Meredith Goebel is currently a 5th year PhD Candidate in the Geophysics Department at Stanford University studying under Dr. Rosemary Knight. Meredith's primary research employs electrical resistivity tomography (ERT) and airborne electromagnetics (AEM) to better characterize and manage saltwater intrusion in coastal aquifers.

As is the case for many of us, Meredith was drawn to geophysics as the logical combination of her passion for earth science and love of math and physics. Meredith was first exposed to near surface geophysics when she participated in the National Science Foundation's Research Experiences for Undergraduates Summer of Applied Geophysics (SAGE). The SAGE program really excited her about all of the different applications and possibilities of geophysics and also introduced her to the idea of pursuing academic research rather than going directly into industry.

Prior to starting her PhD, Meredith worked with microseismic data for enhanced geothermal systems at Lawrence Livermore National Laboratory. This application of geophysics excited Meredith because of its ability to benefit to society, which in turn motivated her to pursue other geophysical methods with wider ranging applications. She was particularly drawn to electrical methods since they can be used to investigate a variety of societally and environmentally relevant problems and can be deployed over a wide range of scales.

Outside of her research, Meredith is an active and proud volunteer with GeoKids, a program at Stanford University where 4th graders from local elementary schools are brought to campus and taught about earth science. In addition to helping teach 4th graders, Meredith also enjoys teaching undergraduates and was awarded Stanford University's Centennial Teaching Assistant Award for Geophysics. Meredith's clear passion for science education and communication is evident through her being a runner up in AGU's 2016 Data Visualization and Storytelling Contest.

Meredith has been to AGU's Fall Meeting a number of times (2012, 2013, 2014, 2015, 2016), and loves that there is such a wide range of research topics covered during the meeting, and that so many members of the academic community attend. She finds that it is a great way to meet people, learn about their research, and get their feedback on her own work. While not set plans for after her PhD yet, Meredith is interested in further pursuing geophysics for groundwater monitoring and management, likely through a postdoc.

For more information about near-surface applications of electrical methods in coastal environments, please contact Meredith Goebel.

Interested in being highlighted, or know a student who should be? Please email Matthew Sirianni for more information about the Student Spotlight. We are also seeking research highlights that showcase use of near-surface geophysics in other AGU sections and focus groups. If you are interested in writing a short, one-page highlight, please contact Chi Zhang.