

# UNIVERSITY OF OXFORD

## Department of Earth Sciences

### POSTDOCTORAL RESEARCHER IN SEISMOLOGY

Applications are invited for the post of postdoctoral scientist in seismology to carry out research in waveform tomography. Areas of interest are the study and synthesis of wavefields in the regional and global contexts, with applications to imaging and model building, and candidates should be able to demonstrate expertise in these topics. The successful candidate will have completed a PhD or equivalent doctoral degree in seismology and have a proven record of research in this area. Experience in high-performance computing is desirable but not essential.

The research will be conducted within the European Research Training Network entitled *Seismic Wave Propagation and Imaging in Complex Media* (SPICE: ) and the appointee will be expected to contribute to the overall goals of the network by collaborating in the provision of research tools, in the dissemination of research results within the network and more generally, and by participating in comparative tests of different methods of waveform synthesis and inversion.

The appointment will be made for one year at a salary equivalent to a point on the Academic Related Research Grade £24,886 to £30,607. There are additional travel mobility and career exploratory allowances. The appointment subject to EU eligibility criteria.

Applications should include a *curriculum vitae* and the names and addresses of two referees, and should be sent to Mrs Sue Ling, Department of Earth Sciences, Parks Road, Oxford OX1 3PR, UK. to arrive no later than 15<sup>th</sup> September 2006 quoting reference DG/06/001/JHW. Referees should be asked to write directly to the above address so that references arrive by the closing date. Referees letters may also be sent by fax (*Fax*: +44 1865 272072) or electronically (*Email*: [Sue.Ling@earth.ox.ac.uk](mailto:Sue.Ling@earth.ox.ac.uk)).

Further particulars are available on the Department's website. Please address questions about the position to Prof J. H. Woodhouse, (*Email*: [John.Woodhouse@earth.ox.ac.uk](mailto:John.Woodhouse@earth.ox.ac.uk))

The University of Oxford is an equal opportunities employer

## UNIVERSITY OF OXFORD

### DEPARTMENT OF EARTH SCIENCES

#### POST-DOCTORAL RESEARCHER IN SEISMOLOGY

Academic Related Research Staff Grade 7

Salary in the range £24,886 to £30,607

### FURTHER PARTICULARS

#### *Duties of the Post*

This position is for one year, available from October 2006, and is funded under the EU Research Training Network (RTN) entitled: *Seismic Wave Propagation and Imaging in Complex Media* (SPICE). The broad goal is to further the understanding of seismic wavefields, in the global and regional contexts, with application to building models of the Earth's three dimensional structure.

The position offers flexibility to pursue research over a broad range topics relevant to the RTN.

Possible areas include:

- The development of improved techniques for modelling three dimensional structure in both global and regional contexts, by the analysis of complete seismograms.
- The comparison of approximate techniques with the results of purely numerical simulations of wave propagation in complex media.
- The construction of global and regional earth models, bringing together a variety of different data types and interpretation techniques.
- Developments in inverse theory aimed at improvements in model selection and evaluation and the inter-comparison of models

The Oxford Department of Earth Sciences is one of only three such UK departments to be awarded 5\* status in the UK Research Assessment Exercise. It has a particular strength in seismology in research groups led by John Woodhouse, Shamita Das and Michael Worthington. The successful applicant will also have the opportunity interact with the geodesy group led by Barry Parsons and Philip England, which has a particular focus on the study of earthquakes using geodetic data. Further information on research in the Department can be found at <http://www.earth.ox.ac.uk>.

The Research Training Network in which the successful applicant will work was established in the environmental area under EU Framework VI, and involves groups in: France (IPG, Paris; ENS Paris), Italy (INGV, OGS, U. Napoli), The Netherlands (U. Utrecht), Switzerland (ETH, Zurich), Slovak Republic (FMPI), Norway (U. Oslo), Germany (U. Hamburg), Ireland (NUID/UCD) and the Czech Republic (Charles U). The successful applicant will be able to interact with these groups and will be expected to contribute, as appropriate, to the collaborative work of the RTN, for example by cooperating in the provision of research tools, in the dissemination of research results within the network and more generally, and by participating in comparative tests of different methods of waveform synthesis and inversion

## *Selection Criteria*

### **Essential**

- PhD or equivalent degree in seismology
- Proven ability to conduct world-class research
- Proven ability to publish and make presentations at international conferences
- Good communication skills

### **Desirable**

Experience in:

- High performance computing with applications in seismology
- Long period seismology and the description of wavefields in terms of fundamental modes and overtones
- Time series analysis and development of techniques for analysis of seismograms
- Inverse theory and parameter estimation, with application to seismic tomography

### ***Application procedure***

Applications should include a *curriculum vitae* and publication list, and the names and addresses of two referees, and should be sent to Mrs Sue Ling, Department of Earth Sciences, Parks Road, Oxford OX1 3PR, UK. to arrive no later than 15<sup>th</sup> September 2006 quoting reference DG/06/001/JHW. Referees should be asked to write directly to the above address so that references arrive by the closing date. Referees letters may also be sent by fax (*Fax*: +44 1865 272072) or electronically (*Email*: [Sue.Ling@earth.ox.ac.uk](mailto:Sue.Ling@earth.ox.ac.uk))