

# WASTEWATER MICROBIOLOGY SEMINAR

March 28, 2018

## REGISTRATION:

OPENS ON February 14, 2018

## COST:

(Cost includes proceedings, coffee, light breakfast and lunch)

Delegate Type	On/Before Mar 7 /18	After Mar 8/18
WEAO/WEF Member and YP /NP Member	\$325.00	\$405.00
Non- Member*	\$415.00	\$495.00
Student Member	\$180.00	

\* Non-Member fee includes one year WEAO membership

1. Above costs do not include applicable HST
2. 7-day advance notice is required for refunds
3. Administration fee of \$35.00 will be charged for all cancellations

## REGISTER ONLINE AT

[www.weao.org](http://www.weao.org)

## CONTACT INFORMATION

For Seminar Content

Jianrong Liu  
ETO Engineering  
(289) 637-2700 x 210  
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Dave Neely  
D&D Environmental Technology  
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Michael Mark  
MYM Consulting Services  
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For Registration Inquiries

Water Environment Association of Ontario  
[admin@weao.org](mailto:admin@weao.org)  
416-410-6933 x 22

### Directions inside ABTP Property

From Leslie Street make a left (east) at Commissioners Ave. onto the North Service Road towards the Wastewater Treatment Plant. Park in the main parking lot and sign in at the security building. Upon entry, follow the road towards the stack and turn left at the intersection. The seminar location - Training Centre is a short walk from there and will be clearly visible by signage.

### Contacts:

ABTP Control Room: (416) 392-5153

Vlad Petran: (647) 462-6542

Dave Dickson: (647) 466-8234



# WASTEWATER MICROBIOLOGY WORKSHOP




## A WEAO Specialty Workshop

**Date:** March 28, 2018

**Time:** 8:00 am - 4:30 p.m.

**Location:** Ashbridges Bay Treatment Plant  
Training Centre  
9 Leslie Street  
Toronto, ON M4M 3M9

8:00 - 8:30	<b>REGISTRATION AND COFFEE</b>
8:30 - 8:45	Introductions and Workshop Objectives
8:45 - 9:30	Overview of Biological wastewater treatment plant <ul style="list-style-type: none"> <li>• Process design</li> <li>• Operation</li> </ul>
9:30 - 9:45	Process and tools used to monitor your WWTP's performance <ul style="list-style-type: none"> <li>• All Attendants</li> </ul>
9:45 - 10:15	Basic microscopic analysis tools and techniques
<b>10:15 - 10:30</b>	<b>COFFEE BREAK</b>
10:30 - 11:30	Conventional microscopic analysis of activated sludge <ul style="list-style-type: none"> <li>• Floc structure</li> <li>• Filament abundance and identification</li> <li>• Higher life forms</li> </ul>
11:30 - 12:00	Practice I: Microscopic observation <ul style="list-style-type: none"> <li>• Wet-mount</li> <li>• Smear Preparation</li> </ul>
<b>12:00 - 1:00</b>	<b>LUNCH Sponsored by</b> 

1:00 - 1:30	Foaming and Bulking Problems/ Control
1:30 - 2:30	Practice II: Staining Techniques <ul style="list-style-type: none"> <li>• Gram Stain</li> <li>• India ink reverse stain</li> </ul>
2:30 - 3:30	Evaluation and review of Samples ( <b>How are your bugs doing?</b> ) Troubleshooting Information
3:30 - 4:00	Introduction to some of the current mind blowing techniques for activated sludge analysis (Optional)
<b>4:00 - 4:30</b>	<b>SUMMARY-</b> What we did today? And what you plan to do with this information and how!
<b>04:30 pm</b>	<b>ADJOURN</b>
	Bring your own samples or use ones provided at the workshop  Bring your own lab coat if you have one  Bring your own microscope if available (may be shared with up to 3 more attendees)

**Register today as space is limited to a maximum attendance of 30 delegates for this important hands-on workshop.**

**0.4 CEUs can be obtained for this seminar\***

**Treatment Plant Operators can credit this CEU towards their MOE Certification requirements.**

\* Application has been filed with OWWCO for granting 0.7 CEUs

## Find Out About:

- ✓ Microbiology of activated sludge
- ✓ Activated sludge floc structure analysis
- ✓ Filamentous organisms in activated sludge

Causes of activated sludge bulking/foaming and control

**Hands-on training** to identify filaments: including staining techniques and morphology to identify specific filamentous organisms

- ✓ Provided by Jianrong Liu (ETO Engineering) and Dave Neely (D&D Environmental Technology).

Jianrong is an expert in the application of conventional and advanced techniques for diagnosing microbiological problems in biological wastewater treatment systems. In 2009 and 2012, she instructed International Water Association (IWA) organized workshops titled Conventional and Advanced Methods for Analyzing Microbiology of Activated Sludge Systems.

Dave is a Water/Wastewater process specialist with D&D Environmental Technology. He has numerous years working in wastewater treatment plants operated by Ontario Clean Water Agency, including Operations Manager for the Region of Peels' WWTP's. He has presented similar theme based courses to WWTP operators throughout Ontario.

