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# Look Who's Talking Careers

## By Robin Bell

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### Career Area:

Geophysics

### Job Title:

Senior Research Professor

### The Big Picture - What I do:

As a geophysicist I use remote sensing tools like light and sound to penetrate ice and water and see the landscapes underneath. Studying parts of the world that are invisible to the rest of us has always fascinated me since early in my career as a scientist when I worked on adapting technology developed for use in the oceans, into airborne work. I have used aircraft to study inaccessible regions in ice-covered Antarctica, coordinating eight major Antarctic aerogeophysical expeditions. The most recent Antarctic work I did was with the AGAP project where we imaged an extensive mountain range completely hidden under up to three miles of ice, and identified fascinating structures forming from the ice at the base of the icesheet. (See link -other resources)

### What I Like Most About My Job:

Being able to 'see' things that are hidden from view. We are the explorers of 21<sup>st</sup> century – traveling to places where people have never been before using geophysical tools to take us there...although we do a lot of physical visiting to unusual places as well...like the middle of the Antarctic Ice Sheet!

### The Most Unusual Part About My Job:

No one has even physically seen the things that I image in my work. Whether they are mountains buried under the ice, or plumes of refrozen ice folded over deep in the icesheet, or giant sandwaves carved into dunes on the bottom the river under many meters of cloudy water, each of the items we image is a discovery!

### What Type of Schooling/Experience is Needed?

Math and Science are the tools of the trade! Physics is a key part of everything I study. We are interested in the energy of how things move, from the water under the ice, to the ice itself, to how we can use energy to do measurements! But aside from schooling scientists need to ask questions! Question the why, the how, build hypothesis and test them out. We learn for asking and testing, and from our successes and our failures – failure force us to rethink and retry.

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STEM Careers in Polar Climate

Grades 7-12

Single Class

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### Photo:



Robin Bell at the South Pole during the AGAP project (see link -other resources)

### Education

BA Geology, Middlebury College

MS, PhD, Geology Columbia University

### Other Resources

The AGAP project from International Polar Year (2007-2008) was an international Airborne Geophysics Project

<http://www.ldeo.columbia.edu/agap>