

# UConn

## UNIVERSITY OF CONNECTICUT

Department of Marine Sciences  
Presents a Seminar By

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### **UV-sensing of dissolved substances along gradients in the marine environment**

There is an increasing request for robust, fast, inexpensive and automated sensing technologies in operational monitoring of the aquatic environment. Optical sensors are a promising approach as they enable us to observe key variables and proxies with high spatio-temporal resolution. In the early 20<sup>th</sup> century observations performed by the German marine scientist Kurt Kalle led to the definition of 'Gelbstoff' (now known as CDOM) and its 'sky-blue fluorescence' if illuminated with ultraviolet (UV) light (denoted as FDOM). As they are both part of the aquatic dissolved organic matter (DOM) pool, their measurement and data interpretation has received substantial interest. Progress in methodologies was in line with technological advancement to produce and detect light at even shorter wavelength. Thus it became also possible to detect dissolved nutrients, namely nitrate and nitrite, as they exhibit prominent absorption characteristics below 250 nanometer wavelength. I will showcase examples of in situ sensing of dissolved organic material and nutrients along gradients in the tidal influenced German Bight and the Elbe estuary, underlining the potential of optical tools for aquatic ecosystem monitoring on larger scales.

**Host:** Shungu Garaba

**Time & Date:** 11:00 am, Friday, December 11, 2015

**Place:** Marine Sciences Building, Seminar Room 103

Please see this [page](#) for cancelations and additional seminar information, email [marinesciences@uconn.edu](mailto:marinesciences@uconn.edu), or call 860-405-9152 or 860-405-9151