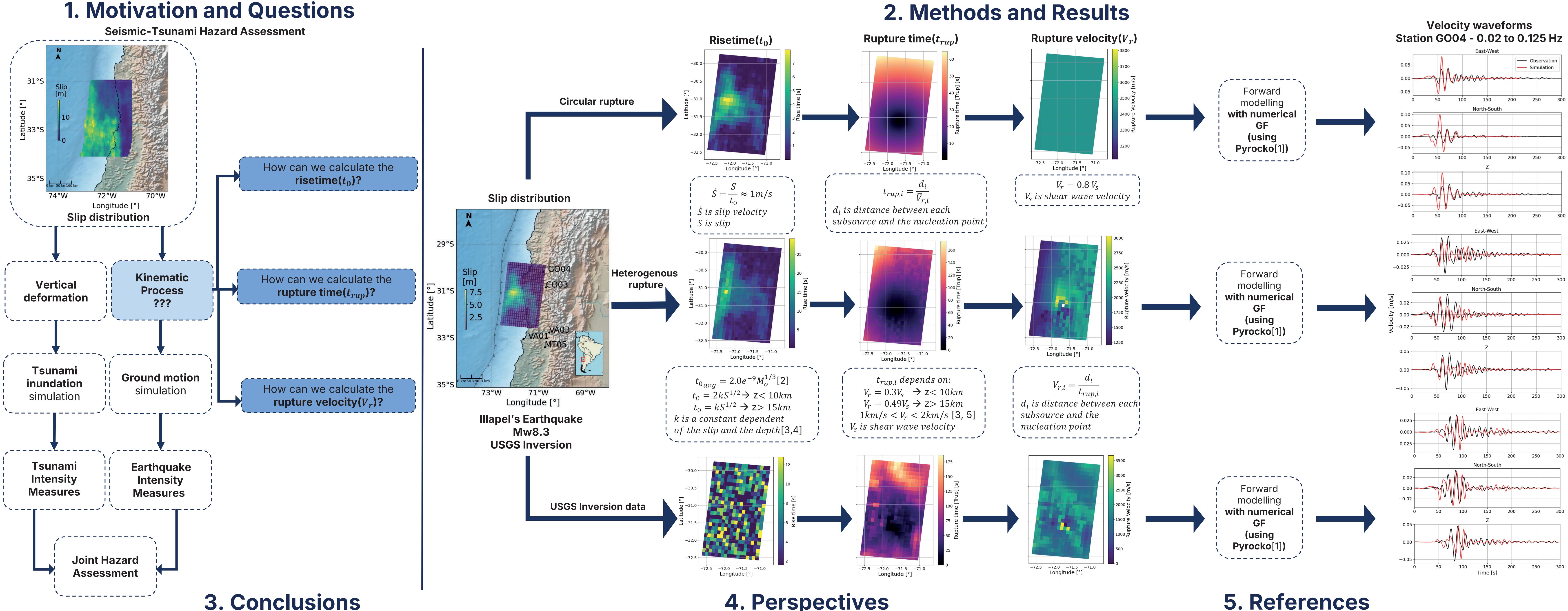
Synthetic Seismograms from Physics-based Modeling of Heterogeneous **Rupture for Large Subduction Earthquakes** Angelica Monserrat Buenrostro^{1,3,4}, Fabrice Cotton^{1,2}, Jorge Jara¹, Jorge G.F. Crempien^{3,4}, Rosita Jünemann^{3,4}



- The analysis of past subduction earthquakes allowed us to calibrate key parameters controlling the kinematic rupture process.
- Rupture velocity and rupture time, dependent on slip, significantly impact ground motion simulations.
- In low frequencies, it is possible to observe a good accuracy between the simulations of the circular and heterogeneous rupture methods and the observations. However, the circular rupture method amplitudes are much higher than the observations.





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- source time functions.
- assessment for Central Chile.



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We will apply the circular and heterogeneous rupture methods to future events using stochastic slip distributions and explore higher frequencies and different

Epistemic uncertainty will be addressed by evaluating multiple earthquake scenarios, which will be used in a full physics-based seismic-tsunami hazard

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