



## Contents

<b>General Announcements</b> .....	<b>3</b>
Vision of the IAG for the Next 4 Years – Harald Schuh’s Presidential Address .....	3
Prague Proceedings volume (IAG Symposia Series) .....	4
ILRS News .....	5
<b>Meeting Announcements</b> .....	<b>5</b>
<b>Meetings Calendar</b> .....	<b>5</b>
Wilhelm und Else Heraeus Autumn School.....	5
ISDE 2015 .....	6
DORIS Analysis Working Group Meeting.....	6
9th Coastal Altimetry Workshop.....	6
OSTST 2015.....	6
Earth Observation for Water Cycle Science 2015.....	6
2015 ILRS Technical Workshop.....	6
COSPAR Capacity Building Workshop on Planetary Data Mission Analysis .....	6
5th International Colloquium Scientific and Fundamental Aspects of the Galileo Programme .....	6
10th Meeting of the International Committee on Global Navigation Satellite Systems (ICG).....	6
2nd Symposium of COSPAR: Water and Life in the Universe .....	6
EuroCarto 2015 .....	6
International Technical Symposium on Navigation and Timing.....	6
VII SIRGAS School on Reference Systems .....	6
IS-GNSS 2015.....	6
Symposium SIRGAS 2015 .....	7
4th International VLBI Technology Workshop (IVTW) .....	7
MMT 2015 .....	7
AGU 2015 Fall Meeting .....	7
United Nations International Meeting on Global Navigation Satellite Systems.....	7
ION Precise Time and Time Interval Meeting (PTTI).....	7
IGS Workshop.....	7
Munich Satellite Navigation Summit .....	7
9th IVS General Meeting.....	7
JISDM 2016 .....	7
TG-SMM 2016 .....	7
EGU General Assembly 2016 .....	7
ICEE-PDRP 2016 .....	7
GEOProcessing 2016 .....	8
FIG Working Week 2016.....	8
ESA Living Planet Symposium 2016 and 6 <sup>th</sup> GOCE User Workshop .....	8
18th Geodynamics and Earth Tide Symposium 2016.....	8
GAGER 2016.....	8
International Symposium on Geodesy and Geodynamics (ISGG2016).....	8
41st COSPAR Scientific Assembly .....	8
AOGS 13 <sup>th</sup> Annual Meeting.....	8
INTERGEO, Geodätische Woche .....	8
AGU 2016 Fall Meeting .....	8
IAG / IASPEI Scientific Assembly .....	8
<b>Obituary</b> .....	<b>9</b>
Dr. Sc. Suriya K. Tatevian (1937 – 2015).....	9

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](mailto: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

### *Vision of the IAG for the Next 4 Years – Harald Schuh's Presidential Address*

On July 1, 2015, the new IAG President Harald Schuh gave his inaugural address at the 26th General Assembly of the International Union of Geodesy and Geophysics (IUGG), in Prague, Czech Republic.

In his introduction, he especially thanked one of his former mentors, James Campbell who introduced geodetic Very Long Baseline Interferometry (VLBI) to Europe, as well as the current IAG Secretary General Hermann Drewes, his co-workers, colleagues, and friends. Professor Schuh reminisced of the 1980s when he made his first steps in space geodesy with contributions to NASA's Crustal Dynamics Project. This was contrasted with today's situation. A global network of almost 500 continuously operating Global Navigation satellite System (GNSS) stations within the International GNSS Service (IGS), densified by thousands of additional GNSS sites in regional networks (e.g. Japan's GEONET, Europe's EUREF, western US's PBO, and others).



Harald Schuh at IUGG making his inaugural address

In addition, the geodetic infrastructure includes a network of globally distributed Satellite Laser Ranging (SLR) and VLBI stations of the highest technical standard, complemented by other ground-based and space-based technologies. Professor Schuh then highlighted the Global Geodetic Observing System (GGOS) of the IAG, which is dependent upon these global geodetic networks, and summarised the main tasks of GGOS. These are: the integration and combination of different measurement systems, observations, analysis methods, and models; connecting the geometric techniques with those of physical geodesy; and representing IAG at "high level" organisations and forums such as GEO, CEOS, UN-GGIM, and others. Professor Schuh reminded the audience of the vision of GGOS, which is to facilitate a better understanding of the dynamic Earth System through quantification of spatial and temporal changes of our planet. He stressed the importance of the GGOS Inter-Agency Committee (GIAC) as a group of stakeholders that fund and operate the geodetic infrastructure.

In his address, Professor Schuh then mentioned the UN resolution no. 69/266 on the importance of geodetic reference frames (see May 2015 issue of *GIM International*). After the long-lasting and vigorous efforts of many individuals in the geodetic community, supported by many others such as the member organisations of the Joint Board of Geospatial Information Societies (see July 2015 issue of *GIM International*), the resolution was adopted by the UN General Assembly on 26 February, 2015. This resolution is indeed a landmark for geodesy because it recognises the economic and scientific importance of, and the growing demand for, an accurate and stable global geodetic reference frame for the Earth, and encourages Member States and relevant international

organisations to enhance global cooperation and to increase investment in upgrading of the global geodetic infrastructure.

In the concluding, Professor Schuh touched on future perspectives of the IAG, including some “dreamlike” developments. As feasible examples, he referred to the use of quantum mechanics for geodesy, as indicated by the establishment of a “Collaborative Research Center“ at Leibniz University Hanover titled “Relativistic Geodesy and Gravimetry with Quantum Sensors”. Professor Schuh also highlighted the rapid development in satellite technology (e.g. the growing interest in swarms of low-cost mini-, micro-, nano-, pico-, and even smaller, satellites). In his final remarks, Professor Schuh imagined a world of low-cost sensors transmitting geodetic data from billions of points, to central units for continuous processing, and even the establishment of a World Geodetic Organisation (WGO), which could implement geodetic infrastructure all over the world where it is really needed.

We wish Harald Schuh all the best for the next four year term as IAG President!

CHRIS RIZOS

## *Prague Proceedings volume (IAG Symposia Series)*

Dear colleagues,

Submission of papers remains open for the IAG Symposia series volume for the IUGG General Assembly 2015, Prague. All presentations (orals and posters) done in the IAG Symposia as well as in the Joint and Union Symposia with the participation of the IAG (see list below) can be followed by an article to be published in the IAG Symposia Series. The deadline for the paper submission has been extended to October 31, 2015.

The Springer Web site is ready to accept your contribution (<http://www.springer.com/series/1345>).

Please note that

- all submissions must be done electronically using the IAG Springer Web site at <http://www.editorialmanager.com/iags/default.aspx> ;
- instructions for authors and templates can also be found at this Web page;
- there is a 6-page limit for regular contributions and an 8-page limit for solicited contributions;
- all submitted manuscripts will go through a standard peer-reviewed process;
- you have the possibility to suggest names of potential reviewers (up to 5);
- accepted papers will be published in a future volume of the IAG Symposia Series available online at <http://www.springer.com/series/1345> and referenced in ISI Web of Knowledge and in Scopus.

The Symposia of the IUGG General Assembly 2015 to be included in these proceedings are:

G01 Reference Frames

G02 Static Gravity Field Models and Observations

G03 Variations of the Gravity Field

G04 Earth Rotation and Geodynamics

G05 GNSS<sup>++</sup> : Emerging Technologies and Applications

G06 Unifying Height Systems

G07 Geohazards Monitoring

G08 Sea-Level Observation and Modelling

JA1 Joint Inversion and Mutually Constrained Inversion of Geophysical Observations (IAGA, IAG, IASPEI)

JA4 Results from SWARM, Ground Based Data and Earlier Satellite Missions - Recognition of Eigil Friis-Christensen (IAGA, IAG, IAMAS)

JA6 Data on the Edge: Preservation and Utilization of Historical Data in the Geosciences (IAGA, IASPEI, IAMAS, IAG, IAHS, IACS)

JG1 Dynamics of the Cryosphere from Geometric and Gravimetric Observations (IAG, IACS)

JG2 Modelling the Atmosphere and Ionosphere by Space Measurements (IAG, IAGA, IAMAS)

JG3 Variations of the Hydrosphere from Satellite Gravity Missions (IAG, IAHS)

JH1 Extreme Hydrological Events (IAHS, IACS, IAG)

JM1 Earth Systems Dynamics, Predictability and Probabilistic Forecasting (IAMAS, IAG, IAGA, IAPSO, IASPEI)

JM4 Data Assimilation in Geophysical Sciences (IAMAS, IAGA, IACS, IASPEI, IAPSO, IAG)

JP4 Satellite Oceanography and Climatology (follow-on U07)

JS3 Geophysical Imaging of Natural Resources (IASPEI, IAG, IAGA, SEG)

JS4 Deformation of the Lithosphere: Integrating Seismology and Geodesy (IASPEI, IAG)  
U7 Climate and Geo-Engineering (Union)  
U8 Geo-Monitoring in the 21st Century (Union)  
U10 Sea Level Change and Variability (Union)

Waiting for your contribution, we thank you for your kind attention.

Sincerely,

Jeff Freymueller  
IAG Symposia Series Editor-in-Chief

Laura Sanchez  
Assistant Editor-in-Chief

## *ILRS News*

### *2015 ILRS Technical Workshop*

ASI will host the 2015 ILRS Technical Workshop in Matera Italy, October 26-30, 2015. The theme of the workshop will be “Network Performance and Future Expectations for ILRS Support of GNSS, Time Transfer and Space Debris Tracking”. More information about the workshop, including registration information, can be found at: [http://geodaf.mt.asi.it/2015\\_ILRS\\_TW/index.html](http://geodaf.mt.asi.it/2015_ILRS_TW/index.html)

### *Third ILRS GNSS Tracking Campaign*

The third SLR GNSS Tracking Campaign started on August 10 and will run through October 16 (10 weeks). The focus of the campaign will be on densifying orbital coverage and improving daylight performance. Satellites included in the campaign are GLONASS-123, -125, -128, -129, -133, and -134, Compass-M3, and Galileo-101, -102, -103, and -104. The results from this campaign will be a topic of discussion at the upcoming ILRS Technical Workshop to be held in Matera.

A report on the second ILRS GNSS Tracking Campaign has been posted on the ILRS website: [http://ilrs.gsfc.nasa.gov/science/ILRS\\_LARGE\\_sg/LARGE\\_activities/LARGE\\_activities.html](http://ilrs.gsfc.nasa.gov/science/ILRS_LARGE_sg/LARGE_activities/LARGE_activities.html)

The ILRS also began laser ranging tracking support of the first two Galileo satellites, Galileo-101 and -102. These satellites were launched on October 21, 2011. The TIGO laser ranging system in Concepcion Chile obtained the first ranges to Galileo-102 on November 29, 2011, shortly after the satellites achieved their operational orbit configuration. Since that time, twelve stations in the ILRS network have tracked the satellites, yielding over 70 passes.

CAREY NOLL

## **Meeting Announcements**

### *Meetings Calendar*

#### *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/>

### DORIS Analysis Working Group Meeting

October 15 – 16, 2015, Greenbelt, Maryland, USA

URL: <http://ids-doris.org/report/meeting-presentations/ids-awg-10-2015.html>

### 9th Coastal Altimetry Workshop

October 18 – 19, 2015, Reston, Virginia, USA

URL: <https://joss.ucar.edu/meetings/2015/9th-coastal-altimetry-workshop>

### OSTST 2015

October 20 – 23, 2015, Reston, Virginia, USA

URL: <https://joss.ucar.edu/meetings/2015/ocean-surface-topography-science-team-meeting>

### 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](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>

### 10th Meeting of the International Committee on Global Navigation Satellite Systems (ICG)

November 1 – 6, 2015, Boulder, Colorado, USA

URL: <http://www1.joss.ucar.edu/>

### 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/>

### International Technical Symposium on Navigation and Timing

November 16 – 17, 2015, Toulouse, France

URL: <http://signav.recherche.enac.fr/index.php/events/international-technical-symposium/symposium-2015/>

### VII SIRGAS School on Reference Systems

November 16 – 17, 2015, Santo Domingo, Dominican Republic

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

### IS-GNSS 2015

November 16 – 19, 2015, Kyoto, Japan

International Symposium on GNSS

URL: <http://www.isgnss2015.org/>

### Symposium SIRGAS 2015

November 18 – 20, 2015, Santo Domingo, Dominican Republic

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

### 4th International VLBI Technology Workshop (IVTW)

November 23 – 26, 2015, Auckland, New Zealand

International Symposium on GNSS

URL: <http://www.irasr.aut.ac.nz/conferences/4th-international-vlbi-Technology-workshop-ivtw>

### 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/>

### United Nations International Meeting on Global Navigation Satellite Systems

December 14 – 18, 2015, Vienna, Austria

URL: [http://www.unoosa.org/oosa/events/data/2015/2015\\_united\\_nations\\_international\\_meeting\\_on\\_gnss.html](http://www.unoosa.org/oosa/events/data/2015/2015_united_nations_international_meeting_on_gnss.html)

### ION Precise Time and Time Interval Meeting (PTTI)

January 25 – 27, 2016, Monterey, California, USA

URL: <http://www.ion.org/ptti/>

### IGS Workshop

February 15 – 19, 2016, Sydney, Australia

URL: <http://kb.igs.org/hc/en-us/articles/205944657-IGS-Workshop-2016-Information>

### Munich Satellite Navigation Summit

March 1 – 3, 2016, Munich, Germany

URL: <http://www.munich-satellite-navigation-summit.org>

### 9th IVS General Meeting

March 13 – 17, 2016, Ekudeni (Johannesburg), South Africa

URL: <http://ivs2016.hartrao.ac.za/>

### JISDM 2016

March 30 – April 1, 2016, Vienna, Austria

3rd Joint International Symposium on Deformation Monitoring

URL: <http://www.jisd2016.org/>

### TG-SMM 2016

April 12 – 15, 2016, Saint Petersburg, Russia

4th IAG Symposium “Terrestrial gravimetry. Static and mobile measurements”

URL: <http://www.elektropribor.spb.ru/tgsmm2016/eindex>

### EGU General Assembly 2016

April 17 – 22, 2016, Vienna, Austria

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

### ICEE-PDRP 2016

April 24 – 26, 2016, Bhaktapur, Nepal

International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning

URL: <http://icee-pdrp2016.com>



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/>

ESA Living Planet Symposium 2016 and 6<sup>th</sup> GOCE User Workshop

May 9 – 13, 2016, Prague, Czech Republic

URL: <http://lps16.esa.int/>

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/>

International Symposium on Geodesy and Geodynamics (ISGG2016)

July 22 – 26, 2016, Tianjin, China

URL: <http://isgg2016.csp.escience.cn>

41st COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

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

AOGS 13<sup>th</sup> Annual Meeting

July 31 – August 5, 2016, Beijing, China

URL: <http://www.asiaoceania.org/aogs2016/>

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/>

IAG / IASPEI Scientific Assembly

July 30 – August 4, 2017, Kobe, Japan

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



### *Dr. Sc. Suriya K. Tatevian (1937 – 2015)*



On July 16, 2015, Dr. Suriya Kerimovna Tatevian, Institute of Astronomy of the Russian Academy of Sciences (INASAN), passed away due to a heart attack in the middle of preparations for the 2015 APSG International Symposium in Moscow. She was 78 years old.

Suriya Tatevian was born on January 22, 1937 in Baku (Azerbaijan Republic, USSR) in the family of the well-known Soviet rocket scientist Kerim Kerimov. From her early age Suriya was involved in the atmosphere of space research and exploration. She was a talented researcher and highly respected project coordinator since the early phase of modern space geodesy. After finishing her studies in 1960 at the Moscow State Geodetic University (MIIGAiK), Faculty of Astro-Geodesy, just after some geodetic field expedition activities in Siberia, she started in 1961 her professional career as research assistant at the Astronomical Council of the USSR Academy of Sciences (since 1991 Institute of Astronomy of the Russian Academy of Sciences, INASAN). In 1968 she received her Ph.D. in technical sciences (satellite geodesy, celestial mechanics) at the MIIGAiK. Years later she became head of the INASAN Department of Space Geodesy, a position she held until her death. For her

activity she received the Soviet Medal “For Labour Valour”.

Suriya Tatevian’s particular scientific and organizational contributions and achievements for the field of space geodesy are closely connected to the SLR ranging data and GPS/GLONASS/DORIS microwave tracking data acquisition, the analysis of collected network data by various computational techniques and the application of analysis results for Earth orientation, reference frame and regional geodynamics studies.

For more than a decade, until 1991, Suriya Tatevian was chief officer of the Section Satellite Tracking for Geodesy and Astronomy in the frame of the East-European INTERCOSMOS program. In the 1980s she strongly supported the IAG/COSPAR Commission on International Coordination of Space Techniques for Geodesy and Geodynamics (CSTG) as a member of the Executive Committee, and she served in the IAU/IUGG MERIT and COTES Joint Working Group on the Rotation of the Earth.

Later, approaching the turn of the century, Suriya Tatevian was strongly supporting the closer integration of the Russian SLR stations into the global network of the ILRS, was engaged in the realization of Russian geosatellite missions (e.g. Etalon) and helped foreign partners to establish successful working relations with the Russian space industry (e.g. for GFZ-1) and the ZUP mission operation center. Her untiring support and coordinating role in modernizing or setting up new satellite tracking stations in the CIS states with foreign partners (e.g. Kitab) and her persuading and valuable contributions for establishing regional geodynamic networks in these states in international partnership will remain unforgotten.

Until her death Suriya Tatevian was closely involved in IAG’s International GPS/GNSS Service (IGS) and the International DORIS Service (IDS) activities by representing the INASAN Analysis Centers in these services. She was member of the International Academy of Astronautics (IAA) and member of the Scientific Boards of the WEGENER (Working Group of European Geoscientists for the Establishment of Networks for Earth-Science Research) and ASPG (Asian-Pacific Space Geodynamics) programs. The delegates to the APSG 2015 meeting dedicated the products and deliberations of the meeting in memory of Dr. Suriya Tatevian.

Suriya was a very honest person, a highly qualified scientist and group leader, respected for her openness, her everlasting cooperativeness, her unrelenting energy and loved for her calm personality and always friendly behavior. She had a rich family life and was keeping close social contacts with many friends and colleagues.

We all, her family and friends and all colleagues around the world will truly miss Suriya Kerimovna. We keep our imperishable memory to the great scientist and likable person.

CHRISTOPH REIGBER and VLADIMIR KAFTAN