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*Compressive Sensing and Sparse Recovery in Exploration Seismology*

During this presentation, I will talk about how recent results from compressive sensing and curvelet-based sparse recovery can be used to solve problems in exploration seismology where incomplete sampling is ubiquitous. I will also talk about how these ideas apply to dimensionality reduction of full-waveform inversion by randomly phase-encoded sources. In this second application, compressive sensing allows us to reduce the number of PDE's needed to solve this parameter-estimation problem.