Look Who's Talking Careers By Chris Zappa

STEM Careers in Polar Climate

Grades 7-12

Single Class

Career Area:

Oceanography (Air-Sea Interaction)

Job Title:

Senior Research Professor

The Big Picture - What I do:

I study the interaction between the atmosphere and the ocean, specifically the transfer of momentum, heat, mass, upper ocean processes, wind-wave dynamics, and deep-ocean wave breaking. For the IcePod project the interaction will be looking at sea ice and the surrounding ocean water and energy transfer in the ice sheets. We will have two cameras to operate, an infrared camera and a visible wave camera. The infrared will tell us about the intensity of the heat energy that is radiating from the ice we are flying over, important for ice age, condition and stability. The visible wave camera will capture surface images of the ice.

What I Like Most About My Job:

I get to spend a good chunk of time out on the ocean!

The Most Unusual Part About My Job:

Spending time living and working on a really unusual research vessel called FLIP which stands for FLoating Instrument Platform. This 355 ft. long ocean research vessel literally flips to stand on its tail leaving the front 55 ft. of the boat standing straight up out of the water. FLIP is a great research platform since it is really stable and doesn't get knocked around by waves. It looks like a capsized ship! While we are running our ocean research experiments we live on the vessel!

What Type of Schooling/Experience is Needed?

I have a PhD in Physical Oceanography, which involves a strong focus in math and science – especially physics. This job also requires lots of experience with measurement systems, instruments, and field-work!

Photo:

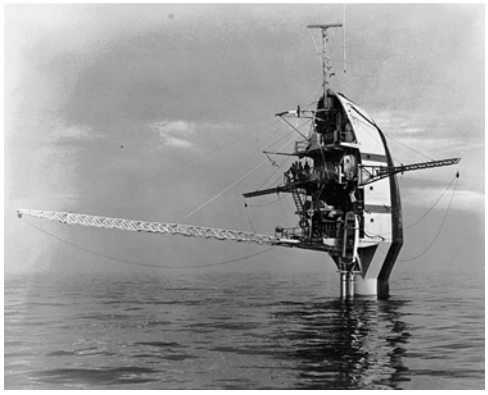

Photo of the Floating Instrument Platform popped up on its tail! People can be seen standing on two of the landings that are parallel to the long boom arm extending over the ocean surface. By the way, the design of this research platform was inspired by a baseball bat!

Education

BA Mechanical Engineering, Columbia University

MS, PhD, Civil & Environmental Engineering/Physical Oceanography, University of Washington