

**Date:** December 1st

**Time:** 11:00 AM

**Location:** Maryland Hall 110

**Speaker:** Dr. Alexandria Boehm  
Stanford University

**Title:** "Microbial Pollution at Recreational Beaches: Sources and Transport to Nearshore Waters"

### **Abstract**

**In the USA, there were 20,000 beach advisory and closure days caused by elevated densities of fecal indicator bacteria (FIB) in 2005, up from 6,200 in 1999. These figures suggest that pollution of America's coastline is widespread, threatening the health of visitors who collectively make 930 million trips to the beach each year, and the tourism and recreation industries (the most rapidly growing sectors of the ocean economy). The majority (over 75%) of the advisories in the nation is caused by "unknown" pollution sources, limiting efforts to remediate contaminated coastal waters. Thus, uncovering FIB sources and elucidating how they may impact coastal water quality needs to be a top priority for coastal scientists and engineers. I will illustrate how interdisciplinary studies using tools from molecular biology, coastal oceanography, and groundwater hydrology can elucidate important sources of FIB to nearshore waters. My lecture will include discussion of three important sources of FIB to nearshore waters, beach sand, polluted groundwater, and ebb flow from coastal lagoons, and the mechanisms via which they are transported from source to sea.**