Reaching out

Chairman of EGU Outreach Committee Niels Hovius explains why the EGU's diverse portfolio of outreach programs is one of the triumphs of the Union's first decade of existence.

The application form for grants from my national research council asks me to explain how I will engage the public with my funded science. The candidate I most want for the open PhD studentship is looking for a topic with direct societal relevance. My head of department has requested a list of my media features for consideration in the upcoming review. My daughter's teacher would like me to give a science talk at school again this year. And, "How does that trial in the news affect my work?" the neighbours want to know. If science has ever been pursued in splendid isolation, then those days are over. "Geoscience for Society" is rightly in the EGU banner.

To help the geoscience community reach out, the EGU has developed a range of initiatives. Since 2011, media contacts are handled year-round by professional staff in the EGU Office, with press releases on the most notable publications in EGU journals and press conferences and interviews during our principal meetings. Science highlights are also featured on the new-look EGU website and in social media, where the boundaries between science and society are perhaps most easily crossed. Making use of the flexibility and immediacy of those social media, the EGU is further hosting and moderating open Twitter discussions on scientific publications and issues with broader relevance, as well as a series of blogs. Elsewhere, our Geoscience Information For Teachers (GIFT) programme each year empowers many dozens of school teachers from across the world to bring geoscience into classrooms with the enthusiasm and excitement that are needed to open the eyes of the next generation to our subject.

But EGU Outreach is about more, because there is also a need for bridges within our own community. Financial support for young scientists to attend our meetings, assistance for key experts to speak at external events, mentoring schemes, a network for young geoscientists, training schools where students can work directly with leading scientists to acquire knowledge and skills they can't get in their own institute, a platform for women in science, a market for jobs, an effective and comprehensive website with up-to-date information about all aspects of the Union, and the newsletter you are reading now: these are all initiatives that aim to strengthen the geoscience community, to bring in those that should be a part of it, and to help build fulfilling careers.

The EGU is a not-for-profit organisation. The revenue from our strong General Assembly and scientific journals portfolio is used substantially to support Outreach initiatives that add real value to being a part of the Union. This is driven overwhelmingly by volunteers who bring their own ideas and passions, and invest some time to enhance the quality of our scientific experience and of the links between our science and our society. But then, we all need to reach out from time to time.

You can find more information about the EGU Outreach programme on the EGU website. If you are interested in contributing your ideas and/or time to EGU Outreach, please contact Media and Communications Officer Bárbara Ferreira.

Niels Hovius
EGU Outreach Committee Chair

Niels Hovius with his son during an expedition in Northeast Greenland. Credit: Thomas Ulrich

SPECIAL EDITION

Division reports

News brought to you from four of EGU's divisions

In each edition of GeoQ*, we select several Division Presidents to contribute reports updating members with news from their divisions. Issue 4 gives voice to Charlotte Krawczyk (SM President), Artemi Cerdà (SSS President), Norma Crosby (ST President), and Fabrizio Storti (TS President).*

Seismology

The current work of the EGU Seismology Division (SM) is guided by the following basic thought: the EGU offers a well recognised forum where a large variety of scientific questions and results are discussed. Since the impact of geosciences in society has probably never been as high as it is today, we can foster this development by broadening our research topics and opening our fields to wider, interdisciplinary collaborations within the EGU. Here, seismology as a discipline is significant, since it contributes to a large variety of both basic and applied thematic fields and urgent questions. SM, therefore, wants to strengthen its value by enhancing the development from static to dynamic models, from acquisition parameters to petrophysical properties, and from geomodels to geotechnical applications. As a result, our ability to make relevant predictions for the future is also growing.

This concern shaped the SM programme at the 2102 General Assembly and also finds its way into the call for abstracts for 2013. Highlights this year were the Beno Gutenberg Medal Lecture by Michel Campillo and the Great Debate on The Role and Responsibilities of Geoscientists for Warning and Mitigation of Natural Disasters, which was jointly organised with the Natural Hazards Division. The debate was a great success, with the panel members (Massimo Cocco, Bruno Merz, Peter Billing, Gero Michel) stimulating the discussion with statements about issues that are important to a wide range of communities (earthquake hazards, uncertainty in flood risk assessment, European Commission on civil protection, risk and insurance). Thereby, the challenging connection between scientific, operational, economic, and political responsibilities was elaborated. It was concluded that both basic and applied research are necessary prerequisites within any step to reduce vulnerability, and improve awareness, preparation, and mitigation.

Many of the points raised during the debate, held in Vienna, were picked up more recently in the aftermath of the guilty verdict handed down to Italian seismologists working with the L'Aquila earthquake. Media requests on this topic were answered promptly and information was provided on short notice using our Division webpage. In addition, a Twitter discussion forum and an web-based blog offered everybody a chance to express themselves in public.

The community itself drives the Division forward. Therefore, please don't forget to leave a time slot free in your 2013 General Assembly schedule for the Division Meeting, which will be held during the lunch break preceding the Beno Gutenberg Medal Lecture.

Charlotte Krawczyk
SM Division President

Soil System Sciences

The Soil System Sciences (SSS) is a growing Division of the European Geosciences Union that was enabled by the work done by the previous Presidents, Jerzy Weber and Teodoro Miano, and a group of enthusiastic scientists keen to demonstrate the key role

Olive plantation on red clay soil in Andalucía. Ploughing, pesticides, herbicides, and mineralisation are some of the threats that make the future of soils, and the fate of societies, unknown. Credit: Artemi Cerdà

that soils play in the Earth system. I have served as SSS Division President since April 2011 and I have just been elected for a new two-year period.

To get a better and more efficient organisation, the SSS Division is now divided into subdivisions. The Division is structured into ten subdivisions and has eight officers, as stated on the SSS website. This new structure responds to the needs of a diverse and rich group of scientists and to the visible increase in the number of abstract submissions from soil scientists at the EGU General Assembly. The number of abstracts rose from 278 in 2005 to 1,099 in 2012. Year after year, the topics of the scientific sessions grow richer and more diverse, and we encourage collaboration with other EGU divisions, mainly Geomorphology, Hydrological Sciences, and Biogeosciences.

In the past year, the SSS Division was an active part of the Outreach Committee, attending the meeting in Pisa, supporting the dissemination programme coordinated by Niels Hovius, and contributing to the Medal Committee coordinated by Alberto Montanari with nominations for four medals.

Following the agreement within the Division Meeting last April, we are also developing a blog and a newsletter. Both of them serve as a contribution of an active group of scientists and are coordinated by Antonio Jordán, SSS Officer for News and Information.

Soils feed humankind, it is time to protect them. Horta de Xàtiva in Eastern Spain. Credit: Artemi Cerdà

The medallists from the SSS Division were José Torrent (Duchaufour medal), for his contribution to understanding the mineralogy of iron oxides and the iron and phosphorus biogeochemical cycle in the soil-plant system, as well as Claudio Zaccone (Outstanding Young Scientist), for his contribution to understanding the role of humification processes in ombrotrophic bog profiles and the interactions between humic substances and organic/inorganic pollutants.. The Best Poster Awards from the 2012 GA went to Sarah McCormack, Alicia Marugan, Gianbattista Bussi and Miriam Muñoz Rojas.

The members of the SSS Division are attempting to disseminate the mission of the EGU within the soil science community and we expect an increase in attendees to the next couple of General Assemblies. To that end, we hope that the applied soil sciences will be more visible with each passing year and that as many as possible new scientific findings will be disseminated in our General Assembly every year. However, we also hope that our knowledge will reach the general public and for this we hope to harness the power of the EGU's Outreach Committee.

The SSS Division faces a promising period, particularly as a result of high quality contributions from young scientists, and we hope they continue to find a natural home within the EGU.

Artemi Cerdà
SSS Division President

Solar–Terrestrial Sciences

The Solar–Terrestrial Sciences (ST) Division considers all aspects of solar and heliospheric physics, specifically the solar-terrestrial connection. It covers the physical processes occurring on the Sun, in the solar wind, as well as in Earth's magnetosphere and ionosphere. To better our understanding of our local star, the Sun, researchers define the neighbourhood that we live in by studying these various domains individually as well as from a coupled approach. Solar activity (e.g. coronal mass ejections, solar flares, solar energetic particle events) and the response of the near-Earth space environment to these solar phenomena are considered on a wide-range of temporal and spatial scales.

In 2012, the General Assembly in Vienna included a diverse selection of ST sessions covering data analysis and interpretation of space-borne and ground-based data, as well as theoretical studies and different modelling techniques. Presentations covered a wide range of topics ranging from the dynamics of the Sun to how solar activity manifests itself throughout the heliosphere.

The Julius Bartels Medal for the year 2012 was awarded to Michael Lockwood for his outstanding contributions to the understanding of the dynamics of the terrestrial magnetosphere and the coupling between solar variability, magnetospheric and ionospheric processes, and the terrestrial climate. Most recently Michael Lockwood has expanded his activities into the consideration of the variability of the Sun on a broad range of time scales, and its influence not only on geomagnetism and the upper atmosphere, but also on possible influences on the Earth's climate.

One of aims of the ST Division is to promote, support and inspire scientists in the beginning of their career. The ST Division Outstanding Young Scientist Award 2012 was awarded to Alejandro Luque for his outstanding contribution to the understanding of the electrodynamics of plasma streamers found in transient luminous events occurring in the mesosphere of the Earth. Furthermore, the Union Outstanding Student Poster (OSP) Awards 2011 for ST were awarded during the ST Division 2012 business meeting to Heli Hietala for the poster entitled Particle Acceleration in Shock-Shock Interaction – Multi-spacecraft In Situ Observations and to Alexandra Alexandrova for the poster entitled Three-dimensional Non-steady Magnetic Reconnection Signatures: Model and Observations.

Norma Crosby
ST Division President

SPECIAL EDITION

Tectonics and Structural Geology

The Tectonics and Structural Geology Division (TS) covers the description, study, and modelling of geological processes causing rock deformation at very different scales, from the microscopic to the tectonic plate level, and at the different structural levels in the lithosphere. Tectonic processes are dynamically inserted in their deformation environments, from the deep Earth to the interaction and feedback with surface processes. TS activities at the General Assembly are conducted in tight collaboration with the Geodynamics Division (GD) in order to minimise overlaps and optimise scientific programmes. During the 2012 General Assembly, 821 papers were presented within 38 sessions for which TS was leading, helping to touch all of the most interesting current science themes in our Division.

The TS Division medal, the 2012 Stephan Mueller Medal, was awarded to Jacques Malavieille in recognition of his "fundamental contributions to the integration of field-based studies with analog modelling to study lithospheric deformation." Jacques gave a very well attended review lecture on this subject. The TS Division Outstanding Young Scientist Award 2012 was awarded to André R. Niemeijer for his "exceptional work on the effects of fluid-rock interactions and fabric development on rock and fault mechanical properties." Further, the Outstanding Student Poster Award was awarded to Marcel Thielmann for his poster paper entitled Shear Heating and Subduction Initiation. Nominations for the 2013 awards will be possible from next January up to June.

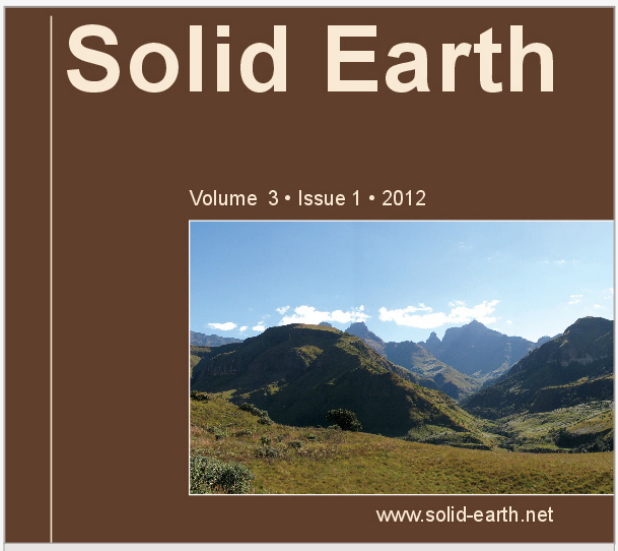
On Division news, in August, Giorgio Pennacchioni and Neil Mancktelow organised at Neves Lake in South Tyrol, the second edition of the biennial TS Summer School on Deformation Structures Within the Tauers Metagranitoids, including lessons in the class and in the field. As the first edition, the second summer school was a great success and we are already looking forward to the third edition in 2014.

The Open Access EGU journal *Solid Earth* is now indexed in Thomson Reuters (ISI) Web of Knowledge and will receive the first impact factor next June. The journal is performing very well and the TS Division community is encouraged to send in their best work to this publication to make it the leading journal in the field.

Finally, with the end of the Autumn 2012 election for EGU Division Presidents, the TS Division community has elected a new President, Susanne Buiter, whose mandate will begin at the 2013 General Assembly.

I want to take this opportunity to thank you very much for the support and collaboration that you gave to the Division over the past four years. See all you in Vienna next year!

Fabrizio Storti
TS Division President



The EGU Open Access Journal Solid Earth was indexed in Thomson Reuters (ISI) Web of Knowledge earlier this year.

GEOLOG
the official blog
geolog.egu.eu