

### Workshop Description

This workshop has been developed with the goal to provide an in-depth understanding of advances in conventional and emerging pollutants in wastewater treatment. The attendees are likely to be practitioners, utility managers/engineers, and researchers. The quality of the presentations and the expertise of the presenters will provide considerable knowledge value to the attendees. Therefore, the invited speakers are leading edge professionals who are actively advancing wastewater treatment for conventional pollutants such as nitrogen and phosphorus and micropollutants such as endocrine disruptors, nanoparticles, and specialty industrial and munition compounds.

### Program Committee

**Krishna R. Pagilla, Ph.D., P.E., Chair**  
Professor of Environmental Engineering  
Illinois Institute of Technology

**Joseph G. Cleary, P.E., BCEE**  
Principal  
HydroQual, Inc.

**James W. Patterson, Ph.D., BCEE**  
President  
Patterson Environmental Consultants, Inc.

**Cecil Lue-Hing, D.Sc., P.E., BCEE, NAE**  
President  
Cecil Lue-Hing & Associates, Inc.

**W. Wesley Eckenfelder, D.Sc., P.E., BCEE**  
Professor Emeritus  
Vanderbilt University

**Thomas E. Wilson, Ph.D., P.E., BCEE**  
AECOM  
President  
Thomas E. Wilson Environ. Engrs., LLC

### Course Credits

20 PDHs

### Conference Location

Union League Club of Chicago  
65 West Jackson Boulevard  
Chicago, Illinois 60604-3598  
T: (312) 427-7800 F: (312) 427-2835

A block of rooms is reserved at the conference rate of \$159 per night. These rooms will be available through April 15, 2010 or until sold out.

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## Workshop 2010

### Advanced Wastewater Treatment Technology: Conventional and Micropollutants

**Dates:**  
**April 27th - 29th, 2010**

**Conference and Hotel Location:**  
**Union League Club, Downtown Chicago**

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**Sponsored by:**  
Environmental Engineering Program  
Illinois Institute of Technology

### Co-Sponsors:



Metropolitan Water Reclamation District of Greater  
Chicago



Illinois Water Environment Association



National Association of Clean Water Agencies



American Academy of Environmental Engineers

**Monday: April 26, 2010**

**7:00-9:00 p.m. - Informal Reception: Registration and Materials Pick-up**

**Tuesday: April 27, 2010**

**8:00-8:30 a.m. - Registration and Materials Pick-up**

**8:30-9:30 a.m.**  
Plenary Session-Emerging Contaminants in the Environment  
**Rao Y. Surampalli, Ph.D., P.E.**  
Engineer Director  
USEPA

**9:30-10:30 a.m.**  
Biological Wastewater Treatment-Overview  
**Krishna R. Pagilla, Ph.D., P.E.**  
Illinois Institute of Technology

**10:30-10:45 a.m. • Break**

**10:45-11:45 a.m.**  
Physical/Chemical Wastewater Treatment-Overview  
**Davis L. Ford, Ph.D., P.E.**  
Ford and Associates, Inc.

**11:45-1:00 p.m. • Lunch (Provided)**

**1:00-2:00 p.m.**  
Biological Nitrogen Removal - Theory and Practice  
**W. Wesley Eckenfelder, D.Sc., P.E., BCEE**  
Vanderbilt University

**2:00-3:00 p.m.**  
Phosphorus Removal - Theory and Practice  
**James Barnard, Ph.D., P.Eng.**  
Black & Veatch, Inc.

**3:00 -3:15 p.m. • Break**

**3:15 -4:15 p.m.**  
Biological Selectors-Municipal and Industrial Applications  
**Glen Daigger, Ph.D., P.E.**  
CH2M-Hill

**4:15-5:00 p.m.**  
High Strength Nitrogen Wastewater Treatment - A Case Study  
**Joseph G. Cleary, P.E., BCEE**  
Hydroqual, Inc.

**5:30-7:00 p.m. • Sponsors' Reception**

**Wednesday: April 28, 2010**

**8:30-9:30 a.m.**  
Wastewater Sidestream Biological and P/C Treatment  
**Beverly Stinson, Ph.D., P.E.**  
AECOM

**9:30 - 9:50 a.m.**  
Vacuum Distillation of Centrate for N Recovery  
**Morton Orentlicher**  
ThermoEnergy

**9:50-10:45 a.m.**  
Anaerobic Biological Treatment  
**Richard Speece, Ph.D., P.E.**  
Vanderbilt University

**10:45-11:00 a.m. • Break**

**11:00-12:00 noon**  
Clarification: Theory and Applications  
**Dave Kinnear, Ph.D., P.E.**  
HDR, Inc.

**12:00-1:00 p.m. • Lunch (Provided)**

**1:00-1:45 p.m.**  
Membrane-Based Wastewater Treatment Systems  
**Glen Daigger, Ph.D., P.E.**  
CH2M-Hill

**1:45-2:45 p.m.**  
Adsorptive Treatment Technologies: Theory and Applications (PAC & GAC)  
**Davis L. Ford, Ph.D., P.E.**  
Ford and Associates, Inc.

**2:45 - 3:00 p.m.**  
Superoxygenation of Industrial Wastewater  
**Richard Speece, Ph.D., P.E.**  
Vanderbilt University

**3:00-3:15 p.m. • Break**

**3:15-4:00 p.m.**  
Removal of Pharmaceuticals and Micropollutants from Wastewater: Proven and Emerging Technologies  
**Ed Helmig**  
Wyeth Pharmaceuticals

**4:00-5:00 p.m.**  
Control of Metals: Conventional and Advanced Technologies  
**James W. Patterson, Ph.D., BCEE**  
Patterson Environmental Consultants, Inc.

**Thursday: April 29, 2010**

**8:00-9:00 a.m.**  
Control of Nanoparticles in Wastewater  
**Ganesh Rajagopalan, Ph.D.**  
Kennedy/Jenks Consultants

**9:00-10:00 a.m.**  
Conventional and Insensitive Munitions Wastewater Treatment  
**Stephen Maloney, Ph.D., P.E.**  
US Army Corps of Engrs. -CERL

**10:00-10:15 a.m. • Break**

**10:15 - 11:00 a.m.**  
Micropollutants Accumulation on Biosolids: Impact on Residuals Management  
**Thomas Granato, Ph.D.**  
MWRD of Greater Chicago

**11:00 a.m.-12:00 noon**  
Panel Discussion: Emerging Contaminants - Fate, Effects and Control  
Selected Speakers  
**Moderator: Joseph G. Cleary, P.E., BCEE**  
Hydroqual, Inc.

**12:00 noon • Adjourn Workshop**

**AWTTCM Workshop  
Workshop Registration Form**  
please fill a separate form out for each person attending.

Name\_\_\_\_\_

Title\_\_\_\_\_

Company\_\_\_\_\_

Address\_\_\_\_\_

City/State/Zip\_\_\_\_\_

Phone/Fax\_\_\_\_\_

Email address\_\_\_\_\_

**Workshop Registration Fees**  
(Includes Breakfast, Lunches, Reception, and Proceedings)

**Advance Registration**  
(prior to 2/28/10).....\$550

**Registration**  
(after 2/28/10 or until all seats are sold out.).....\$675

**Payment Options**  
 Bill to my company - invoice will be sent upon registration  
 Credit card payment - online registration available at [www.iweasite.org](http://www.iweasite.org)  
 Check payment enclosed - Payable to: Illinois Institute of Technology - AWTTCM Workshop

**For further information, please contact:**  
AWTTCM Workshop  
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