



International Association of Geodesy

Newsletter

August 2014

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The *IAG Newsletter* is under the editorial responsibility of the *Communication and Outreach Branch* (COB) of the IAG.

It is an open forum and contributors are welcome to send material (preferably in electronic form) to the IAG COB (newsletter@iag-aig.org). These contributions should complement information sent by IAG officials or by IAG symposia organizers (reports and announcements). The *IAG Newsletter* is published monthly. It is available in different formats from the IAG new internet site: <http://www.iag-aig.org>

Each *IAG Newsletter* includes several of the following topics:

- I. news from the Bureau Members
- II. general information
- III. reports of IAG symposia
- IV. reports by commissions, special commissions or study groups
- V. symposia announcements
- VI. book reviews
- VII. fast bibliography

Books for review are the responsibility of:

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General Announcements

Call for Nominations for IAG Officers 2015-2019

Nominating Committee

M.G. Sideris (Chair), sideris@ucalgary.ca

B. Heck, bernhard.heck@kit.edu

S.R.C. de Freitas, sfreitas@ufpr.br

Y. Fukuda, fukuda@kugi.kyoto-u.ac.jp

August 4, 2014

Delegates of IAG Adhering Bodies

IAG Officers

IAG Fellows

IAG Members

Dear colleagues:

As you are aware of, the elections of IAG Officers for the period 2015-2019 shall take place by mail vote before the 2015 IAG General Assembly in Prague. The procedure for nominations and elections of Officers are given in section 39 of the IAG Bylaws (attached). According to the IAG Statutes, section 12, the voting members of the IAG Executive committee that should be elected are the following: President, Vice-President, Secretary General, Presidents of Commissions (4), Service representatives (3), members at large (2), and the President of the Communication and Outreach Branch. Their eligibility and terms of office are outlined in section 40 of the IAG Bylaws (attached).

The Nominating Committee is inviting you to submit nominations as follows:

- Submit nominations for all Officer positions listed above, except for the Service representatives who will be submitted by the Services.
- All nominations should be submitted to me, electronically or by regular mail, to the address given at the end of this letter.
- The deadline to submit nominations is **November 3, 2014**.

Based on the nominations received, the Nomination Committee will prepare a list of candidates for each position to be filled (normally two candidates per position) and will send it, by the end of 2014, to the delegates of the adhering bodies of the member countries, the officers of the Association, and those IAG fellows and individual members who took part in the nomination process. New nominations could be added to the list of candidates for six more weeks after this mailing, provided they are supported by at least two members of the Council. By mid February 2015 the final list of candidates will be sent out to the Council members for election. The result of the elections will be announced by the end of March 2015.

For any questions or concerns, please feel free to contact either me, or any of the other members of the Nominating Committee listed at the top of this letter.

I am looking forward to receiving your nominations and I thank you in advance for your prompt attention to this matter.

Yours truly,

Prof. Michael G. Sideris
Chair of the IAG Nominating Committee

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2500 University Drive N.W.
Calgary, Alberta T2N 1N4
CANADA

Fax: +1-403-284-1980
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Call for Nominations for 3 Service Representatives to the 2015-2019 IAG EC

Nominating Committee

M.G. Sideris (Chair), sideris@ucalgary.ca

B. Heck, bernhard.heck@kit.edu

S.R.C. de Freitas, sfreitas@ufpr.br

Y. Fukuda, fukuda@kugi.kyoto-u.ac.jp

August 4, 2014

Chairs/Presidents of IAG Services
Directors of IAG Service Bureaus

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The Nominating Committee is inviting you to consult with your Service and submit nominations as follows:

- Submit nominations only for the 3 Service representatives. All nominees should have a good record in the IAG Services. However, it is not a requirement that they be active within the Service you represent.
- All nominations should be submitted to me, electronically or by regular mail, to the address given at the end of this letter.
- The deadline to submit nominations is **November 3, 2014**.

Based on the nominations received, the Nomination Committee will try to get a good balance of all Services in the IAG Executive Committee (EC), will prepare a list of candidates for each position to be filled (normally two candidates per position) and will send it, by the end of 2014, to the delegates of the adhering bodies of the member countries, the officers of the Association, and those IAG fellows and individual members who took part in the nomination process. New nominations could be added to the list of candidates for six more weeks after this mailing, provided they are supported by at least two members of the Council. By mid February 2015 the final list of candidates will be sent out to the Council members for election. The result of the elections will be announced by the end of March 2015.

For any questions or concerns, please feel free to contact either me, or any of the other members of the Nominating Committee listed at the top of this letter.

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Prof. Michael G. Sideris
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COSPAR Awards 2014

Committee on Space Research (COSPAR) Awards 2014 have been presented on 4 August during the 40th COSPAR Scientific Assembly 2 – 10 August 2014, Moscow, Russia

- COSPAR Space Science Award for outstanding contributions to space science:
David J. McComas (USA), Jean-Loup Puget (France)
- COSPAR International Cooperation Medal:
Carlé McGetchin Pieters (USA)
- COSPAR William Nordberg Medal:
Mikhail Ya. Marov (Russia)
- COSPAR Harrie Massey Award:
Eugene Churazov (Germany/Russia)
- Vikram Sarabhai Medal:
Gurbax Singh Lakhina (India)
- Jeoujang Jaw Award:
Martin Sweeting (United Kingdom)
- Yakov B. Zeldovich Medals:
 - COSPAR Scientific Commission A
Jérôme Bouffard (France)
 - COSPAR Scientific Commission B
Diego Turrini (Italy)
 - COSPAR Scientific Commission C
C. Vineeth (India)
 - COSPAR Scientific Commission D
Anton Artemyev (Russia)
 - COSPAR Scientific Commission E
Nanda Rea (Spain/Netherlands)
 - COSPAR Scientific Commission F
Luca Mariotti (Italy)
 - COSPAR Scientific Commission G
José Miguel Ezquerro Navarro (Spain)
 - COSPAR Scientific Commission H
Benny Rievers (Germany)

Citations for honors awarded in 2014 at the 40th COSPAR Scientific Assembly can be found from the homepage of COSPAR at <https://cosparhq.cnes.fr/content/award-citations>.

TONIE M. VAN DAM

IAG monthly news for GIM – IAG page in the GIM International July 2014

The IAG become a partner with the magazine GIM International from the start of 2012. We would join sister geospatial organisations such as the FIG, ISPRS, ICA, GSDI & OGC in having a monthly page of news. The article titled “GGOS - The IAG’s Observing System” and “2nd Joint FIG/IAG/ISPRS International Symposium on Deformation Monitoring” for the July 2014 issue of GIM is available from the webpage http://www.gim-international.com/issues/articles/id2119-GGOS_The_IAGs_Observing_System.html.

CHRIS RIZOS
President of IAG

UN-GGIM endorses a draft UN Resolution on the Global Geodetic Reference Frame Press Release – 8 August 2014

The United Nations Committee of Experts on Global Geospatial Information Management endorses a draft United Nations Resolution on the Global Geodetic Reference Frame

The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) is meeting at the UN Headquarters in New York from 6-8 August 2014. The first day saw them endorsing a draft Resolution on the Global Geodetic Reference Frame (GGRF) as a mandate.

A geodetic reference frame refers to the science of very finely measuring the Earth, from its orientation in space, to its gravity field and to its shape. Since these three aspects of the planet are constantly changing, it makes it even more imperative that, globally, we have the best data possible in order to respond to everything from climate change to disaster management.

The UN-GGIM recognises that there is a growing requirement for more accurate measuring of the changing planet, down to millimetres. Such data will have enormous economic benefits since the data impacts on countries' economies as well as their environments. At the same time, it is recognised that such improved data can only come through enhanced global co-operation.

As things currently stand, there needs to be a growing awareness that no single country can maintain the GGRF alone. Instead it requires global co-operation and contributions. The Committee of Experts is considering how to enhance intergovernmental co-operation, which will lead to geospatial data interoperability.

Equally, the 'best efforts' principle currently in place will not be sufficient for the future. There need to be mutual global efforts working under the umbrella and mandates of overarching structures like the United Nations.



Mr Rajendra Pachauri, Chairman of the Intergovernmental Panel on Climate Change, gave his support to the work of the UN-GGIM and the GGRF Working Group at a recent climate symposium in Ny-Ålesund, Norway; their work is making a vital contribution to our understanding of climate change (<http://ggim.un.org/docs/meetings/GGIM4/UNGGIM%20Newsletter%2020202014.pdf>).

Already some countries are collecting data as part of the GGRF and are making that data freely available. The UN-GGIM hopes that more Member States can work towards more open sharing of geodetic data, standards and conventions.

Location-based services, based on for example the Global Positioning System (GPS), are becoming an expected fundamental requirement in many Member States, along with things like power and water. These all depend on a robust GGRF. It is therefore imperative for economic and environmental stability that there is a robust, highly accurate and easily accessed GGRF for the whole planet.

The GGRF Working Group provides updates and important best practice case studies in a newsletter available online at the UN-GGIM website.

The draft Resolution will now pass to the Economic and Social Council (ECOSOC), UN-GGIM's parent body and the United Nations' central platform for reflection, debate, and innovative thinking on sustainable development. The intent is for ECOSOC to then refer the Resolution to the General Assembly later in the year.

The Fourth Session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) live and on-demand, available on UN Web TV website at: <http://webtv.un.org>.

For additional information on the fourth session, including the agenda and technical reports, please visit: http://ggim.un.org/ggim_committee.html.

ANNE JØRGENSEN

Former Chief Geodesist at the Danish Geodetic Institute E. Kejlso died

Former Chief Geodesist at the Danish Geodetic Institute E. Kejlso died on June 30, 2014 at the age of 95. He served the international community as Treasurer of IUGG and as coordinator of early optical space projects.

CARL CHRISTIAN TSCHERNING

Meeting Announcements

REFAG2014 preregistration extended

October 13-17, 2014 Kirchberg, Luxembourg

Preregistration for [REFAG2014](#) extended to **15-September**. Please make hotel reservations for that week as soon as possible. Students should contact Tonie van Dam directly: tonie.vandam@uni.lu.

TONIE M. VAN DAM

19th International Workshop on Laser Ranging

Celebrating 50 Years of SLR: Remembering the Past and Planning for the Future

October 27-31, 2014 Annapolis, Maryland, USA

Registration is now open for the 19th International Workshop on Laser Ranging, which will be held in Annapolis Maryland during the week of October 27-31, 2014. We encourage everyone to register for the workshop well before the deadline of **September 5, 2014** using the following link:

https://www.hou.usra.edu/meeting_portal/registration/index.cfm?mtg=ilrw2014

More details on the program topics are now available on the workshop website

<http://ilrs.gsfc.nasa.gov/ilrw19/index.html>

We ask attendees to submit abstracts early. The third circular for the workshop is available at:

http://ilrs.gsfc.nasa.gov/ilrw19/docs/2014/ilrw19_circular3.pdf

CAREY NOLL

Meetings Calendar

18th WEGENER General Assembly: Measuring and Modelling our Dynamic Planet

September 1-4, 2014, Leeds, UK

URL: <http://see.leeds.ac.uk/wegener/>

Summer school on "GRACE/GRACE-FO applications for the terrestrial water cycle"

September 15-19, 2014, Mayschoss, Germany

URL: <http://www.massentransporte.de/?summerschool>

Journees 2014 "Systemes de reference spatio-temporels"

September 22-24, 2014, Pulkovo Observatory, St. Petersburg, Russia

URL: <http://journes2014.gao.su/>

Eighth FORMOSAT-3/COSMIC Data Users' Workshop

September 30 – October 2, 2014, Boulder, USA

URL: www.cosmic.ucar.edu/workshop_2014/

INTERGEO / Geodätische Woche

October 7-9, 2014, Berlin, Germany

URL: <http://www.intergeo.de>

European VLBI Network (EVN) Symposium

October 7-10, 2014, Cagliari, Italy

URL: <http://www.evlbi.org/meetings/meetings.html>

REFAG2014

October 13-17, 2014, Luxembourg

IAG Commission 1 Symposium 2014 "Reference Frames for Applications in Geosciences"

URL: <http://iag.uni.lu/index.php?id=189>

The Climate Symposium 2014

October 13-17, 2014, Darmstadt, Germany

URL: <http://www.theclimatesymposium2014.com>

8th Coastal Altimetry Workshop

October 23-24, 2014, Lake Constance, Germany

URL: <http://www.coastalaltimetry.org/>

SARAL/AltiKa Workshop

October 27, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

IDS Workshop

October 27-28, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

19th International Workshop on Laser Ranging

October 27-31, 2014, Greenbelt, MD, USA

URL: <http://ilrs.gsfc.nasa.gov/ilrw19/index.html>

Ocean Surface Topography Science Team (OSTST) meeting

October 28-31, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

Digital Earth Summit 2014

November 9-11, 2014, Nagoya, Japan

URL: <http://gis.chubu.ac.jp/summit2014/>

Third International VLBI Technology Workshop

November 10-13, 2014, Groningen/Dwingeloo, Netherlands

URL: <http://www.jive.nl/ivtw2014/>

ISPRS Technical Commission I Symposium Sustaining Land Imaging: UAVs to Satellites

November 17-20, 2014, Denver, Colorado, USA

URL: <http://www.commission1.isprs.org/>

PECORA 19

November 17-20, 2014, Denver, Colorado, USA

URL: <http://pecora.asprs.org/>

ICSU GRC Conference "Improving Geophysical Risk Assessment, Forecasting and Management"

November 18-21, 2014, Madrid, Spain

URL: <http://www.icsu.org/>

Symposium SIRGAS 2014

November 24-26, 2014, La Paz, Bolivia

URL: <http://www.sirgas.org>

5th GOCE User Workshop

November 25-28, 2014, Paris, France

URL: <http://www.goce2014.org/>

11th International Conference on Location-based Services

November 26-28, 2014, Vienna, Austria

URL: <http://www.lbs2014.org/>

AGU 2014 Fall Meeting

December 15-19, 2014, San Francisco, CA, USA

URL: <http://sites.agu.org/meetings/>

18. Internationale Geodaetische Woche Obergurgl

February 8 – 14, 2015, Obergurgl, Austria

URL: <http://www.mplusm.at/ifg/>

GEOProcessing 2015

February 22 – 27, 2015, Lisbon, Portugal

URL: <http://www.iaria.org/conferences2015/GEOProcessing15.html>

European Geosciences Union General Assembly 2015

April 12 – 17, 2015, Vienna, Austria

URL: <http://www.egu.eu>

SPACOMM 2015

April 19 – 23, 2015, Barcelona, Spain

URL: <http://www.iaria.org/conferences2015/SPACOMM15.html>

22nd Meeting of the European VLBI Group for Geodesy and Astrometry (EVGA)

May 17 – 21, 2015, Ponta Delgada, Azores, Portugal

URL: <http://evga2015.raege.net/>

TransNav 2015

June 17 – 19, 2015, Gdynia, Poland

URL: <http://transnav2015.am.gdynia.pl>

XXVI IUGG General Assembly

June 22 – July 2, 2015, Prague, Czech Republic

Information about registration and accommodation will be available from June 2014. Call for abstracts will be open during summer 2014. Deadline for abstract submission is January 31, 2015.

URL: www.iugg2015prague.com

XXIXth IAU General Assembly

August 3 – 14, 2015, Honolulu, Hawaii, USA

URL: http://www.iau.org/science/meetings/future/general_assemblies/1024/

ISDE 2015

October 6 – 10, 2015, Halifax, Nova Scotia, Canada

URL: <http://isde2015halifax.ca/>

18th Geodynamics and Earth Tide Symposium 2016

June 6 – 9, 2016, Trieste, Italy

URL: <http://www.lithoflex.org/g-et/>

41th COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

URL: <http://www.cospar-assembly.org/>

Reports

International Symposium on Geodesy for Earthquake and Natural Hazards (GENAH2014)

22 – 26 July, 2014, Matsushima, Miyagi, Japan

International Symposium on Geodesy for Earthquake and Natural Hazards (GENAH2014) was successfully held in Matsushima, Miyagi, Japan, a town that suffered from the huge tsunami on 11 March 2011. 130 geodesists gathered in 22 - 26 July, to exchange up-to-date knowledge and discuss the role of geodesy in earthquake and volcanic studies, natural hazard assessment, and disaster mitigation. There were 7 sessions whose themes were (1) Subduction Zone Earthquakes, (2) Geodetic Observations of the Earthquake Deformation Cycle, (3) Near Real-Time Warning, (4) Interaction between Earthquakes and Volcanoes, (5) Impact of Great Earthquakes on Reference Frame, (6) Geodetic Techniques in Volcanological Research, and (7) Natural Hazards. In total 83 oral and 50 poster presentations were made during the 4-day conference. Participants came from 16 countries including Japan, United States, China, Indonesia, UK, France, Australia, Canada, etc.

One of the most studied topics was the 2011 Tohoku-oki earthquake and its related activities. Results of research using various geodetic techniques such as GNSS, GPS/A, and GRACE were intensively discussed among the participants. The main concern was the coseismic and postseismic deformation of the Tohoku-oki earthquake and their source processes. Effects of this great earthquake on seismic activity in and around Japan were also discussed.

Another important issue is the earthquake cycle. Using SAR and GNSS several groups are trying to reveal interseismic strain buildup in subduction zones (e.g. Chile) and active faults zones (e.g. North Anatolian Fault). Detection of slow slip events and their role in the earthquake cycle are also important issues. Rapid detection of deformation was a popular topic in this symposium. Several groups presented the results of (near) real-time

detection of the very early part of coseismic deformation and the estimation of the size of events. Another interesting aspect of this theme is the detection of coseismic ionospheric disturbances and its utilization in earthquake early warning, though this is still a subject of hot controversy.

The impact of great earthquake on the reference frame is the great concern from the viewpoint of geodesy. Altamimi showed that a proper treatment of postseismic transients using logarithmic or exponential decaying functions gives us a stable reference frame. On the other hand, the rapid recovery of precise coordinates is demanded for sites displaced by earthquakes, but this takes a long time due to long-lasting postseismic deformation. How to reconcile practical use and long-term stability of the network is a serious problem.

Monitoring of volcanic activity is another big issue in geodesy. Several reports on volcanoes in Japan, Indonesia, Costa Rica, etc. were presented in the symposium. It is important to note that extensometers and tiltmeters are very effective for the detection of precursory deformation to eruption. Case studies of triggering of volcanic activity by large earthquakes also drew the attention of the participants.

In the session of Natural Hazards, we had presentations on the application of geodetic work to monitor various kinds of hazards such as land subsidence, storms, floods, etc. in addition to earthquakes and volcanic eruptions. Results of earthquake hazard estimates based on geodetic works in a couple of countries were also shown. An invited talk by Dr. Hatayama, who is a specialist in Disaster Information Systems and disaster management, showed results of the application of geodetic work to emergency response. He also emphasized that the content and accuracy requirements of the information needed may change depending on the stage of emergency response and disaster recovery. This is a bit different viewpoint that scientists may not have and noteworthy in the application to disaster management.

On the final day, participants visited Ishinomaki city and Onagawa town, where a very high tsunami attacked on March 11 2011 and recovery works are still going on. They stopped at a couple of memorial places, heard related stories and fully realized the impact of this disaster.

On the whole, participants obtained a common recognition on the status quo of geodesy, and found several take-home questions concerning scientific, technical and social issues through five day long discussion and activity. We are convinced that this kind of opportunity is important and should be continued.



Participants in GENAH2014

MANABU HASHIMOTO