Ocean engineering for exploratory science, education, and communication

Phil Bresnahan’s research seeks to build novel devices in order to enable cutting-edge oceanography as well as to design systems for use in educational and outreach settings. In this seminar, he will describe a range of engineering projects that cross the disciplines of chemical and physical oceanography. Projects include microfluidic chemical analyzers for Argo floats, self-calibrating pH sensors, and citizen science temperature and sea level rise devices. In addition to spending time in the lab, Phil greatly enjoys opportunities for public outreach and education; he will describe the new Scripps Makerspace, named “The Sandbox,” where he and his team strive to teach the next generation of earth and environmental scientists and engineers how to design, develop, calibrate, and deploy their own research tools.