WEF Forum 2022

Particles and Colloids: The Next Frontier in Intensifying Water Resource Recovery

January 10-12, 2022
Embassy Suites Fort Lauderdale 17th Street
Fort Lauderdale, Florida, USA
www.wef.org/Forum

This Forum is hosted by the Water Environment Federation.

Draft program as of December 2021

Session 1: Opening Session

Monday, July 12, 2021
1:30pm – 5:00pm

1:30 pm	**Welcome and Introduction from the Co-Chairs** Peter Vanrolleghem, Université Laval, 2021 Forum Co-Chair Kendra Sveum, Loudoun Water, 2021 Forum Co-Chair Jose Jimenez, Brown and Caldwell
1:45 pm	**The Role of Particles in the Design of WRRFs: A Historical Perspective** Art Umble, Stantec Consulting Services, Inc.
2:15 pm	**The Role of Particles in the Design of WRRFs: Facilitated Discussion**
2:30 pm	**What Particles Do Outside the Fence: A Disinfection and Advanced Oxidation Perspective** Domenico Santoro, USP Technologies
2:45 pm	**What Particles Do Outside the Fence: Facilitated Discussion**
3:00 pm	**Networking Coffee Break**
3:30 pm	**Potable Reuse Deep Dive** Krishna Pagilla, University of Nevada, Reno
3:45 pm	**Potable Reuse Facilitated Discussion**
4:15 pm	**Environmental Impact Deep Dive** Jamie Hughes, Clean Water Services
4:30 pm	**Environmental Impact Deep Dive: Facilitated Discussion**
4:55 pm	**Session Moderator Wrap-Up and Highlights** Peter Vanrolleghem, Université Laval; Kendra Sveum, Loudoun Water
5:00 pm	**Session adjourns for networking reception**

Session 2: Particle Type/Particle Properties

Tuesday, July 13, 2021
8:30am – 12:00pm

8:30 am **Introduction from the Session Moderator**
Jim McQuarrie, TetraTech

8:35 am **Particle Impacts on Wastewater Treatment Operations**
Christine deBarbadillo, Black & Veatch

8:45 am – 10:10 am **Deep Dive 1 – Particle Types and Properties**

8:45 am **The Fundamentals – Particles & Particle Properties in Environmental Engineering**
John Tobiason, Professor of Civil and Environmental Engineering, University of Massachusetts, Amherst, MA

9:20 am **Preliminary & Primary Treatment**
Queralt Plana Puig, Research & Development Engineer, SIAAP Colombes, Île-de-France, France

9:30 am **Continuous flow Activated Sludge**
Rudy Maltos, Metro Wastewater Reclamation District, Denver, CO

9:40 am **Facilitated Q&A**

10:10 am **Networking Break**

10:40 am – 11:20 am **Deep Dive 2 - Modeling**

10:40 am **Physical particle behavior in systems**
Wim Audenaert, AM-TEAM

10:50 am **Biological behavior with and within particles**
Lina Belia, Primodal, Inc

11:00 am **Modelling of particle heterogeneity**
Ingmar Nopens, Ghent University

11:10 am **Extending the practical benefit of understanding particles**
Alonso Griborio, Hazen and Sawyer

11:20 am **Session Moderator Wrap-Up and Highlights**
Jim McQuarrie, TetraTech; Chris deBarbadillo, Black & Veatch

12:00 pm **Session adjourns for networking luncheon**

Session 3: Processes

Tuesday, July 13, 2021
1:00pm – 5:30pm

1:00 pm **Introduction from the Session Moderators**
Jose Jimenez, Brown and Caldwell
Adrien Moreau, Suez

1:05 pm **Setting the Scene**
Sudhir Murthy, NEWhub

1:25 pm **Setting the Scene: Facilitated Discussion**

1:45 pm **Physical/Chemical Processes for Particle Formation, Particle Creation and Conditioning**
Celine Vaneeckhaute, Université Laval

2:00 pm **Physical/Chemical Processes: Facilitated Discussion**

2:30 pm **Aerobic Granular Sludge Technology: Quo Vadis?**
Mari Winkler, University of Washington

2:45 pm **Aerobic Granular Sludge Technology: Facilitated Discussion**

3:00 pm – 3:30 pm **Networking Coffee Break**

3:30 pm **Capture of Particles in Effluent Filtration Systems**
Gary Hunter, Black & Veatch

3:45 pm **Capture of Particles in Effluent Filtration Systems: Facilitated Discussion**

4:25 pm **Session Moderator Wrap-Up and Highlights**
Jose Jimenez, Brown and Caldwell; Adrien Moreau, Suez

4:30 pm – 5:30 pm **Afternoon networking reception**
This session flows immediately into an informal happy hour full of intriguing dialogue and socializing among new acquaintances and old friends. Afterwards, participants are encouraged to make plans on own for dinner in small groups, catching up on project ideas and happenings over the last year.

Session 4: Methodologies

Wednesday, July 14, 2021
8:30am – 12:00pm

8:30 am **Introduction from the Session Moderator**
Wendell Khunjar, Hazen

8:40 am **Grit Characterization**
Kendra Sveum, Loudoun Water

9:10 am **Grit Characterization: Facilitated Discussion**

9:40 am **Settling Transition Parameters for Sludge Characterization/Methods for Characterizing Properties of Flocs and Granules**
Belinda Sturm, The University of Kansas; Haydee DeClippeleir, DC Water

10:10 am **Settling Transition Parameters for Sludge Characterization: Facilitated Discussion**

10:40 am – 11:00 am **Networking Coffee Break**

11:00 am **Particle Size Measurement Techniques/Insights into Methodologies Used for Characterizing Biological Particles in WRRFs**
Ingmar Nopens, Ghent University; Ameet Pinto, Northeastern University

11:25 am **Particle Size Measurement Techniques: Facilitated Discussion**

11:55 am **Session Moderator Wrap-Up and Highlights**
Wendell Khunjar, Hazen

12:00 pm **Session adjourns for luncheon and closing session**

Session 5: Closing Session

Wednesday, July 14, 2021
12:30pm – 2:00pm

This session will include a working lunch and wrap up discussions, as well as a Closing Presentation. More information coming shortly.