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NOTICE OF UPCOMING TECHNICAL PRESENTATION Monday, 8 March 2021

TOPIC: Geotechnical Investigation of Coastal Sediments with regards to Geomorphodynamics

SPEAKER: Nina Stark, PhD. – Associate Professor, Virginia Tech.

Nina Stark is an associate professor in the geotechnical engineering program at Virginia Tech. In the framework of her PhD, she developed a novel portable free fall penetrometer that enables geotechnical seabed probing under energetic hydrodynamics, and pioneered in-situ measurements of seabed surface hardening and softening associated to active sediment remobilization processes. Nina joined Dalhousie University, Canada, as a postdoctoral fellow in 2012 after continuing some of her PhD work as a postdoctoral fellow at MARUM. During her postdoctoral appointments she focused on the development of a penetrometer for deployment from manned submersibles, seabed monitoring around offshore wind energy converters, beach dynamics and a novel acoustic Doppler device for high resolution monitoring of the seabed surface. She joined Virginia Tech in 2013. Her research is focused on coastal geotechnics, coastal and marine field surveying methods, subaqueous sediment dynamics, beach trafficability, geotechnical engineering in naval applications, and ocean renewable energy. Nina has co-led teams for the Geotechnical Extreme Events Reconnaissance (GEER) association in response to Hurricanes Harvey and Irma in 2017, and she has received the NSF CAREER award and the ONR Young Investigator award in 2018. Nina has been awarded the Anthony and Catherine Moraco Faculty Fellowship in 2019.

CONTENT: Geotechnical sediment properties in coastal and marine environments vary with local sediment dynamics, and vice versa affect sediment erodibility and depositional behavior. Thus, geotechnical properties are directly related to geomorphodynamics, including shoreline change in response to extreme events and sea level rise. Changes of geotechnical properties in coastal and marine environments resulting from sediment dynamics also potentially affects the integrity of coastal structures, engineering actions, naval activities, and/or habitats. It follows that there is a need for geotechnical investigations of coastal sediments with regards to active geomorphodynamics and its implications on above listed issues. Research towards filling this gap in knowledge requires the development of novel methods suitable for geotechnical site investigation in energetic coastal and marine environments, as well as a better understanding of the complex interaction between geotechnical properties and coastal processes. This presentation includes examples of latest efforts of method developments for the geotechnical investigation of coastal environments, as well as examples of geotechnical field data collections in areas affected by a variety of coastal processes and conditions. The presentation concludes with an outlook towards next steps and opportunities.

DETAILS: Technical Presentation: 12:00 pm – 1:00 pm

Link: <https://attendee.gotowebinar.com/register/3941750698485534223>