



## **Uncertainty in crustal imaging of the Paraná basin, Brazil**

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The joint inversion of surface-wave dispersion curves and derivative information from receiver function data reduces the non-uniqueness of modeled sub-surface seismic velocities. The evaluation of uncertainties in the estimated velocity distributions however are usually overlooked or considered qualitatively. In this study, we present and use an optimization method to estimate the uncertainty in modeled velocity distributions associated with the Conrad and Moho discontinuities. The proposed methodology is tested using synthetic and field seismic data recorded in the Paraná Basin, Brazil.