

Seismic interferometry for passive and controlled source data

Seismic interferometry is the process of generating new seismic responses by cross-correlating seismic observations at different receiver locations. It has a wide range of applications for passive as well as for controlled source data.

One of the most intriguing aspects of passive seismic interferometry is the transformation of noise into signal. In the presentation I'll discuss this phenomenon in the light of changing worldviews, starting with the ordered view of the nineteenth century, via the chaotic world of the twentieth century, to the present view, in which the chaos is tamed.

Controlled source interferometry has many promising applications in exploration. It has been pioneered by Schuster and Bakulin & Calvert. In the presentation I'll discuss its possibilities and limitations and indicate new directions, both for seismic and CSEM exploration.