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## Full Waveform Inversion, from geosciences to medical imaging

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The concept of imaging based on the full physics of seismic wave propagation was introduced in seismology approximately 35 years ago. Thanks to modern numerical methods and high-performance computers, seismic Full Waveform Inversion (FWI) has finally come to fruition in the past decade. Today, FWI is used across nine orders of frequency and wavelengths, from megahertz frequencies and millimeter wavelengths in ultrasound medical imaging and non-destructive testing to millihertz frequencies and thousand-kilometer wavelengths in seismology. The ultimate goal of FWI is to use every wiggle in a time series to map an object, be it the Earth or the Sun, a rock sample, or a body part. The purpose of this talk is to give an overview of the challenges and opportunities for FWI in medical imaging, in light of the geosciences state of the art.

### Preferred Contribution Type

Presentation

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