

School of Earth and Environmental Sciences

Colloquium Series

Dr. Arjun K. Venkatesan

Associate Director for Drinking Water Initiatives
NYS Center for Clean Water Technology
Stony Brook University, Stony Brook, NY 11794

Wednesday, March 22nd, 2023

12:15 – 1:30 PM

Location: Science Building, C-207

Chemicals of Concern in the Urban Water Cycle

Urban water cycle is created due to the unintentional and, in some cases, intentional reuse of wastewater into the drinking water supply. The efficiency of drinking water and wastewater treatment processes determine the type and abundance of chemicals in the urban water cycle. My research program is focused on the occurrence, fate, and treatment of chemicals of concern in the built and natural environment. We particularly focus on persistent and accumulative chemicals that may enrich and increase exposures in the urban population. Some examples of chemicals we study include 1,4-dioxane, per- and polyfluoroalkyl substances (PFAS) and many pharmaceuticals and personal care products. We develop novel treatment technologies to remove these toxic contaminants from the urban water cycle and also apply creative monitoring techniques to assess chemical exposures occurring in urban communities. In this seminar, I will summarize some ongoing research in our group focused on the: (i) treatment of 1,4-dioxane in the Long Island urban water cycle, and (ii) the application of wastewater-based epidemiology approaches to track community consumption of drugs and chemicals.



Brief bio: Dr. Arjun Venkatesan is the Associate Director for the New York State Center for Clean Water Technology and a Research Associate Professor in the School of Marine and Atmospheric Sciences at Stony Brook University (SBU). He earned his Ph.D. in Environmental Engineering from ASU (2013), master's in environmental engineering from University of Nevada, Las Vegas (2009), and a bachelor's in chemical engineering from Anna University in Chennai, India (2007). His current research projects are funded by National Science Foundation, US Department of Energy, US Department of Defense, US Bureau of Reclamation, New York State (NYS), and industries to support the development and evaluation of novel water treatment approaches to remove PFAS and 1,4-dioxane. He also serves as the technical director of the NYS Department of Health-certified analytical facility at SBU for PFAS analysis. His work on emerging contaminants has been featured in media including PBS News Hour, Royal Society in Chemistry, NIEHS, American Society of Agronomy, ACS Chemical & Engineering News, and many others. To date, Dr. Venkatesan has published >46 peer-reviewed journal articles and holds a patent for a novel approach to remove and recover chemical resources from sludge.

****THIS IS A HYBRID MEETING****

Zoom link for remote attendance:

<https://us02web.zoom.us/j/82229858276?pwd=UkNzM2FNY2p6cG42YjBmeHg0dGxNdz09>

Meeting ID: 822 2985 8276

Passcode: 515589