling and to cover detailed modeling approaches. Part one serves as a foundation for part two by making sure participants know about and are comfortable with existing models. Part two covers emerging research areas and questions with overview presentations. Then there will be small group discussions, led by experts, that are structured to result in a list of research and model development/integration plans to improve wastewater modelling efforts.

Workshop set-up

The workshop will be a full day that includes talks, break-out group discussions, and small group interactive demonstrations.

Chair/Co-chair

Sherri Cook (University of Colorado-Boulder, USA)
Wim Audenaert (Ghent University, Belgium)
Kelly Martin (Black & Veatch, USA)
Nick Landes (Feese and Nichols, USA)

Speakers / Moderators

Leiv Rieger (inCTRL, Canada)
Lorenzo Benedetti (Waterways, Hungary)
Damien Batstone (University of Queensland, Australia)
Leon Downing (CH2M, USA)
Oliver Schraa (inCRTL, Canada)
David Weissbrodt (Delft University of Technology, the Netherlands; Aalborg University, Denmark)
George Wells (Northwestern University, USA)
Sherri Cook (University of Colorado-Boulder, USA)
Lluis Corominas (Institut Català de Recerca de l'Aigua (ICRA), Spain)
Ingmar Nopens (BIOMATH, Belgium)

Target Participants

Young Water Professionals

Programme

Time	Topic	Presenter/Moderator
09:00 - 09:20	**Introduction:** Workshop overview; Group orientation and ice breakers.	Sherri Cook, Wim Audenaert, Kelly Martin
Part I: Today's Model: New models you should know about Participants will choose 2 of the 3 activities, which include small group interactive demonstrations.		
09:20 - 09:30	**Overview of Activities** Activity 1: Advances in aeration modeling: Air supply and Tariff costing Activity 2: Integrated Model – WWTP, River, Collection System (Decision Support) Activity 3: Parameter Estimation and Anaerobic Digestion Problems	 Leiv Rieger Lorenzo Benedetti Damien Batstone
09:30 - 10:30	**First Round of Activities**	
10:30 - 11:00	Coffee break	
11:00 - 12:00	**Second Round of Activities**	
12:00 - 13:30	Lunch break	
Part II: Tomorrow's Models: Models you may be developing soon Overview Presentations followined by facilitated small group discussions, with final reporting back to the entire group.		
13:30 - 13:55	**Topic 1:** Modeling Granule-based Processes	Leon Downing Oliver Schraa
13:55 - 14:20	**Topic 2:** Microbial Ecology	David Weissbrodt George Wells
14:20 - 14:40	Coffee break	
14:40 - 15:05	**Topic 3:** Life Cycle and Sustainability Assessments	Sherri Cook Lluis Corominas
15:05 - 15:30	**Topic 4:** Population Balance Modeling	Ingmar Nopens
15:30 - 16:30	**Small Group Discussions**	Facilitated by Presenters
16:30 - 17:10	**Small Group Reporting** (back to entire group)	(10 min per topic)