

# Institute for Water Innovation (IWI)

## Workshop on Water Challenges in the Natural Resource Industries

The University of Toronto's Institute for Water Innovation invites industry stakeholders and faculty members to attend this inaugural workshop. Hear leading researchers present on the state-of-the-art in water technology, and key industry executives discuss water challenges facing the mining, metallurgy and petroleum industries. Participate in this workshop and have the opportunity to influence the Institute for Water Innovation's research direction.

8:00 am to 8:30 am

Registration and Breakfast

8:30 am to 8:45 am

Welcome and Introduction:

**Professor Vlad Papangelakis**, Director, Institute for Water Innovation  
Chemical Engineering & Applied Chemistry, U of T

**Mandeep Singh Rayat**, Manager, Institute for Water Innovation  
Faculty of Applied Science and Engineering, U of T

8:45 am to 10:15 am

Keynote Panel

Moderator:

**Dr. Sam Marcuson**

Former Vice President, Vale Canada Ltd.

**Emily Moore**, Global Director, Water  
HATCH

**Mike Sheedy**, Vice President, Technology Development  
Eco-Tec

**Michel Julien**, Vice President Environment  
Agnico Eagle Mines

**John Brogly**, Director, Water Environmental Priority Area  
Canada's Oil Sands Innovation Alliance (COSIA)

10:15 am to 10:30 am

Break

10:30 am to 11:45 am

Theme I: Process Water Treatment and Recycling Panel

Moderator:

**Dr. Sam Marcuson**

Former Vice President, Vale Canada Ltd.

i. Current Challenges in the Reuse and Recycling of Process Water

**Kati Bell**, Water Reuse Global Practice Leader  
MWH Global

iv. Effectively Treating High TDS Water Using Nanofibre Membrane Distillation

**Professor Ramin Farnood**  
Chemical Engineering & Applied Chemistry, U of T

ii. New Advances in Solid and Oil Removal Technologies

**Professor Edgar Acosta**  
Chemical Engineering & Applied Chemistry, U of T

v. Treating Brackish Water for Reuse Using Osmotic and Freezing Technologies

**Professor Vlad Papangelakis**  
Director, Institute for Water Innovation  
Chemical Engineering & Applied Chemistry, U of T

iii. Process Water Treatment Technologies

**Howie Honeyman**, CEO  
Forward Water Technologies

11:45 am to 12:30 pm

Networking Lunch

12:30 pm to 1:45 pm

Theme II: Effluent Water Treatment and Remediation Panel

**Moderator:**

**Dr. Sam Marcuson**

Former Vice President, Vale Canada Ltd.

**i.** Current Challenges in the Treatment of Mine Effluent Streams

**Jes Alexant**, Industrial and Mine Water Treatment Leader  
Stantec Consulting

**ii.** Electrochemical Technologies for the Treatment of Industrial Effluent Streams

**Professor Donald Kirk**  
Chemical Engineering & Applied Chemistry, U of T

**iii.** Adsorption Technologies for the Treatment of Oil Sands Process Water

**Professor Charles Jia**  
Chemical Engineering & Applied Chemistry, U of T

**iv.** Advances in Engineered Wetlands and Applications for the Natural Resource Industries

**Professor Elodie Passeport**  
Chemical Engineering & Applied Chemistry, U of T

**v.** Using Genomics Based Technologies to Treat Resource Industry Effluents

**Professor Elizabeth Edwards**  
Chemical Engineering & Applied Chemistry, U of T

1:45 pm to 2:00 pm

Break and Transition into Breakout Groups

2:00 pm to 2:45 pm

Industry Focus Session

Two breakout sessions based on Process Water Treatment & Recycling, and Effluent Water Treatment & Remediation

- i.** What are your company's greatest research needs?
- ii.** What is their importance in terms of short-term, medium-term, on-going/long-term horizons?
- iii.** What strategic University-Industry partnership opportunities exist?

2:45 pm to 3:15 pm

Reports from Breakout Sessions

Results will be used by IWI to develop a collaborative research action plan.

3:15 pm to 3:30 pm

Closing Remarks

**Institute for Water Innovation (IWI)**

Workshop on Water Challenges in the Natural Resource Industries

Friday, June 17, 2016

Alumni Hall, Victoria College Building

91 Charles Street West, Toronto, ON