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**“Water, Water, Everywhere: Some Geophysical Approaches to Mapping Water Beneath the Seafloor”**

**Abstract:** Water plays a critical role in many Earth processes. In the mantle, water dissolved in minerals can lower mantle viscosity and promote melting. Nearer the seafloor, free water in cracks and pores is a transport agent for heat, chemicals and for nutrients.

The electrical conductivity of the ocean crust and mantle is heavily influenced by the presence of water in all forms. As a consequence, Electromagnetic methods which measure conductivity on a variety of length scales are able to provide key constraints on fluid contents and distributions.

Through this presentation I will show examples of how conductivity measurements constrain water in the mantle, the flux of water into subduction systems and how it might be used to map fresh water deposits on the continental shelf.