

Utrecht University, seismology group

Personnel to be involved in SPICE

Faculty:

- Hanneke Paulssen, **observational seismology, body waves**
- Jeannot Trampert, **inverse theory, surface wave and normal mode theory and measurements**

Postdocs:

- Sergei Lebedev, **regional waveform wave tomography**
- Joe Resovsky, **normal mode measurements, full model space tomography**

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Current projects of interest to SPICE (PhD)

- Near surface structure and instrument coupling in seismic land surveys (UU, Schlumberger)
- Optimal training of neural networks, application to global discontinuities and well logs (UU, Schlumberger)
- Automatic measurements of overtone phase velocities using NA (UU, ANU)
- Regional surface wave tomography in Baja California (new NARS data) (UU)
- Validity of approximate theories to surface wave propagation (UU)

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Current projects of interest to SPICE (Postdoc)

- Thermodynamic interpretation of seismic tomography (UU)
- 1D seismic reference model using NA (UU)
- Regional waveform inversion in Eurasia (UU, MIT)
- 3D experimental wave propagation in a water tank to test the validity of theoretical approximations (UU, TU Delft)

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Infrastructure

- 900 Mhz Sparc III, 8Gb internal memory, 1.5 Tb raid system
- 32 dual node cluster, 1.6 Ghz Operon processors, 2Gb internal memory and 40 Gb hard drive per node, 1Gbit ethernet
- Mostly home made software, except NA (Sambridge) and classical seismological software (normal mode seismograms, reflectivity, WKJB, ray shooting...)
- NARS, 15 station broadband seismic network, currently in Baja California

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Course material

- Mostly old fashioned teaching, black board and books
- Course on inverse theory in PDF, published on Samizdat press at <http://samizdat.mines.edu>