

Benoît TAUZIN

Department of Earth Sciences
Utrecht University
P.O. Box 80.021, 3508 TA Utrecht, The Netherlands
Tel. (pro.): +31 3 02 53 51 35
Tel. (mob.): +31 6 49 72 18 20
Email: benoit@geo.uu.nl
Webpage: <http://eost.u-strasbg.fr/benoit/index.html>

Born 8th September 1980 in Dax, France
Male
French nationality
Single – no children
Valid driving licence

Geophysicist Engineer – Doctor in Seismology

SKILLS

Geophysical Data Processing, Modelling and Interpretation

- Seismic processing, seismic modelling (source, ray tracing, synthetic seismograms), 1D, 2D and 3D acquisition geometries, optimisation, inverse methods
- Seismological and physical data integration and interpretation
- Theoretical and applied skills in geophysical prospecting: seismic imaging, field methods, electromagnetic waves
- Notions of rock physics, structural geology, stratigraphy and reservoir seismic characterization

Computer Sciences

- Operating systems: Unix/Linux, Mac OS X, Windows
- Programming: bash, awk, perl, C, Matlab, Fortran, batch processing
- Geophysical software: CGG GéoCluster, Seismic Unix, Seismic Analysis Code, Matlab
- GIS software: Generic Mapping Tool, Matlab
- Office software: Office suites, LaTeX

Languages

- French: native language
- English: fluent (Test Of English for International Communication: 840)
- Spanish: fluent
- Dutch: notions

ACADEMIC & ENGINEERING EDUCATION



2009

PhD in Earth Sciences (Seismology): Ecole et Observatoire des Sciences de la Terre (EOST) - Strasbourg University (UDS), Strasbourg, France

Promoted by E. Debayle (EOST) and G. Wittlinger (UDS). *Global seismic imaging of upper mantle discontinuities from SS-precursors and P-to-S receiver functions*
Defended 6th March 2009 in Strasbourg.



2004-2007

Teacher Training

Université Louis Pasteur, Strasbourg, France



2004

Master of Earth Sciences and Geophysics

Université Louis Pasteur, Strasbourg, France.



2004

Engineering diploma in Geophysics

Equivalent to a Master degree, Ecole et Observatoire des Sciences de la Terre (EOST), Strasbourg, France.

CURRENT EMPLOYEMENT



Universiteit Utrecht

Since April 2009

Post-Doctoral Research

Department of Earth Sciences, Utrecht University, The Netherlands

With J. Trampert (Utrecht) and R.D. Van der Hilst (MIT). *Seismic imaging of mantle discontinuities.*

PROFESSIONAL EXPERIENCE



September - December 2008

Assistant Engineer

Centre National de la Recherche Scientifique, Ecole et Observatoire des Sciences de la Terre (EOST), Strasbourg, France.

Seismology. *Mapping the depth of mantle transition zone seismic discontinuities.*



September 2007- August 2008

Teaching Assistant (Bachelor and Master levels)

At the engineering school EOST and the Université Louis Pasteur, Strasbourg, France. *Rock Physics, Geophysics, Computer Sciences.*



December 2004 - August 2007

Teaching Assistant (Undergraduate level)

At the Université Louis Pasteur, Strasbourg, France.

PhD Research

At the Ecole et Observatoire des Sciences de la Terre (EOST).



July - November 2004

Engineering internship, Compagnie Générale de Géophysique (CGGVeritas)

Research and Development Department, Multi-Component, Massy, France

Supervised by R. Garotta et P.Y. Granger. *Application of a simulated annealing algorithm for P-waveform inversion.*



February - June 2004

Research internship, Ecole et Observatoire des Sciences de la Terre (EOST)

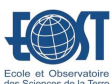
Seismology. Supervised by G. Wittlinger, M. Cara and E. Debayle. *Mantle transition zone under Afar from combined data of receiver functions and surface wave tomography.*



June 2003

Training period, Instituto Geofisico del Peru, Lima, Peru

Seismology. Supervised by H. Tavera. *Estimation of the noise level on broadband seismic stations of the National Peruvian Seismic Network.*



January - April 2003

Part-time job, Service des Observatoires Magnétiques, Ecole et Observatoire des Sciences de la Terre (EOST)

Software development with Matlab for formatting and archiving geomagnetic data.



July 2002

Training period, Ecole et Observatoire des Sciences de la Terre (EOST)

Near-surface geophysics. Supervised by G. Marquis. *Synthetic seismogram modelling using a reflectivity method and petro-elastic data stemmed from diagraphies.*

FIELD EXPERIENCE

September 2003: **Marine seismic acquisition** (1 week), *field course in Mediterranean sea on the Tethys vessel, Villefranche-sur-Mer.*

Near-surface geophysics (1 week), *geophysical prospection (seismic, electrics, EM, ground penetrating radar).*

June 2001: **Field trip in the Alps** (1 week), *Cartography, sedimentology and tectonics with Dr P. Düringer.*

ADMINISTRATION DUTIES

2005-2006: **Seminar organisation, webpage conception** for the seminars of the Ecole et Observatoire des Sciences de la Terre (EOST).

Webmaster for Bachelor section of the Université Louis Pasteur, Strasbourg, France.

First Aid Formation, Centre de Traumatologie d'Illkirch, France.

2003-2004: **Secretary of the association** Strasbourg University Geophysical Society (<http://sugs.u-strasbg.fr>), student section of the Society of Exploration Geophysicists (SEG).

SCIENTIFIC PUBLICATIONS & COMMUNICATIONS

Peer-reviewed journal publications:

- Tauzin, B., E. Debayle and G. Wittlinger** (in press), Seismic evidence for a global low velocity layer in the Earth's upper mantle, *Nature Geoscience*, doi:10.1038/NGEO969.
- Ritsema, J., P. Cupillard, B. **Tauzin**, W. Xu, L. Stixrude, and C. Lithgow-Bertelloni (2009), Joint mineral physics and seismic wave travelttime analysis of upper mantle temperature, *Geology*, 37, 363-366.
- Tauzin, B., E. Debayle and G. Wittlinger** (2008), The mantle transition zone as seen by global Pds phases: no clear evidence for a thin transition zone beneath hotspots, *J. Geophys. Res.*, 113, B08309.
- Tauzin, B.** (2007), Discussion of Seismic observations of transition zone discontinuities beneath hotspot locations by Deuss, *GSA Special Issue: Plates, Plumes, and Planetary processes*, vol. 430, ED. G. R. Foulger and D. M. Jurdy.
- Tauzin, B., E. Debayle and G. Wittlinger** (2007), Constraints on the mantle transition zone structure from P-to-Sv converted waves, www.MantlePlume.org, Discussing the origin of hotspot volcanism.

Oral presentations in international conferences with reading committees:

- Tauzin, B., E. Debayle and G. Wittlinger** (2009), Seismic evidence for a wide-spread low velocity layer atop the 410-km discontinuity, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract D143A-05.
- Tauzin, B., E. Debayle and G. Wittlinger** (2007), The Mantle Transition Zone as Seen by Global Pds Phases: no Clear Evidence for a Thin Transition Zone Beneath Hotspots, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract DI51B-10.

Other presentations in international conferences with reading committees:

- Tauzin, B., E. Debayle, G. Wittlinger, J. Trampert and R.D. van der Hilst** (2009), Challenges in Studying Upper Mantle Seismic Discontinuities, ORFEUS workshop, Pays-Bas.
- Debayle, E., B. **Tauzin**, C. Zanolli, G. Wittlinger and M. Sambridge (2008), Global Transition Zone Discontinuities and Seismic Heterogeneities From Body-Wave Travel-Times and Long Period Surface Waves, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract S21A-1801.
- Debayle, E., B. **Tauzin**, and G. Wittlinger (2007), Global Imaging of Upper Mantle Seismic Heterogeneities and Discontinuities From Observations of Body-Wave Travel-Times and Rayleigh Wave Dispersion, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract DI53A-1098.
- Tauzin, B., E. Debayle, G. Wittlinger and C. Zanolli** (2007), Seismic Imaging of Deep Mantle Discontinuities, **Statoil International Student Conference**, Trondheim, Norvège.
- Tauzin, B., E. Debayle and G. Wittlinger** (2006), A global study of transition zone thickness, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract S53A-1300.
- Tauzin, B., G. Wittlinger and E. Debayle** (2005), Structure of the transition zone from surface-wave and body-wave constraints, SPICE R&T workshop 2, Slovaquie.

Invited Seminars:

- Tauzin, B., E. Debayle and G. Wittlinger** (2010), Challenges in studying upper mantle seismic discontinuities, séminaire au département de Sciences de la Terre de l'ETH Zurich, Suisse.
- Tauzin, B., E. Debayle and G. Wittlinger** (2009), Seismic evidence for a wide-spread low velocity layer atop the 410-km discontinuity, séminaire de l'équipe Sismologie de l'Université d'Utrecht, Pays-Bas.
- Tauzin, B.** (2009), Apport des techniques de fonctions récepteur Ps et phases précurseurs de SS à l'imagerie du manteau supérieur, séminaire de l'équipe Sismologie de l'Institut de Physique du Globe de Paris, France.

Reports/manuscripts:

- Tauzin, B.** (2009), Apport des techniques de fonctions récepteur Ps et phases précurseurs de SS à l'imagerie du manteau supérieur, 230 pp, PhD manuscript from the Université de Strasbourg, France.
- Tauzin, B.** (2004), Inversion de données sismiques en mode P, engineering internship report, Ecole et Observatoire des Sciences de la Terre, Strasbourg, France.
- Tauzin, B.** (2004), Structure du manteau lithosphérique et de la zone de transition sous le dôme Afro - Arabe : combinaison d'observations de fonctions récepteurs et de données d'harmoniques d'ondes de Rayleigh, Master degree report, Université Louis Pasteur, Strasbourg, France.
- Tauzin, B.** (2003), Analisis del nivel de ruido en la estacion sismica de Pucallpa (Red Sismica Nacional del Peru), Compendio de trabajos de investigacion realizados por estudiantes, Centro Nacional de Datos Geofisicos, Lima, Peru.

Reading committees:

- Meeting convener: Session Deep Interior DI06 at AGU Fall Meeting 2010. Journals: *Earth and Planetary Science Letters*, *Survey of Geophysics*, *Geophysical Journal International*.

LEISURE

Cinema, travelling, volley-ball, soccer, running (half-marathon), roller-skating.