



Contents

General Announcements.....	3
Elections Report for IAG Officers for the Period 2015-2019	3
Call for Proposals on IAG Projects, Study Groups and Working Groups in the period 2015 – 2019.....	4
Achievements and Highlights of the IAG 2011-2015	5
The Joint Board of Geospatial Information Societies (JBGIS)	6
Meeting Announcements	8
Meetings Calendar	8
TransNav 2015	8
DGON-Navigationskonvent 2015	8
XXVI IUGG General Assembly.....	8
EVN TOG Meeting.....	8
AOGS 2015	8
XXIXth IAU General Assembly	8
2015 APSG International Symposium	8
ESA/JRC International Summer School on GNSS 2015.....	8
ION GNSS+ 2015	8
INTERGEO, Geodätische Woche	8
ICTRS 2015.....	8
Wilhelm und Else Heraeus Autumn School.....	8
ISDE 2015	9
Earth Observation for Water Cycle Science 2015.....	9
2015 ILRS Technical Workshop.....	9
COSPAR Capacity Building Workshop on Planetary Data Mission Analysis	9
5th International Colloquium Scientific and Fundamental Aspects of the Galileo Programme	9
2nd Symposium of COSPAR: Water and Life in the Universe	9
EuroCarto 2015	9
IS-GNSS 2015.....	9
MMT 2015	9
AGU 2015 Fall Meeting	9
IGS Workshop.....	9
JISDM 2016	9
EGU General Assembly 2016	9
GEOProcessing 2016	10
FIG Working Week 2016.....	10
18th Geodynamics and Earth Tide Symposium 2016.....	10
GAGER 2016.....	10
41st COSPAR Scientific Assembly	10
INTERGEO, Geodätische Woche.....	10
AGU 2016 Fall Meeting	10
Obituary.....	10
Professor Bob E. Schutz (1940-2015).....	10

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

General Announcements

Elections Report for IAG Officers for the Period 2015-2019

The IAG President, Chris Rizos, following Bylaw 39 (b), appointed in spring 2014 the Nominating Committee (NC) for the 2015 IAG elections. Michael G. Sideris (Canada) served as the Chair, and the other members were Silvio R.C. de Freitas (Brazil), Yoichi Fukuda (Japan) and Bernhard Heck (Germany). On August 4, 2014, the NC Chair sent out by email a letter with a *Call for Nominations for IAG Officers 2015-2019* to all Delegates of IAG Adhering Bodies, IAG Officers, IAG Fellows, and IAG Members. They were invited to submit nominations for the positions of 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. On the same date, a letter with a *Call for Nominations for 3 Service Representatives to the 2015-2019 IAG EC* was sent to the Chairs/Presidents of IAG Services and the Directors of IAG Service Bureaus, inviting them to submit nominations only for the 3 Service Representative positions. Attached to these letters were also copies of sections 39 and 40 of the IAG Bylaws, which describe the procedure for nominations and elections of Officers and their eligibility and terms of office, respectively.

By the deadline of November 3, 2014, a total of 55 names were nominated for all positions. The NC accepted for each position all nominees having at least 3 nominations, which resulted in 2 to 5 candidates per position, except for President of the COB for which the second candidate had only one nomination and was therefore not accepted. On December 4, 2014, the NC Chair contacted the 29 accepted nominees and asked them to confirm whether they agreed to be on the ballot or not. Seven of them denied the nomination and therefore there were in the end a total of 22 candidates for 13 positions. The NC was very pleased to see that there was a wide geographical distribution (Argentina, Brazil, China, Egypt, South Africa) of the 5 accepted candidates for the 2 Member at Large positions.

Following the IAG Bylaw 39(e), the NC Chair contacted on March 9, 2015, the IAG Delegates of the 46 countries with fully paid IUGG dues, informing them of the selection process and providing them with the names and short resumés of the accepted candidates. They were also asked, through a letter with a *Call for Additional Nominations for IAG Officers 2015-2019*, to send in further nominations. By March 21, 2015, the same information was also emailed to all IAG Members. No additional nominations were received by the deadline of April 10, 2015, and therefore the NC prepared the elections ballot with a total of 22 candidates.

On May 7, the *Call to vote for IAG officers 2015-2019* and the ballot was sent to the IAG Delegates. By the deadline of May 25, 42 out of the eligible 46 countries had voted. The list of the elected IAG officers is provided at the end of this report. On May 28, 2015 all candidates (elected and not elected) were informed about the outcome of the election. All elected candidates were asked to confirm that they accepted their position; they all have agreed to serve. The NC Chair has informed the IAG President and Secretary General of the results of the election, and they will inform the current EC members. The Council members will be informed during the IUGG General Assembly in Prague.

The NC Chair would like to thank the members of the NC and the IAG Secretary General for their support and help during the nomination and election process, as well as all nominees and nominators. Congratulations and best wishes for a successful term to all new IAG Officers!

Michael G. Sideris

Calgary, June 2, 2015

Chair of the Nominating Committee

Elected Officers to the IAG EC for the period 2015-2019

President

- Harald Schuh (Germany)

Vice-President

- Zuheir Altamimi (France)

Secretary General

- Hermann Drewes (Germany)

President of the Communication and Outreach Branch

- József Ádám (Hungary)

President of Commission 1: Reference Frames

- Geoffrey Blewitt (USA)

President of Commission 2: Gravity Field

- Roland Pail (Germany)

President of Commission 3: Earth Rotation and Geodynamics

- Manabu Hashimoto (Japan)

President of Commission 4: Positioning and Applications

- Marcelo Santos (Canada)

Member at large – Position 1

- Ludwig Combrinck (S. Africa)

Member at large – Position 2

- Maria Cristina Pacino (Argentina)

Service Representative – Position 1

- Ruth Neilan (USA)

Service Representative – Position 2

- Riccardo Barzaghi (Italy)

Service Representative – Position 3

- Axel Nothnagel (Germany)

Call for Proposals on IAG Projects, Study Groups and Working Groups in the period 2015 – 2019

A new structure of the IAG Commissions and the Inter-Commission Committee on Theory (ICCT) will be set up in the months following the IUGG General Assembly, Prague, Czech Republic, June 22 – July 2, 2015. IAG associates are invited to submit proposals for Commission or Inter-commission Projects, Study Groups and Working Groups with a clear description of the terms of reference, objectives and planned activities.

A Project may be established when a new scientific method or a new technique is being developed, or when it seems appropriate to apply an existing technique to a specific geographic area where international collaboration is required. It is established for one period and may be extended for another period subject to a positive review.

A Study Group or Working Group may be established to address clearly defined and well-focused scientific topics of limited scope. A Study Group is dealing with more theoretical issues and a Working Group with more practical realizations. They are established for one period or less.

Inter-Commission Committees handle well defined, important and permanent tasks involving all commissions. The ICCT strongly encourages frontier mathematical and physical research, provides the channel

of communication amongst the different IAG components, helps in articulating mathematical and physical challenges of geodesy, and seeks closer research ties with relevant areas of Earth sciences.

Proposals for Projects, Study Groups or Working Groups shall be sent to the responsible Commission or ICCT President, in case of joint groups related to more than one commission to all involved Presidents, with a copy to the IAG Secretary General (iag.office@tum.de):

Commission 1 “Reference Frames”: Geoffrey Blewitt (gblewitt@unr.edu),

Commission 2 “Gravity Field”: Roland Pail (pail@bv.tum.de),

Commission 3 “Earth Rotation and Geodynamics”: Manabu Hashimoto (hashimoto.manabu.7e@kyoto-u.ac.jp),

Commission 4 “Positioning and Applications”: Marcelo Santos (msantos@unb.ca),

Inter-Commission Committee on Theory: TBD, presently: Nico Sneeuw (sneeuw@gis.uni-stuttgart.de).

HERMANN DREWES
IAG Secretary General

Achievements and Highlights of the IAG 2011-2015

This is my last article as President of the IAG. The IAG’s new President is Harald Schuh, and the new Vice-President is Zuheir Altamimi. The Secretary-General remains Hermann Drewes. The full leadership team is listed on this page. I summarise below some of the achievements and highlights of the IAG during the last four year period, several of which have been reported in this column in past issues of *GIM International*.

Anniversaries. Several important milestone events must be noted. Over 500 scientists attended the IAG Scientific Assembly in Postdam, Germany on 2-6 September 2013 to celebrate the 150th anniversary of the founding of the IAG’s forerunner organisation, established in 1862 to oversee the Central European Arc Measurement (“Mitteleuropäische Gradmessung”) Project. The International GNSS Service (IGS) celebrated 20 years of service at its biennial workshop, 23-27 June 2014, in Pasadena, California. The 19th International Workshop on Laser Ranging on 27-31 October 2014 in Annapolis, Maryland, marked the 50th anniversary of the first successful Satellite Laser Ranging measurement.

Noteworthy Progress. Never before has the investment in geodetic infrastructure been so high, its outputs so accurate, its utility so widely recognised. On 26 February 2015 the United Nations General Assembly adopted the resolution, *A Global Geodetic Reference Frame for Sustainable Development*, recognising the increasing role Geodesy plays in people’s lives, and through its contributions to the geospatial discipline and to the geosciences. As an example of this trend, there has never been an era in history of VLBI when so many new radio telescopes have been inaugurated. During 2015 the latest realisation of the International Terrestrial Reference System, the ITRF2014, was released. Progress was also made in gravimetry networks and standards, gravity field mapping from space (including monitoring of time varying features), developing guidelines for an International Height Reference System, refining the structures of the Global Geodetic Observing System (GGOS), launching new GNSS-based services to support real-time geohazard-related applications and system integrity monitoring, and continued regional campaigns and collaborations.

Engagement and Collaboration. The IAG engages with many national and international science agencies, professional associations, and non-government organisations, including the International Union of Geodesy & Geophysics (IUGG), International Council for Science (ICSU), Group of Earth Observations (GEO), UN Office for Outer Space Affairs (UN-OOSA), UN Global Geospatial Information Management (UN-GGIM), and its sister associations in the Joint Board of Geospatial Information Societies (JBGIS), to name but a few. Such engagement is manifest in many ways, but principally as joint conferences, workshops and publications, and collaborative projects. This is facilitated by the fact that many officers of the IAG (its Commissions and Services) also hold positions in a range of scientific and professional organisations, and hence are able to promote Geodesy more broadly.

Outreach and Education. During the past quadrennial period the IAG sponsored 65 conferences or workshops, ran more than 10 schools (GNSS, space geodesy, reference frames, geoid, heights), published (or in preparation) 11 conference proceedings in the *IAG Symposia Series*, and published over 300 peer-reviewed articles in its *Journal of Geodesy*. Particularly noteworthy is the fact that the IAG granted 94 scientists a travel award, 49 of them from developing countries, to attend a variety of conferences and workshops.

Organisational Matters. The IAG continues to pursue goals aimed at improving its operations, its governance structures, and its visibility. Hence amongst the initiatives in this regard are the restructure of GGOS (and its components), the commencement of the IAG Service Assessment Exercise, increased engagement with the UN (through the UN-OOSA and UN-GGIM), and of course the election of a new IAG leadership team at the IUGG General Assembly, held in Prague, Czech Republic, 22 June – 2 July this year.

It has been a stimulating and highly satisfying four years at the “helm” of the IAG, and wish to thank all the people (within, and external to the IAG) who have assisted me in so many ways. I look forward to continuing to

serve the interests of the IAG. I wish my successor well, and am confident that under his leadership the IAG will continue to provide essential geodetic services to our modern world.

CHRIS RIZOS

Website: <http://www.iag-aig.org>



Some participants at the 2013 Scientific Assembly in Potsdam, Germany, celebrating 150 years of the founding of the IAG

The Joint Board of Geospatial Information Societies (JBGIS)

The JBGIS is a coalition of international organisations involved in the collection, coordination, development, management, standardisation or regulation of geospatial information and related matters. The purpose of the JBGIS is to provide, where possible, a collective and unified voice at the international level regarding geospatial affairs, especially to the United Nations and other global geospatial information stakeholders. The current members of the JBGIS are:

- [Global Spatial Data Infrastructure \(GSDI\) Association](#)
- [IEEE Geoscience and Remote Sensing Society \(IEEE-GRSS\)](#)
- [International Association of Geodesy \(IAG\)](#)
- [International Cartographic Association \(ICA\)](#)
- [International Federation of Surveyors \(FIG\)](#)
- [International Geographic Union \(IGU\)](#)
- [International Hydrographic Organisation \(IHO\)](#)
- [International Map Industry Association \(IMIA\)](#)
- [International Society for Photogrammetry and Remote Sensing \(ISPRS\)](#)
- [International Steering Committee for Global Mapping \(ISCGM\)](#)

The JBGIS typically meets once a year at a location linked to one of the conferences of the member organisations, or to meetings conducted by the UN initiative on Global Geospatial Information Management (UN-GGIM).

With the launch of the UN-GGIM initiative the JBGIS has found a significant focus for its activities. It now provides support to the UN-GGIM secretariat, helping to plan meetings of the UN-GGIM Committee of Experts

or of the High Level Forums (HLF) or special workshops. One of the first significant outcomes was the adoption of the UN General Assembly resolution on a “Global Geodetic Reference Frame for Sustainable Development” (see GIM International May 2015). This was championed by the IAG and strongly supported by all JBGIS member organisations.

Several representatives of the JBGIS made presentations at the 3rd HLF of the UN-GGIM, 22-24 October 2014, held in Beijing, China:

- Mark Cygan (IMIA), spoke on behalf of the JBGIS during the Opening Ceremony
- Teo Chee Hai (FIG), moderated the session “Sustainable Cities and Human Settlements”
- Abbas Rajabifard (GSDI), gave the keynote address in the session “Climate Change and Disaster Mitigation”
- Mark Cygan (IMIA), member of the panel on “Leveraging the Technology Revolution”
- Chen Jun (ISPRS), gave the keynote address in the session “Working Together Across Borders and Regions”
- Robert Ward (IHO), member of the panel on “Working Together Across Borders and Regions”

This close alignment of JBGIS interests with that of the UN-GGIM continues in 2015. For example, the 22nd meeting of ISCGM will be held just prior the 5th session of the UN-GGIM Committee of Experts in New York, 5-7 August 2015. This meeting will address two critical issues: the role of geospatial information for supporting decision making in the framework of disaster management, and the future development of global mapping.

The 2015 annual meeting of the JBGIS will also be held in conjunction with the aforementioned UN-GGIM Committee of Experts meeting. The current chair of the JBGIS is Professor Chris Rizos.

CHRIS RIZOS

Website: <http://www.fig.net/jbgis/>



The JBGIS is a coalition of international organisations involved in the collection, coordination, management or regulation of geospatial information.

Meeting Announcements

Meetings Calendar

TransNav 2015

June 17 – 19, 2015, Gdynia, Poland

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

DGON-Navigationskonvent 2015

June 18 – 19, 2015, Berlin, Germany

URL: <http://www.dgon.de/index.php?id=139&L=0>

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.

URL: www.iugg2015prague.com

EVN TOG Meeting

June 26, 2015, Robledo, Spain

URL: <http://iag.dgfi.badw.de/index.php?id=291>

AOGS 2015

August 2 – 7, 2015, Singapore

URL: <http://www.asiaoceania.org/aogs2015/>

XXIXth IAU General Assembly

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

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

2015 APSG International Symposium

August 24 – 28, 2015, Moscow, Russia

Geodesic Datum and Regional and Terrestrial Reference Frame Realization

URL: <http://apsg2015.inasan.ru>

ESA/JRC International Summer School on GNSS 2015

August 31 – September 10, 2015, Barcelona, Spain

URL: <http://congrexprojects.com/2015-events/15m21/registration>

ION GNSS+ 2015

September 14 – 18, 2015, Tampa, Florida, USA

URL: <http://www.ion.org/gnss/index.cfm>

INTERGEO, Geodätische Woche

September 15 – 17, 2015, Stuttgart, Germany

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

ICTRS 2015

September 17 – 17, 2015, Rhodes, Greece

Fourth International (URSI) Conference on Telecommunications and Remote Sensing

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

Wilhelm und Else Heraeus Autumn School

October, 4-9 2015, Bad Honnef, Germany

Global gravity field modeling from Satellite-to-Satellite Tracking data
URL: <http://www.geoq.uni-hannover.de/autumnschool.html>

ISDE 2015

October 5 – 9, 2015, Halifax, Nova Scotia, Canada
URL: <http://digitalearth2015.ca/>

Earth Observation for Water Cycle Science 2015

October 20 – 23, 2015, ESA-ESRIN, Frascati, Italy
URL: <http://www.eo4water2015.info/>

2015 ILRS Technical Workshop

October 26 – 20, 2015, Matera, Italy
URL: http://ilrs.gsfc.nasa.gov/about/2015_ILRS_Technical_Workshop.html

COSPAR Capacity Building Workshop on Planetary Data Mission Analysis

October 26 – November 6, 2015, Guaratinguetá, Brazil
URL: <http://cbw.cosparbrazil2015.org/>

5th International Colloquium Scientific and Fundamental Aspects of the Galileo Programme

October 27 – 29, 2015, PTB Braunschweig, Germany
URL: <http://congrexprojects.com/2015-events/15a08/introduction>

2nd Symposium of COSPAR: Water and Life in the Universe

November 9 – 13, 2015, Foz do Iguacu, Brazil
URL: <http://cosparbrazil2015.org/>

EuroCarto 2015

November 10 – 12, 2015, Vienna, Austria
URL: <http://eurocarto.org/>

IS-GNSS 2015

November 16 – 19, 2015, Kyoto, Japan
International Symposium on GNSS
URL: <http://www.isgnss2015.org/>

MMT 2015

December 9 – 11, 2015, Sydney, Australia
The 9th International Symposium on Mobile Mapping Technology
URL: <http://www.mmt2015.org/>

AGU 2015 Fall Meeting

December 14 – 18, 2015, San Francisco, California, USA
URL: <http://fallmeeting.agu.org/2015/>

IGS Workshop

February 15 – 19, 2016, Sydney, Australia
URL: <http://kb.igs.org/hc/en-us/articles/205944657-IGS-Workshop-2016-Information>

JISDM 2016

March 30 – April 1, 2016, Vienna, Austria
3rd Joint International Symposium on Deformation Monitoring
URL: <http://www.jisd2016.org/>

EGU General Assembly 2016

April 17 – 22, 2016, Vienna, Austria

URL: <http://www.egu2016.eu/>

GEOProcessing 2016

April 24 – 28, 2016, Venice, Italy

URL: <http://www.iaia.org/conferences2016/GEOProcessing16.html>

FIG Working Week 2016

May 2 – 6, 2016, Christchurch, New Zealand

URL: <http://www.fig.net/fig2016/>

18th Geodynamics and Earth Tide Symposium 2016

June 5 – 9, 2016, Trieste, Italy

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

GAGER 2016

July 18 – 23, 2016, Wuhan, Hubei, China

Geodesy, Astronomy and Geophysics in Earth Rotation (GAGER2016) – A Joint IAU / IAG / IERS Symposium

URL: <http://main.sgg.whu.edu.cn/gager2016/>

41st COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

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

INTERGEO, Geodätische Woche

October 11 – 13, 2016, Hamburg, Germany

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

AGU 2016 Fall Meeting

December 12 – 16, 2016, San Francisco, California, USA

URL: <http://meetings.agu.org/upcoming-meetings/>

Obituary

Professor Bob E. Schutz (1940-2015)



On June 7, 2015, Professor Bob E. Schutz, University of Texas at Austin, passed away after a brain tumor surgery some weeks before. He was 75 years old.

Bob Schutz was a passionate researcher and academic teacher throughout the era of modern space research. After receiving his doctorate at the University of Texas Austin in 1969, he started his academic career in the Department of Aerospace Engineering and Engineering Mechanics (ASE-EM) of UT Austin soon after. Until his death he held the Joe J. King Chair in Engineering and the FSX Professorship in Space Applications and Exploration in the ASE-EM department and was Associate Director of the famous UT Center for Space Research (CSR).

Bob Schutz's rich research and teaching contributions ranged from orbital mechanics, precision orbit and attitude determination, computational techniques and satellite mission design, to space geodetic microwave and laser instrumentation and their applications to Earth system studies.

In the geoscience community Bob Schutz is best known as

co-founder of IAG's International Laser Ranging Service (ILRS) and as Science Team Leader for NASA's Geoscience Laser Altimeter System (GLAS), the primary instrument onboard the NASA ICESat mission, which measured for seven years global topography, including tracking changes in polar ice.

But Bob's trend-setting contribution to the shaping of modern space geodetic research, in particular his intensive support for the international coordination of modern satellite observing techniques, of tracking networks and for improvements of space geodesy products, started already in the early 1980's. As president of the IAG Special Study Group on Satellite Radio Tracking Techniques and as Satellite Laser Ranging Coordinator for the IAG/IUGG project MERIT (1982-1987) his contributions to the MERIT and COTES Joint Working Groups recommendation on concepts to be incorporated in the operation of the new IAU/IUGG sanctioned International Earth Rotation Service (IERS) were pivotal. He was member of the Provisional and Final Directing Board of the IERS (1986-1994) and Satellite Laser Ranging Coordinator of the new service for many years. In the same timeframe Bob was very active in the IAG/COSPAR Commission on International Coordination of Space Techniques for Geodesy and Geodynamics (CSTG), first as chairman and member of its SLR and GPS sub-commissions before he was elected its president in 1992. He was closely involved in IAG's International GPS/GNSS Service (IGS) activities since its inception in the early 1990's. He was member of the IGS Directing Board until 1997 and served until most recently on the ILRS Governing Board.

Bob Schutz was a Fellow in the American Astronautical Society, the American Geophysical Union, the American Institute of Aeronautics and Astronautics, and the International Association of Geodesy. In 2008, he received the Dirk Brouwer Award from the American Astronautical Society in recognition of his years of educational and professional contributions to astrodynamics and the aerospace profession. In 2014, he was inducted into the National Academy of Engineering (NAE) for his contributions to satellite laser ranging and global positioning systems used to study Earth system dynamics.

Bob Schutz valued the relationships with colleagues and was cherished by his colleagues and friends. He was a profound teacher, Ph.D advisor, mentor and a fine gentleman. His legacy will be appreciated for many decades to come.

Bob will be truly missed not only by his family and friends, but also by his many colleagues around the globe.

Prepared by CHRISTOPH REIGBER and CAREY NOLL