

Claire Bouligand

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EDUCATION

- 2007 **Assistant Professor qualification in Earth sciences** sections 35 and 36 (Qualifiée aux fonctions de maître de conférence en sections 35 et 36).
- 2002-2006 **PhD thesis in geophysics** *Institut de Physique du Globe de Paris, France.* Defended the 13th of September 2006. Thesis committee: V. Courtillot (president), J.-J. Schott and R.J. Blakely (reviewers), P. Tarits (examiner), G. Hulot and J. Dyment (Thesis advisors). Received with honors.
- 2001-2002 **DEA (equivalent to Master's degree) in geophysics** *Institut de Physique du Globe de Paris, France.* Received with honors.
- July 2001 **“Agrégation” in Earth sciences and biology** (French competitive examination for getting a teaching position in high schools).
- 1998-2000 **“Licence” and “maîtrise” diploma in Earth sciences** *Ecole Normale Supérieure de Lyon, France.* Received with honours.
- 1996-1998 **Preparatory classes in mathematics, physics, biology and Earth sciences** *Lycée Saint Louis, Paris, France.*
- June 1996 **Baccalauréat diploma in mathematics** *Lycée David d'Angers, France.* Received with honors.

RESEARCH EXPERIENCE

- 2006-present **Study of heat-flow in the Great Basin using aeromagnetic data.** Supervisors: J.M.G. Glen and R.J. Blakely. *Geophysical Unit, U. S. Geological Survey, Menlo Park, CA, USA.*
- 2002-2006 **Study of the behavior of the Earth's magnetic field during periods of stable polarity.** PhD Thesis advisors: G. Hulot and J. Dyment. *Laboratoire de Géomagnétisme, Institut de Physique du Globe de Paris, France.*
- 2001-2002 **Statistical properties of the magnetic field produced by a numerical geodynamo simulation.** Master Thesis. Advisors: G. Hulot and A. Khokhlov. *Laboratoire de Géomagnétisme, Institut de Physique du Globe de Paris, France.*
- May-July 2000 **Measurement of seismic noise in Bagnière de Bigorre, France.** Study of its spectral content in relation to the geological setting. Three-month training period with A. Souriau at the *Observatoire Midi Pyrénées, Toulouse, France.*
- July-August 1999 **Numerical modeling of the North Atlantic Deep Water Current.** Two months training period with K. Doos at the *Meteorologiska Institutionen Stockholms Universitet, Sweden.*

FIELD EXPERIENCE

- Summer 2007 **Magnetic and gravity ground surveys and paleomagnetic sampling** in Northern Nevada and Northern California, *U.S. Geological Survey of Menlo Park, USA.*
- July-August 2005 **Geophysical Cruise MAGOFOND3** *R/V Suroit*. Deep-tow magnetic measurements in the Cretaceous Quiet Zone. Chief scientists: J. Dymont and Y. Gallet.
- September 1999 **Participation in the GEOFRANCE 3D seismic survey in the Alps** *Laboratoire de Geophysique Interne et Tectonophysique, Grenoble, France.*

TEACHING EXPERIENCE

- 2005-2006 **Co-supervising of a masters student**
Eva Hoisé, Thesis title: Time variations of the magnetic field during the Cretaceous Normal Superchron: new data from the cruise MAGOFOND3, *Institut de Physique du Globe de Paris, France.*
- 2005-2006 **Teaching assistant (96 h)** *Institut de Physique du Globe de Paris, France,* in Earth sciences, including:
 - Geomagnetism (Master).
 - Initiation to Geosciences (1st year).
 - Preparation to the CAPES in Earth sciences (an examination for getting a teaching position in high schools).
- 2002-2005 **Teaching assistant (64 h per year)** *Université Paris 7, France,* in Earth sciences including:
 - Initiation to geological maps (3rd year).
 - Preparation to the CAPES in Earth sciences.
 - The Marine Geophysics field trip at Villefranche s/ mer, France (Master).
- 2001-2002 **Weekly oral examinations** in Earth sciences and biology for students in preparatory classes. *Lycée Saint Louis, Paris, France.*

RESPONSABILITIES

- 2006 **Co-convener of session “Bridging the gap between observation and modeling in planetary dynamo”** at the Joint Assembly, 23-26 May, in Baltimore, MA, USA.
- 2002-2004 **Student delegate of the Administration Council (2 years)** at the Institut de Physique du Globe de Paris, France. (This is the main decision-making body of the IGP.)

AWARDS AND FELLOWSHIPS

- Lavoisier postdoctoral fellowship from the French Ministry of Foreign Affairs, July 2007.
- Outstanding Student Paper Award, Joint Assembly, Baltimore, May 2006.
- PhD Thesis scholarship from the Ecole Normale Supérieure de Lyon, 2002-2005.

MEMBERSHIP

American Geophysical Union.

LANGUAGES

French: mother tongue

English: very good (result at the TOEIC test in 2006: 885)

German: fair

COMPUTER SKILLS

Operating Systems: Linux, Mac OS, Windows

Programming languages: Matlab, Fortran, C

Software experience: OASIS, ArcGIS, GMT, Illustrator, LATEX, Word, Excel, PowerPoint

OTHERS INTERESTS

Spare time activities: horse riding, hiking, bicycle, soccer, drawing and reading

LIST OF PUBLICATIONS

Peer-reviewed publications:

Khokhlov A., G. Hulot and **C. Bouligand**, Testing statistical paleomagnetic field models against directional data affected by measurement errors, *Geophys. J. Int.*, 167, 635-648, 2006.

Bouligand, C., J. Dyment, Y. Gallet and G. Hulot, Geomagnetic field variations between chrons 33r and 19r (83-41 Ma) from sea-surface magnetic anomaly profiles, *Earth Planet. Sci Lett.*, 250, 541-560, 2006.

Bouligand, C., G. Hulot, A. Khokhlov and G. A. Glatzmaier, Statistical paleomagnetic field modelling and dynamo numerical simulation, *Geophys. J. Int.*, 161, 603-626, 2005.

Hulot, G. and **Bouligand C.**, Statistical paleomagnetic field modelling and symmetry considerations, *Geophys. J. Int.*, 161, 591-602, 2005.

Memoirs:

Bouligand, C., Etude sur le comportement du champ magnétique terrestre durant les périodes de polarité stable, PhD Thesis, Institut de Physique du Globe de Paris, 267 pages, 2006.

Bouligand, C., Etude du comportement statistique des dynamos numériques : application à la modélisation de paléovariation séculaire, Master Thesis, Institut de Physique du Globe de Paris, 31 pages, 2002.

LIST OF MEETINGS

- Bouligand, C.**, J. Glen and R. Blakely, A new method for mapping depth to the Curie-temperature isotherm in the Great Basin from aeromagnetic anomalies, AGU Fall Meeting, San Francisco, U.S.A., 2007.
- Khokhlov A., G. Hulot and **C. Bouligand**, Testing Statistical Paleomagnetic Field Models Against Directional Data Affected by Measurement Errors, AGU Fall Meeting, San Francisco, U.S.A., 2006.
- Glen, J. M. and S. J. Payne, **C. Bouligand**, C. M. Helm-Clark and D.E. Champion, Regional geophysical setting of the Yellowstone Hotspot track along the Snake River Plain, Idaho, USA, AGU Fall Meeting, San Francisco, U.S.A., 2006.
- Bouligand, C.**, J. Dyment, Y. Gallet and G. Hulot, Geomagnetic field variations between chrons 33r and 19r (83-41 Ma) from sea-surface magnetic anomaly profiles, SEDI, Prague, Czech Republic, 2006.
- Khokhlov A., G. Hulot and **C. Bouligand**, Testing statistical paleomagnetic field models against directional data affected by measurement errors, SEDI, Prague, Czech Republic, 2006.
- Bouligand, C.**, J. Dyment, Y. Gallet and G. Hulot, Geomagnetic intensity fluctuations between 83 and 40 Ma inferred from sea-surface magnetic anomaly profiles, Joint Assembly, 2006.
- Gallet, Y., J. Dyment, M. Kitazawa, **C. Bouligand**, E. Hoise, M. Kim, J. Savary, J. Royer, Y. Choi-Dyment and B. Gotab, The Cretaceous Quiet Zone: How Quiet?, AGU Fall Meeting, San Francisco, U.S.A., 2005.
- Bouligand, C.**, J. Dyment, Y. Gallet and G. Hulot, Short-term fluctuations of the geomagnetic field deduced from sea-surface magnetic profiles during chrons 33R to 19R, IAGA, Toulouse, France, 2005.
- Bouligand, C.**, J. Dyment, Y. Gallet and G. Hulot, Short wavelength magnetic anomalies in the Indian and Pacific Oceans after the Cretaceous Normal Superchron (40-83 Ma), AGU Fall Meeting, San Francisco, U.S.A., 2004.
- Bouligand, C.**, G. Hulot, A. Khokhlov and G. A. Glatzmaier, Statistical Paleomagnetic Field Modelling and Dynamo Numerical Simulation, SEDI, Garmisch-Partenkirchen, Germany, 2004.
- Hulot, G. and **C. Bouligand**, Statistical Paleomagnetic Field Modelling and Symmetry Considerations, SEDI, Garmisch-Partenkirchen, Germany, 2004.