Knowledge Development Forum (KDF) on Intelligent Water Technology Solutions for Waterborne Infectious Disease Outbreak Control and Water Security

The Water Environment Federation and the Water Research Foundation would like to invite you to attend the upcoming LIFT Knowledge Development Forum (KDF) on intelligent water technology solutions for disinfection and waterborne infectious disease outbreak control and water security. This event will create a great opportunity for attendees to openly discuss new technologies and management practices in the Water and Wastewater Systems Sector to help solve some of the most complex and difficult challenges facing the water and wastewater industry. Unlike a traditional workshop, the KDF is an interactive platform for attending stakeholders to exchange and synthesize new knowledge, identify collaboration potential to bridge gaps, and facilitate the adoption of innovative ways of problem solving in the water sector. Through a series of highly interactive discussions, experts in the field will provide context for evaluation and dissemination of information gleaned from recent studies.

Limited Space Available! Reserve your spot soon!

VISIT https://www.eventbrite.com/e/intelligent-water-technology-knowledge-development-forum-tickets-79265618599

Date: **24-FEB-2020**
Location: **University of California, Irvine**
               Irvine, CA 92697

OVERVIEW
Intelligent water technologies are quickly becoming the cornerstone of a proactive and evidence-based day-to-day management and operation approach. The collection and strategic use of real-time data and innovative technologies could provide a wide range of solutions to existing challenges the water sector has been facing for decades. A myriad of new instrumentation options for water and wastewater monitoring, treatment, production, transmission and distribution and collection system performance monitoring, combined with improved communications and computing power are being introduced. These disruptive forces are leading the way for the implementation of intelligent water technologies that improve the efficiency and reliability of water networks, and system knowledge, provided utilities receive guidance on which technologies are appropriate for their situation and how they could be implemented successfully. To that end, this KDF will investigate the intersection of intelligent water technologies with disinfection and public health protection during routine plant operation and during outbreaks. For example, there is a great deal of research focusing on disinfection practices and disease outbreaks. This KDF will highlight the crucial role collection, analyses and synthesis of these data, as well as the detection technologies to improve water and wastewater system service delivery. The KDF will provide an opportunity for industry leaders to collaborate and discuss the vision of intelligent water technology solutions, existing technology, improvements to technology and practices, and next steps to encourage adoption and implementation.

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24-FEB-2020
8:45 AM – 3:30 PM

TIME	TOPIC	INSTRUCTOR AND AFFILIATION
8:45 AM	**Welcome and Introductions** An overview and description of the forum and how it is going to run. The top priorities of the forum will be discussed in order to lay down the foundation for the rest of the day and the rest of the event.	Elkin Hernandez, DC Water (Moderator) *(Confirmed)* Diego Rosso, Ph.D., University of California, Irvine *(Confirmed)*
9:00 AM	**Contaminant Detection** Presentations will be provided that define current methods for detection in different spatial contexts for short-term and long-term management goals **Transport and uncertainty** **USEPA contaminant detection research and future directions** **Big data**	[Speaker 1] David B. Hart, Sandia National Laboratory *(Confirmed)* [Speaker 2] Jeffrey Szabo, U.S. Environmental Protection Agency Water Security Test Bed, INL *(Confirmed)* [Speaker 3] Ting Lu, Ph.D., Principal Engineer, Clean Water Services *(Confirmed)*
10:00 AM	**Networking Break**	
10:15 AM	**Contaminant Detection** Presentations will be provided that define current methods for detection in different spatial contexts for short-term and long-term management goals **Waterborne disease outbreaks** **Ebola case studies** **AI, Machine Learning, Modelling**	[Speaker 4] Rasha Maal-Bared, Ph.D. Senior Microbiologist, EPCOR Water Services *(Confirmed)* [Speaker 5] Kyle Bibby, Ph.D., University of Notre Dame, College of Engineering *(Invited)* [Speaker 6] Corey Williams, Optimatics *(Confirmed)*
11:15 AM	**Detection Methods, AI, Machine Learning Round Table Discussions** Participants at each table will be provided with a question(s) for discussion that will assist in informing additional discussion and post report content.	
12:00 PM	Lunch KEYNOTE: AI and transformative technology solutions for outbreaks – Microsoft Premonition	[Keynote speaker *(invited)*] Ethan Jackson, Ph.D., Senior Director and Principal Researcher, Microsoft Healthcare
1:00 PM	**Practical applications** Session will bring together a panel of municipal and industry experts to share their experiences and lessons learned. Panelist include: **Pathogens in Water** **Disinfection**	[Speaker 1] C. Sunny Jiang, Ph.D., University of California, Irvine, The Henry Samueli School of Engineering *(Confirmed)* [Speaker 2] Brian Louie, Los Angeles County Sanitation District *(Invited)*

	Sensors	[Speaker 3] Jodi Glover, Liquid AI, RealTech, Inc. *(Confirmed)*
2:00 PM	Networking Break	
2:15 PM	Practical applications (cont'd) Session will bring together a panel of municipal and industry experts to share their experiences and lessons learned. Panelist include: **Smart disinfection process control technology (ADC)** **Test beds** **Case study on technology implementation** **Data Sharing**	 [Speaker 4] John Walton, USP Technologies *(Confirmed)* [Speaker 5] Jeffrey Szabo, U.S. Environmental Protection Agency Water Security Test Bed, INL *(Confirmed)* [Speaker 6] Jay Boyd, ADS *(Confirmed)* [Speaker 7] Ari Goldfarb, KANDO *(Confirmed)*
3:15 PM	Collaboration and Next Steps	Elkin Hernandez and Rasha Maal-Bared *(Confirmed)*
3:30 PM	Adjourn	