

# Editorial

J. R. Evans

It is our custom at *Geophysical Journal International* to inform readers of changes to the journal through these occasional Editorials. It has been some time since we last printed one, so there is not only much to record but, on this occasion, some very substantial changes to announce.

## ELECTRONIC SUBMISSION

*Geophysical Journal International* has been available online since January 1998, through Blackwell's *Synergy* and other providers, and featuring rich content searching and referencing capabilities. We are pleased to announce that, from January 2004, we will be operating an electronic manuscript submission, handling and tracking system. This service is being provided through the well-established Manuscript Central system, operated by Scholar One. The web site address for GJI is <http://gji.manuscriptcentral.com/>. We invite you to submit your manuscripts through this system. The interface is easy to use, but help is available at every stage of the process, and a roadmap to the process will shortly be available from the journal's web page at <http://www.blackwellpublishing.com/gji>. We anticipate that electronic handling of manuscripts will not only eliminate the delays associated with paper mail, but will speed up other aspects of our processing, and will substantially reduce our times to decision.

Our publishers, Blackwell Publishing, have also undertaken to improve the times taken in handling manuscripts between acceptance and publication, and are aiming to have papers available through *OnlineEarly* (see below) within 30 working days of receipt of copy. Together, we intend to ensure that GJI offers authors and readers rapid publication and up-to-date results.

Manuscript Central also holds contact and interest details for the many colleagues who support us as reviewers. We will be emailing all those for whom we have email contact details with login information, and will invite them to log in at the site and check that their profile is accurate. If you have reviewed for us in the past but do not receive an email, it is likely that the details we have on file for you are incorrect – please create a new account for yourself (as a corresponding author) at [gji.manuscriptcentral.com](http://gji.manuscriptcentral.com), including your up-to-date details. Then email a note of your new User ID to [gji@ras.org.uk](mailto:gji@ras.org.uk) and we will enable your account as a reviewer. In like manner, we would be very pleased to hear from other potential reviewers.

## ONLINE PUBLICATION

Traditionally, we have published papers online on a month-by-month cycle, with all papers contained in each issue being loaded on to *Synergy* at much the same time as the paper copies are despatched. From this issue onwards, we will handle online publication differently. As soon as papers are complete and proofs have been approved by the corresponding authors, and before they have been assigned to an issue, they will be published online through the Blackwell *Synergy* 'OnlineEarly' system. The only difference between the paper presented 'OnlineEarly' and in the standard issue is that the papers

will be identified by their Digital Object Identifier (DOI) rather than the traditional volume and page number. Papers will be immediately citeable, so 'OnlineEarly' is true publication and not a preprint service.

If we are to meet the aim of publishing within 30 working days, we will need the support of authors. We ask for your co-operation in returning proofs promptly. Note, too, that given the high speed of publication, there will be no opportunity to make changes after acceptance, apart from minor changes at proof stage.

## COLOUR

The paper and printing processes used by *Geophysical Journal International* are such that colour printing is particularly effective. Acknowledging its value to authors in seeking to explain complex scientific ideas, we have always sought to encourage use of colour in the journal, and to that end, we are pleased to announce that a simplified system of lower charges will take effect immediately. A standard fee (presently £550 + VAT) will be levied for any paper that uses colour figures, regardless of the number of figures involved.

Authors have always been able to request colour figures in the HTML online version of their papers without charge, even where the paper version has appeared in black and white. From here on, it is possible to use colour in both online versions – HTML and pdf – without charge when the paper version appears in black and white. *Synergy* also continues to offer facilities to attach arbitrary files to papers, which may include datasets or other forms of presentation, such as movies. (However, authors should bear in mind that such auxiliary files may not appear in versions of their article distributed outside *Synergy* itself, e.g. in the paper edition or in abstracting services.)

## ORGANIZATION OF THE JOURNAL

Feedback from readers suggests that our previous method of organizing our material – for the most part printing papers in the order accepted – can make it difficult to identify material that is likely to be of interest. Accordingly, from this issue on, we will organize the journal into a series of broad sectional areas to assist readers. It is not our intention that this should form a rigid classification and we trust that readers will at least scan sections other than those of their principal interest.

Authors are asked to suggest which section is most appropriate for their paper from the following list.

- Geodesy, potential field and applied geophysics
- Geomagnetism, rock magnetism and palaeomagnetism
- Marine geoscience
- Planetary science
- Seismology
- Tectonics and geodynamics
- Volcanology, geothermics, fluids and rocks
- Book reviews

## SCOPE – PLANETARY SCIENCE

When *Geophysical Journal International* was established in 1988, it was intended that its scope would eventually be extended to cover planetary science. Given the increased work being carried out in Europe in planetary science and the planned future expansion of the planetary exploration programme of the European Space Agency, we have decided that the time is now right to extend the scope of the journal to publish high-quality papers in planetary science. We have already approached several lively and authoritative figures in planetary science, and expect to have appointed Editors by the time this Editorial appears. With immediate effect, we welcome submissions in this area and look forward to developing a strong section.

## THE SPONSORING SOCIETIES

The European Geophysical Society (EGS) was wound up with effect 31st December 2003. Some of the activities of the Society are being adopted by the recently formed European Geosciences Union (EGU), but the Council of the EGU has decided that it will not adopt the role that EGS has played in GJI. We understand that the EGU Council intends to develop publishing initiatives through a different model. This means that, as of this issue, GJI will be published on behalf of the Royal Astronomical Society and the Deutsche Geophysikalische Gesellschaft only; the EGS name and logo will disappear from the cover. We are pleased to confirm that, in view of the confidence expressed by the GJI community in their work, the board has asked each editor formerly appointed by the EGS to continue in office on a personal basis, and all have agreed.

## JOURNAL CIRCULATION

Whilst most scientific journals have seen a substantial attrition of their subscriber base over some years, GJI's continues to hold up well, with almost all subscribing institutions continuing to renew their traditional library subscriptions year on year and some institutions newly subscribing. This is a tremendous vote of confidence in our editors and demonstrates the esteem associated with papers published in GJI. Consortium-based electronic subscriptions have been developing rapidly and GJI is now available at about 1850 institutions worldwide. Additionally, in order to increase the availability and impact of authors' work, we have made arrangements that from 2004 GJI will be available to 4000 more individual scientists. Arrangements are now well advanced for members of the sponsoring Societies to receive free electronic access to *Geophysical Journal International* via *Synergy*. See the respective web sites <http://www.ras.org.uk/> and <http://www.dgg-online.de/> for further details. Judy Cornish and her team at Blackwell (our publishing partners) have well advanced plans to increase our circulation even further. Following several years of steady-state flow of manuscripts and published papers, we have noted a distinct increase in submissions over the past two years. We expect to publish our largest page volume ever in 2003 and anticipate further substantial growth in the size of the journal.

## STAFF

Over recent months, there have been many changes of faces in the teams that support GJI, so I summarize them below. The common theme running through our staff changes is the development of an

increasingly team-based approach to support of editors, authors and reviewers. This means that papers continue to make progress even when one of our Editorial Assistants or Production Editors is away from the office.

Linda Marques succeeded Valerie Dennis as the GJI Editorial Assistant two years ago, and John Randall, the Senior Editorial Assistant at the RAS in Burlington House, took on an oversight role to coordinate editorial support for GJI in that office. Since that time, Sylvia Hales and more recently Anna Evripidou have joined the editorial team and are now supporting individual GJI as well as MN editors. In recent days, we have heard that Linda plans to leave the RAS to develop her interests in computer graphics, and her place will be taken by Emily Butt, who has been working on our sister journal, *Monthly Notices*.

At the beginning of the summer, David Elliott took over from John Lane as Executive Secretary of the RAS; David is already well up to speed with and taking an active role in the affairs of the various journals served from Burlington House.

At Blackwell Publishing in Edinburgh, Gregor Hutton stepped across from the *Monthly Notices* production team to take the reins of GJI and is supported by Claire Terris. Laura Hogan continues at Blackwell and is again working with her predecessor as GJI production editor, Rachel Leslie. At Blackwell in Oxford, Miriam Maus has been acting as our publishing manager and Judy Cornish as our marketing manager, both for about two years, and most readers will have met them on the Blackwell stand at the various conferences where we have been represented.

We are delighted to have these (mostly!) young faces and (consistently!) youthful hearts associated with the journal and welcome them all. Our good wishes and grateful thanks go to those who have moved or are moving on.

## EDITORIAL BOARD

In recent months, Steven Ward (San Diego) and Malcolm Sambridge (who has managed the Pacific Region Office at Canberra) have indicated their intention to stand down from the Board in order to focus on other aspects of their professional life. We are sorry to see them go, as both have been key members of our team for some time, but we appreciate that change is essential for renewal, for us as for them, so we thank each of them for their substantial contributions, wish them every success in their new initiatives, and look forward to seeing the results of their new researches in GJI soon.

With the development of initiatives to handle manuscripts electronically, the need for Editorial Offices to receive papers internationally is diminished, so at present we have no plans to re-establish a Pacific Office.

Torsten Dahm (Hamburg) joined the Board following the tragic death of Guenther Bock (Potsdam). Rob van der Hilst agreed some time ago to join the Board once his move back to MIT was completed, and he is now handling papers on our behalf. Welcome, all of you!

In view of the increased and increasing volume of papers being received, and our expectation that electronic submission will further increase that volume, we plan to appoint several further new editors during 2004, and these names will appear on our web site and inside front cover as the year progresses. As it is some time since we last published them, updated pen portraits of all our current editors are appended.

Russ Evans  
Managing Editor

## THE BOARD OF EDITORS

### *J. R. Evans (Managing Editor)*

Russ Evans is Head of Discipline for Geophysics and Marine Geoscience at the British Geological Survey (BGS), and works in Edinburgh. Following a first degree in mathematics and research into Earth tides and crustal deformation at Cambridge, he spent three years at the Carnegie Institution of Washington, DC, working on surface-wave studies of oceanic regions. Moving to the BGS in 1978, he undertook micro-earthquake studies in various parts of the world, investigating shear-wave propagation through anisotropic materials. Subsequently, his work moved towards applying geophysical techniques to geological problems, such as the neotectonics of NW Turkey, and seismic refraction studies in the UK and elsewhere. Before taking up his present post, he led a small team imaging gravity and magnetic data, with applications in the hydrocarbons exploration industry. He takes an interest in science policy issues and always looks forward to reading his GJI postbag.

Joined GJI Board 1997

### *H. Schmeling (DGG Editor)*

Harro Schmeling is professor in geophysics at the Institute of Meteorology and Geophysics, Goethe-University of Frankfurt. His general field of research is geodynamics. He is interested in numerical modelling of global to regional scale processes such as mantle convection, plate tectonics and lithospheric or crustal dynamics, and how these processes affect geophysical observables such as seismic velocities or the gravity potential field. He has also worked on the physical properties of rocks at high temperatures. His current research interests include the physics of melting and associated transport mechanisms in the crust and mantle.

Joined GJI Board 1992

### *J. Bloxham (North American Coordinating Editor)*

Jeremy Bloxham is Professor of Geophysics at Harvard University, where he has worked since 1985. His research interests are centred on the generation and evolution of planetary magnetic fields, with particular emphasis on the use of observations to constrain models of the Earth's magnetic field. Other areas of interest include Earth rotation, the structure of the Earth's deep interior, and geophysical inverse theory.

Joined GJI Board 1993

### *K. Bahr*

Karsten Bahr has been a Professor of Geophysics at Göttingen University since 1996. His main field of research is electromagnetism. His research has covered both applied and theoretical aspects of this field, and he has held positions in industry as well as in research institutions. He has contributed to the theory of distortion of electromagnetic transfer functions by 3-D conductivity structures of all scale lengths. Recent research interests include the contributions of electromagnetic sounding techniques to geodynamic processes like crustal formation, sub-lithospheric flow and plume–lithosphere interaction.

Joined GJI Board 1997

### *A. E. Beck*

Alan Beck, after 30 years as Head of Department of Geophysics, is now Professor Emeritus in the Department of Earth Sciences at the University of Western Ontario (the geophysics department was also retired when he retired). His life-long research interests have been centred on geothermal problems, concentrating most recently on the determination of ground surface temperature history, and hence inferring something about past climate change, from perturbed bore-hole temperature profiles. He has served on numerous national and international committees and has published over 100 papers (in good as well as not so good journals).

Joined GJI Board 1994

### *B. A. Buffett*

Bruce Buffett is an assistant professor in the Department of Earth and Ocean Sciences at the University of British Columbia. His research activities deal with the structure and dynamics of the Earth's deep interior. Specific research interests include the thermal evolution of the core, energy sources for the geodynamo, core–mantle interactions and large-scale deformation of the Earth.

Joined GJI Board 1996

### *R. A. Clark*

Roger Clark is a geophysicist at the University of Leeds, UK, from where (in conjunction with MOD Blacknest) he obtained his PhD in 1982. He worked first as a consultant exploration geophysicist, specializing in seismic and potential field surveys for onshore hydrocarbon exploration, while maintaining research in earthquake focal mechanisms, lithospheric seismic structure, and nuclear explosion seismology. He is now a lecturer in the Department of Earth Sciences, where he continues to work on earthquake seismology and seismic verification of nuclear test-ban treaties; his main interests at present are processing of seismic reflection surveys, and the quantitative use of reflected wave amplitudes for attenuation and rock characterization.

Joined GJI Board 1993

### *T. Dahm*

Torsten Dahm is a seismologist and Professor of Geophysics at the University of Hamburg. His research interests are in different fields of seismology and volcano-seismology. One focus over the last few years was the study of seismic source mechanisms and rupture processes. The techniques developed have been used to study tectonic earthquakes and seismic swarms associated with fluid intrusions. Another research focus was the numerical simulation of faults, dikes, and fluid-filled fracture propagation, by using boundary element methods. Since his move to Hamburg in 2000 he is involved in marine passive oceanbottom seismology studies.

Joined GJI Board 2003

### *C. Ebinger*

Cindy Ebinger obtained a PhD in the MIT/Woods Hole Oceanographic Joint Programme in Oceanography in 1988. She then was a National Research Council Post-doctoral Fellow at NASA-Goddard Space Flight Center, and a NATO Post-Doctoral Fellow at Leeds University. Ebinger commenced a lectureship post in 1991 at Leeds

University, but moved to Royal Holloway University of London in 1999, where she is now a Professor of Tectonics. Her research interests are in predictive models of rift basin formation, the break-up of continental lithosphere, plume-lithosphere interactions, and lithospheric rheology. Ebinger is a Fellow of the Geological Society of America, Associate Editor of Geological Society of America Bulletin, Member of the Europe Regional Advisory Committee, American Geophysical Union and Secretary of the Tectonophysics section of the American Geophysical Union.

Joined GJI Board 2001

#### *J. Francheteau*

Jean Francheteau is a marine geophysicist who obtained his PhD in oceanography in 1970 at the Scripps Institution of Oceanography, La Jolla, California, after obtaining a diploma of mining engineering at the Ecole Nationale Supérieure de la Metallurgie et de l'Industrie des Mines de Nancy, France. After 11 years of research as a scientist at the Centre National pour l'exploitation des Océans (CNEXO) in Brest, France, and about the same time as a physicist at the Institut de Physique du Globe de Paris, he took up his current position as a professor of geophysics at the Université de Bretagne Occidentale in Brest. His research has covered a wide range of topics: palaeomagnetism, heat flow, plate kinematics, marine geophysics, tectonics. His current research interest is in understanding the processes active in mid-ocean ridges. From 1991 to 1998 he has chaired the French national Dorsales programme, an active component of the InterRidge international initiative.

Joined GJI Board 1988

#### *A. J. Haines*

John Haines is a geophysicist at the University of Cambridge in the UK. He has research interests in Continental Deformation. The objectives of his work are to provide a detailed understanding of how continents deform, using pioneering analysis techniques based on a macroscopic picture of continental deformation as a continuum.

Joined GJI Board 1999

#### *M. Korn*

Michael Korn is a theoretical seismologist. He is Professor of Theoretical Geophysics at the University of Leipzig. His main interest is in wave propagation theory and its application to real data sets. Over the past years he has worked on numerical modelling of wavefields and on the scattering of seismic waves in small scale heterogeneous structures. More recently he became interested in the new possibilities of experiments with temporary deployments of dense mobile seismological networks and in volcano seismology.

Joined GJI Board 1998

#### *H.-J. Kämpel*

Hans-Joachim Kämpel is a geophysicist with specialization in geohydraulics. He is professor for modelling of earth systems at the Technical University of Clausthal and heads the Leibniz Institute of Applied Geosciences, Hannover, Germany. Following a Bachelor degree in mathematics and physics at Freiburg University, he moved to Kiel University, where he obtained a Diploma and PhD in geophysics. As part of his scientific education, he spent a year at Nice University, France, and held a post-doctoral scholarship at Dalhousie University, Halifax, Canada. His main current interest

is in experimental *in situ* pore pressure physics on various scales, as in the vicinity of wells, reservoirs, or when associated to seismicity in continental crust.

Joined GJI Board 2000

#### *C. G. Langereis*

Cor Langereis is a professor in palaeomagnetism and heads the palaeomagnetic laboratory Fort Hoofddijk of the Department of Earth Sciences at Utrecht University since 1995. His main research interest concerns variations of the geomagnetic field at all time scales with an emphasis on their reliable (or unreliable) recording in the geological record. This includes polarity reversals and the construction of (astronomical) polarity timescales, as well as the study of short-lived phenomena such as geomagnetic excursions and secular variation. Further research interests encompass the sedimentary NRM acquisition mechanism and thus the relation between palaeomagnetism and the (palaeo)environment, while he is also strongly involved in geodynamic and tectonic applications.

Joined GJI Board 2000

#### *S. R. C. Malin*

Stuart Malin is retired. He was Professor of Geophysics at Bosphorus University, Istanbul from 1994–1999, and was also a visiting professor at the Universities of London and Cairo. His main research interest is in geomagnetism which he pursued first at the Royal Greenwich Observatory, Herstmonceux (1958–1970) and then at the British Geological Survey, Herstmonceux and Edinburgh (1970–1982). He was Head of Astronomy and Navigation at the National Maritime Museum, London from 1982–1988. He handles papers on geomagnetism.

Joined GJI Board 1996

#### *R. Madariaga*

Raul Madariaga is Professor of Geophysics at the Université Denis-Diderot in Paris and is a senior member of Institut Universitaire de France. He has recently moved his research group to Ecole Normale Supérieure de Paris, having been head of the Seismological laboratory at Institut de Physique du Globe de Paris for the last 12 years. His research activities cover a wide domain of seismology – he has worked on the theory of free oscillations, the mechanics of seismic sources, ray tracing in complex structures and the numerical modelling of wave propagation by finite differences. In collaboration with researchers from French oil companies, the French Petroleum Institute and the Paris School of Mines he has contributed to the development of ray-based methods for migration and the inversion of seismic profiles. He has also published a series of studies on large earthquakes around the world, including events in the Peru–Chile subduction zone, Marianas and many intraplate areas along the Mediterranean and the Alpine belt. His main current interests are in the detailed field study of seismic gaps in Chile, the mechanics of earthquakes, and the processing of 3-D seismic profiles.

Joined GJI Board 1996, EGS office head from July 1999

#### *Y. Ricard*

Yanick Ricard is a research director of the Centre National de Recherche Scientifique (CNRS). He has been working at the

University of Orsay where he got his PhD and then at Ecole Normale Supérieure of Paris. He is now the head of the laboratory of geology at Ecole Normale Supérieure de Lyon. His research has covered a wide range of topics in geodynamics: gravity modelling, mantle convection, lithospheric deformation, rotation of the Earth, thermodynamics, tomography interpretation, multiphase flows.

Joined GJI Board 2000

#### *K. Roy-Chowdhury*

Kabir Roy-Chowdhury has been a senior lecturer at the Department of Geophysics, Utrecht University, the Netherlands since 1993. He started as a research assistant at the National Geophysical Research Institute, Hyderabad, India, and later became a senior research scientist, helping to establish the Deep Seismic Sounding and the Marine Geophysics programmes there. In 1981 he joined Princeton University, New Jersey, as a member of the research staff, and became involved in the acquisition, processing and interpretation of multichannel seismic reflection data from the lower crust. From 1989 to 1992 he was a senior research geophysicist with the Atlantic Richfield Corporation, studying aspects of seismic processing and interpretation. His current research interests include high-resolution near-surface seismics and seismic investigations of the lower crust/upper mantle.

Joined GJI Board 1994

#### *F. Sansò*

Fernando Sansò is a professor at the Politecnico di Milano. His main research interest is in Mathematical and Physical Geodesy. In particular he has been enhancing mathematical theory for the analysis of non-linear and oblique derivative Boundary Value Problems. In addition he has been publishing on the general item of random fields estimation theory. Fernando is Honorary President of the International Association of Geodesy (IAG) and member of the 'Accademia dei Lincei'.

Joined GJI Board 2000

#### *H. C. Soffel*

Heinrich Soffel is Chair in Geophysics at the University of Munich. His main research interests are in rock magnetism, palaeomagnetism, archaeomagnetism, geodynamics, petrophysics, applied geophysics (interpretation of magnetic and gravity anomalies) and scientific drilling (KTB-project). Heinrich, as president of

the DGG in 1987, was instrumental in the merger that gave rise to GJI.

Joined GJI Board 2000

#### *M. Unsworth*

Martyn Unsworth is a Professor at the University of Alberta in Canada. After graduate studies at Cambridge in marine geophysics, he has held positions at the University of British Columbia and Los Alamos National Laboratory. His primary research interest is in the development and application of electromagnetic exploration methods in geophysics. He has worked on the development of numerical modelling and inversion techniques for magnetotelluric and controlled source electromagnetic data, and has also been active in the application of electromagnetic exploration techniques to solve a range of tectonic problems. In recent years this has included studies of active fault zones, mid-ocean ridges and the Tibetan Plateau. He is also interested in the application of these methods to problems in environmental geophysics.

Joined GJI Board 1998

#### *R. van Der Hilst*

Rob van Der Hilst's research interests are as follows. Main fields: Global Seismology and Mantle Dynamics. Current research: Seismic imaging of Earth's deep interior structure. Geodynamics of convergent plate boundaries and the mode of mantle convection. Waveform analyses; isotropic and anisotropic structure of continental lithosphere and upper mantle of the Australasian region, SE Asia, and North America (USArray/Earthscope); Body wave scattering in Earth's lower mantle. Continental evolution.

Joined GJI Board 2003

#### *D. M. Willis*

David Willis is an Associate Fellow in the Space and Astrophysics Group at the University of Warwick and an Honorary Research Associate at the Rutherford Appleton Laboratory (RAL). He was formerly project scientist with responsibility for the United Kingdom's participation in the research programmes of the European Incoherent Scatter (EISCAT) Scientific Association and also Director of the World Data Centre for Solar-Terrestrial Physics, Chilton. His research interests include solar-terrestrial physics, radar studies of the upper atmosphere, ionosphere and magnetosphere, historical solar and auroral observations, and planetary magnetism.

Joined GJI Board 1978