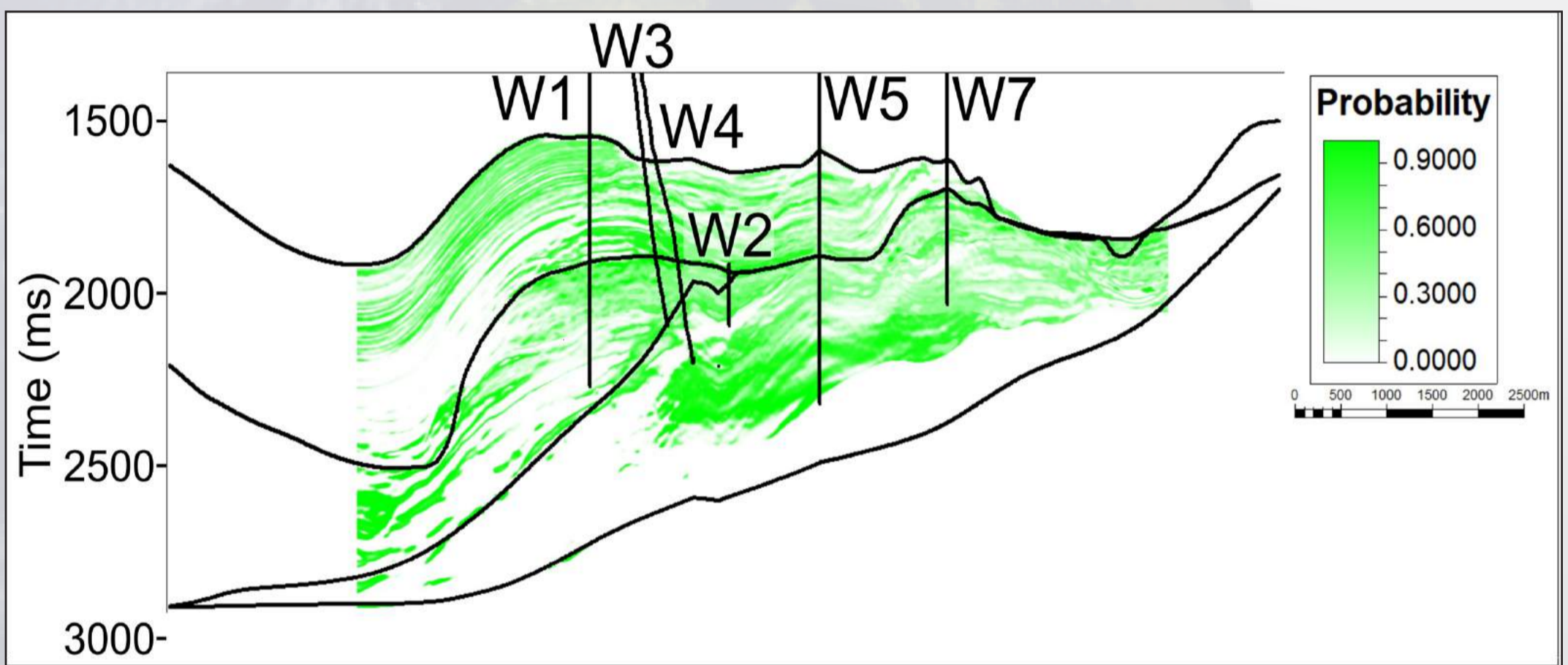


SOLID EARTH SEMINARS

GEOSTATISTICAL SEISMIC INVERSION: WHERE WE ARE AND WHERE DO WE GO



Geostatistical seismic inversion methods are routinely applied within the geomodelling workflow to predict the spatial distribution of the subsurface elastic and rock properties. The inverted models with these methods have higher resolution than the observed seismic and allow assessing the spatial uncertainty associated with the predicted properties. Current geostatistical seismic inversion methods invert post-stack seismic volumes into acoustic impedance models and to invert post- and pre-stacked seismic for rock properties and lithofluid facies, if these methods include a rock physics modelling step. A new generation of geostatistical seismic inversion methods is now growing with the coupling of deep learning and artificial intelligence tools into the conventional geomodelling workflow.

We provide herein an overview of the most common statistical-based seismic inversion methods, with a particular focus on geostatistical seismic inversion, and then we look at the road ahead with examples of novel self-updating inversion methods and how deep generative models might be the answer to model complex facies models. Including these recent advances in deep learning and artificial intelligence within the geomodelling workflow is an effective approach to overcome some of the hard assumptions of conventional geostatistical seismic inversion.

ZOOM



WHAT'S THIS
ABOUT?

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<https://videoconf-colibri.zoom.us/j/89018419156>