

# Division reports

## News brought to you from four EGU divisions

In each edition of GeoQ division presidents contribute reports that update EGU members with news from their divisions. Issue 10 gives voice to Michael Schmidt (Geodesy), Irina Artemieva (Geodynamics), Andreas Lang (Geomorphology) and Nicholas Arndt (Geochemistry, Mineralogy, Petrology & Volcanology).

### Geodesy

#### 2014 General Assembly

In 2014, the Geodesy Division ([G](#)) ran a total of 14 sessions scheduled over the whole week. The sessions were well attended and the lecture rooms for the most of the sessions were sufficiently large. The Geodesy Division had 390 submitted abstracts, around 3% more than in 2013. As in previous years, the most popular sessions (by number of abstracts and by number of participants) were related to gravity field research and gravity satellite missions. The open session on regional [GNSS \(Global Navigation Satellite System\) analysis](#) was scheduled as a PICO session, and like last year, the response was predominantly positive.

This year the Outstanding Young Scientists Award was given to [Roelof Rietbroek](#) for providing methodological solutions to the problem of integrating GRACE data, together with GPS, altimetry, and model data into estimates of mass redistribution. During the Division Meeting he gave a short and scintillating presentation entitled 'CSI geodesy: pointing out culprits behind sea level change'. Furthermore, [Verena Lieb](#) was decorated with the Outstanding Student Poster (OSP) Award for her poster on regional gravity field modelling, in addition to [Bas de Boer](#) for his contribution on simulating regional sea-level changes over the past glacial cycles, both of which were presented last year.

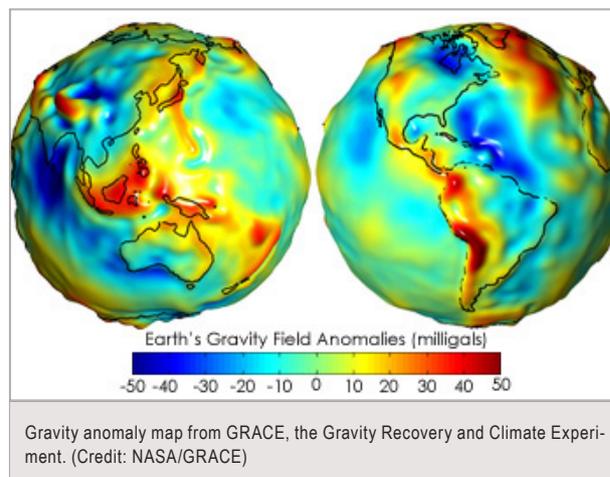
#### 2014 Vening Meinesz Medal

This year's Vening Meinesz Medal was awarded to [Reinhard Dietrich](#) for his outstanding accomplishments in the application of terrestrial and satellite geodesy to study cryospheric change and the glacial isostatic adjustment process, and his pioneering quantitative studies of the current state of polar ice sheets. He gave a great medal lecture entitled '[Geodesy and ice: is there still something to discover?](#)' during the conference.

#### Geodesy Division officers and committees

Johannes Böhm (Vienna University of Technology) and Johannes Bouman (German Geodetic Research Institute) have been appointed as the two deputy presidents according to the new EGU by-laws. The division president is a member of the Programme Committee, which organises the General Assembly, with Johannes Böhm designated as the alternate. Furthermore, Roelof Rietbroek (University of Bonn, Germany) was appointed as the new Young Scientist Representative of the Geodesy Division for a term of two years.

The Vening Meinesz Medal Committee consists of the four past medalists as well as the Geodesy Division president and the EGU



Awards Committee chair (both non-voting). The last year's medalist is chairing the committee. The 2015 committee consists of: Reinhard Dietrich (1), Zuheir Altamimi (2, chair), Che-Kwan Shum (3) and Harald Schuh (4), in addition to myself and Alberto Montanari (Awards Committee Chair).

The Outstanding Young Scientists Award Committee consists of the division president, the two deputy presidents and the latest medalist (Roelof Rietbroek). The Outstanding Student Poster Award Committee consists of the division president and the two deputy presidents. All committees were approved unanimously during the Division Meeting. The Programme Group for the 2015 Assembly consists of the division president, the two deputy presidents, the young scientist representative and one or two others to cover the whole field of geodesy.

#### Upcoming issues

The preparation of the next EGU Assembly will start soon: the skeleton programme for the Geodesy Division could be based on this year's successful sessions, but we also welcome new sessions! In this context the following items are important:

- Co-organised sessions strengthen the interdisciplinary character of the EGU;
- The total number of sessions within the Geodesy Division should be around 12 to ensure large and strong sessions run at the conference;
- PICO sessions are independent of oral slots and should be considered as an appropriate alternative;
- When choosing conveners and chairs, the gender diversity, the diversity in countries/institutes, and the inclusion of younger scientists should be given strong consideration;
- A minimum of three conveners for each session is generally desirable.

I look forward to hearing your session suggestions!

*Michael Schmidt*  
G Division President



## Geodynamics

The ongoing activities of the EGU Geodynamics Division ([GD](#)) are guided by the multitude of scientific methods, which aim to understand deep and shallow processes acting at different time scales across a variety of tectonic settings. Geodynamics as a discipline embraces depth scales from near-surface processes to core dynamics, length scales from grain size to lithospheric plates, and timescales from seismic deformation to mantle convection. It plays a critical role in integrating knowledge from a multitude of research disciplines, bridging geology, tectonics, deep and shallow geophysics, rheology, geochemistry, mathematical physics, laboratory experiments, and numerical simulations.

Many research topics in the GD Division overlap with those of other EGU divisions (e.g. SM, G, TS, NH and GMPV). To reduce overlap between sessions on similar topics, and to achieve maximum exposure of scientific results to a multi-division community, the scientific programme of the GD Division at EGU 2014 was developed together with other divisions (SM, GMPV, G, and in particular with TS).

The GD Division programme at the EGU 2014 General Assembly continued the success of past years and showed a 46% increase in the number of presentations compared to EGU 2013 (507 abstracts presented in 13 oral/poster and 2 PICO sessions). By keeping the number of GD sessions at the same level as in 2013, GD significantly increased the size of the sessions and their visibility. This was achieved through the organisation of large multidisciplinary topical sessions with targeted sub-sessions. In spite of the competition, the GD Division organised many successful sessions that were well attended, sometimes exceeding the capacity of the rooms. Highlights at the 2014 General Assembly included the [Augustus Love Medal Lecture](#) of the GD Division given by [Shun-Ichiro Karato](#) (Yale University). Our cooperation with non-European organisations continued, aided by a number of invitations of solicited talks from American and Australian experts and by the AGU's Studies of the Earth's Deep Interior co-sponsorship of the GD session '[Mantle dynamics in the Earth and other planetary bodies](#)'.

Together with other EGU divisions, GD continues to promote competition between young EGU participants. In 2014 the GD Division awards to early-career researchers were presented to [Rhodri Davies](#) (GD Outstanding Young Scientists Award) and [Chase Shyu](#) (GD Outstanding Student Poster Award 2013). There was a significant increase in a number of posters registered at the EGU 2014 for the student competition. Coordinators of the Division Outstanding Student Poster contest are Maxim Ballmer (present) and Ana-Catalina Plesa (incoming). The participants of the GD Division scientific programme have received a large number of travel awards, with the highest success rate (57%) among the EGU divisions.

Broad presentation of research results from the Geodynamics community continues through international journals, including EGU's journal *Solid Earth*. During the last few years, this open access journal has gradually gained a solid reputation in the scientific community.

The positive experience of the EGU 2014 General Assembly will form the basis for the preparation of the GD Division programme for EGU 2015. The bottom-up initiative that is at the core of the EGU and its Assembly is both welcome and eagerly anticipated in proposing sessions for and organising the GD Division scientific programme for 2015. Contributions from early-career researchers are particularly welcome.

*Irina Artemieva*  
GD Division President



## Geomorphology

The Geomorphology Division ([GM](#)) programme at the EGU 2014 General Assembly has seen abstract numbers increase by 13% compared to 2013, continuing the success of past years and establishing the meeting as the leading annual scientific event for geomorphology. Over 1200 contributions (including in co-organised sessions) were presented filling room G2 all week, and three full days in rooms across the G-level.

This year's General Assembly theme The Face of the Earth placed geomorphology at centre stage. This was beautifully highlighted by Jean Braun's Rocks of the Earth keynote lecture and Heather Viles' Union symposium lecture 'Linking life and landscape: (bio)geomorphological contributions to shaping the face of the Earth'.

The 2014 Ralph Alger Bagnold Medal was awarded to [Pieter van der Beek](#). He delivered a stimulating Bagnold Lecture entitled 'Late-Cainozoic climate change, erosion, and relief of mountain belts: 20 years of chickens and eggs'. As in recent years the Medal Lecture was preceded by a reception sponsored by the British Society for Geomorphology (BSG) and their journal, *Earth Surface Processes and Landforms*.

The division's 2014 Outstanding Young Scientist Award went to [Robert G. Hilton](#). He delivered the Penck lecture on 'Orogenesis as a carbon dioxide source or sink? New insights from the organic carbon cycle of Taiwan'. Ping Fu received the 2013 Outstanding Student Poster Award for her poster on 'Paleoglaciacion of Shaluli Shan, Southeastern Tibetan Plateau'.

The workshops for young researchers continue to be highlights of the GM programme. This year they included 'Pitfalls, statistical and otherwise, in analysis of environmental data' with James Kirchner and 'Meet the Master' with Paul Carling. For years GM has been trailblazing workshops for young researchers. Their great success and the excellent feedback received for them stimulated the roll out of similar events at Union level in 2014. Again, in coming years, workshops for young researchers will be forming an important part of the EGU programme, both at division and Union level. New this year was the 'Meet and greet' drinks reception for young scientists for which Lucy Clarke, the GM Young Scientists Representative, managed to secure BSG sponsoring. Another new activity was the very well received 'International Young Geomorphologists Social Event' organised by young German geomorphologists (*Junge Geomorphologen*), who hired an authentic Austrian restaurant for a whole night!

And of course, the science presented in GM was not just of high scientific value but also of great societal relevance: the session on land subsidence, highlighted through a press conference, was picked up by AGU, BBC and more than 60 newspapers and magazines (including Der Spiegel). Gilles Erkens, the main convenor, was interviewed over 20 times during the Assembly and in the week thereafter.

The 2014 General Assembly also saw the GM community celebrating the first year of its new EGU journal *Earth Surface Dynamics* (ESurf) at a reception on Tuesday evening. EGU-style open access publishing after public peer-review and an interactive public discussion process has proven attractive for the GM community. The division is looking forward to receiving more high quality articles on [Earth Surface Dynamics](#). Page charges have been waived until at least April 2015.

The full division structure, the scientific officers and their contact details can be found at: <http://www.egu.eu/gm/structure>. For further details please consult the presentation from the division business meeting at: <http://www.egu.eu/gm/reports>.

*Andreas Lang*  
GM Division President



Radar data are increasingly important to measure land subsidence. The problem of land subsidence was highlighted in a GM scientific session, as well as at a press conference at the EGU 2014 General Assembly. (Credit: ESA/DLR)

## Geochemistry, Mineralogy, Petrology & Volcanology

Activities of the Geochemistry, Mineralogy, Petrology & Volcanology Division (GMPV) encompass a broad range of geoscience disciplines. A major focus is the solid Earth, and a series of processes that starts with mantle geodynamics, extends through the formation of magma and its evolution in the crust, and terminates with volcanic eruptions. In addition, the mineralogy group deal with metamorphism and the geochemists study processes ranging from mantle evolution to the chemical record of climate change.



Panel at the EGU 2014 Great Debate on 'Metals in our backyard: to mine or not to mine'.

This span of activities is reflected in the career of [Chris Hawkesworth](#) who received GMPV's Bunsen Medal. Hawkesworth is a geochemist whose research has included the origin of granitic magmas, material transfer in subduction zones and the generation of the continental crust from the Hadean to the present. The career of [Sebastien Watt](#), who received an Arne Richter Award for Outstanding Young Scientists, reflects the interests of the volcanology group. Watt works on reconstructing regional volcanic histories with an emphasis on volcanic landslides.

Our collaboration with the Volcanology, Geochemistry, and Petrology (VGP) section of the American Geophysical Union continues to be strong. This year the two groups co-sponsored four sessions at the EGU General Assembly. On Thursday afternoon, Frederic Moynier delivered the lecture of VGP's Kuno Medal and this was followed by a VGP-GMPV reception. Next year we will extend the collaboration to include the Geological Society of America. Bruno Dhuime will coordinate these activities.

We have also recruited two young scientists to the division. Ioannis Baziotis has been actively promoting our activities on social networks for several months and he will be joined by another young scientist before the summer.

The GMPV Division is closely associated with the Great Debates in the geosciences at the EGU meeting. This year we co-organised the debate on the minerals industry: '[Metals in our backyard: to mine or not to mine](#)'.

Participation in GMPV activities at the General Assembly is strongly influenced by the 'Goldschmidt effect'. When this major geochemistry meeting is held outside of Europe, as is the case this year, the number of abstracts and the size of the audience in our sessions are up – by about 45% this year compared with 2013. Next year the Goldschmidt meeting will be in Prague but we are counting on the enthusiasm generated by this year's numerous successful sessions to provide the momentum needed to overcome the effect in 2015.

*Nicholas Arndt*  
GMPV Division President