



**International Association
of Geodesy**

Newsletter

June 2019

Editor: Gyula Tóth

IAG Communication and Outreach Branch
Department of Geodesy and Surveying
Budapest University of Technology and Economics
H-1521 Budapest, Hungary

Information Service of the International Association of Geodesy

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

newsletter@iag-aig.org

Contents

General Announcements	3
27th IUGG General Assembly, Montreal, Canada, July 8 – 18, 2019	3
Meeting Announcements	5
Meetings Calendar	5
IAG Sponsored Meetings	5
27th IUGG General Assembly	5
Centennial International Cooperation in Earth and Space Sciences	5
Ninth Session of UN-GGIM.....	5
Workshop for the Implementation of the GGRF in Latin America.....	5
Munich Remote Sensing Symposium 2019 (MRSS19).....	5
CODATA 2019.....	5
DORIS Analysis Working Group meeting	5
ILRS Analysis Standing Committee (ASC) meeting	5
5th IAG Symposium on Terrestrial Gravimetry: Static and Mobile Measurements	5
GGOS/IERS Unified Analysis Workshop.....	5
Journées 2019: Astrometry, Earth Rotation and Reference.....	5
BIPM Workshop on Advanced Time and Frequency Transfer.....	5
2019 ILRS Technical Workshop.....	6
GGOS Days 2019	6
SIRGAS Symposium 2019.....	6
11th IVS General Meeting.....	6
IGS Workshop "IGS 2020: Science from Earth to Space"	6
43rd COSPAR Scientific Assembly.....	6
22nd meeting of the Consultative Committee for Time and Frequency (CCTF).....	6
IAG Related Meetings	6
AOGS 16 th Annual Meeting.....	6
Earth & Geo Science-2019	6
First International School on "Geoid Modelling, Gravity Inversion and its Applications"	6
4th Symposium of the Committee on Space Research (COSPAR)	6
Reports	6
International Scientific Societies meet in Hannover for the Day of Geodesy.....	7

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

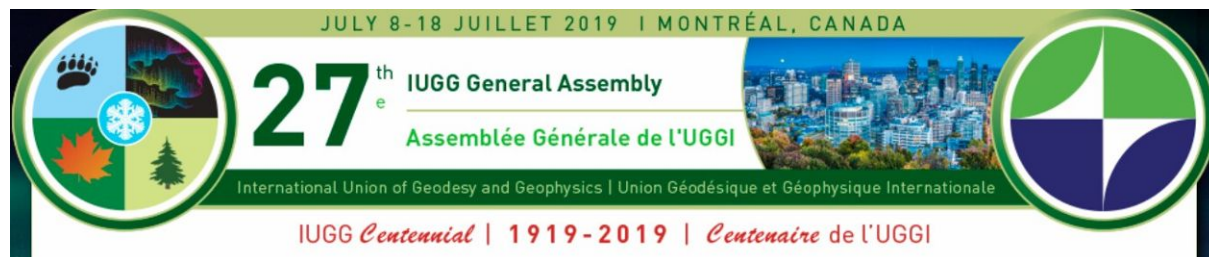
It is an open forum and contributors are welcome to send material (preferably in electronic form) to the IAG COB (newsletter@iag-aig.org). These contributions should complement information sent by IAG officials or by IAG symposia organizers (reports and announcements). The *IAG Newsletter* is published 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

27th IUGG General Assembly, Montreal, Canada, July 8 – 18, 2019



The International Union of Geodesy and Geophysics (IUGG) holds its 27th General Assembly from July 8 to 18, 2019 in Montreal, Canada. The general assembly theme is the celebration of the centennial of the IUGG establishment in Brussels, Belgium, in 1919.

IUGG holds its General Assemblies every four years. Traditionally, the eight constituent associations of IUGG (Cryospheric Sciences, IACS; Geodesy, IAG; Geomagnetism and Aeronomy, IAGA; Hydrological Sciences, IAHS; Meteorology and Atmospheric Sciences, IAMAS; Physical Sciences of the Ocean, IAPSO; Seismology and Physics of the Earth's Interior, IASPEI; and Volcanology and Chemistry of the Earth's Interior, IAVCEI) arrange their General Assemblies in parallel with the IUGG. This enables to hold joint inter-association symposia besides the specific association symposia and a greater involvement in the IUGG symposia.

There will be nine Union Symposia organized by IUGG and each of the associations in cooperation with the IUGG Commissions (Climatic and Environmental Changes, CCEC; Mathematical Geophysics, CMG; Geophysical Risk and Sustainability, GRC; Study of the Earth's Deep Interior, SEDI; Data and Information, UCDI; Planetary Sciences, UCPS), the IUGG Working Group on History (WGH), and the Global Geodetic Observing System (GGOS).

- U1 - Achieving Sustainable Development: The Role for Earth Sciences (IACS, CCEC),
- U2 - Georisk Reduction: Science, Resources, and Governmental Action (IAVCEI, GRC),
- U3 - Mathematics of Planet Earth: The Science of Data (IASPEI, CMG),
- U4 - Data-driven Science for Earth and Space Exploration (IAPSO, UCDI),
- U5 - New Discoveries in Earth Deep Interior (IAGA, SEDI),
- U6 - Recent Advances and Discoveries in Planetary Science and Comparative Planetology (IAMAS, UCPS),
- U7 - Centennial of the International Cooperation in Earth Sciences (IAHS, WGH),
- U8 - Earth and Space Observations (IAG, GGOS),
- U9 - Celebrating Early Career Scientists (IUGG).

In addition, there will be nine Union Lectures given in three special sessions by representatives of the IUGG and associations:

- David Grimes (IUGG): Earth Sciences as the Underlying Pillars to Meet Societal Challenges in the next Century;
- Waleed Abdalati (IACS): Exploring and Understanding Earth from Space: The Power of Perspective;
- Kosuke Heki (IAG): No geodesy, no geophysics;
- Lisa Tauxe (IAGA): Hunting the magnetic field;
- Veena Srinivasan (IAHS): Understanding and transforming water conflicts in the Anthropocene;
- Ed Hawkins (IAMAS): The value of rescuing millions of lost historical weather observations using volunteer citizen scientists;
- Karen Kohfeld (IAPSO): The Ocean's Role in Atmospheric Carbon Dioxide Changes During Ice Age Cycles;
- Vera Schlindwein (IASPEI): Singing seismograms – harmonic tremor signals in seismological records;
- Paolo Papele (IAVCEI): Volcanic giants - what we know, what we think we know, what we can't know about cataclysmic super-eruptions.

The joint symposia are always led by an association with co-conveners from other associations. IAG has the lead of the following Inter-Association Symposia:

- JG01 - Interactions of Solid Earth, Ice Sheets and Oceans;
- JG02 - Theory and Methods of Potential Fields;
- JG03 - Near-Real Time Monitoring of Regional to Global Scale Water Mass Changes;
- JG04 - Geodesy for Atmospheric and Hydrospheric Climate Research;
- JG05 - Remote Sensing and Modelling of the Atmosphere;
- JG06 - Monitoring Sea Level Changes by Satellite and In-Situ Measurements;
- JG07 - Monitoring, Imaging and Mapping of Volcanic Belts;
- JG08 - Earth Systems Literacy: Geophysics in K-16 Class Rooms, Outreach Projects, and Citizen Science Research Projects;

and IAG is sponsoring (with IAG co-conveners) the following Inter-Association Symposia led by other associations:

- JA01 - Geophysical Constraints on the Earth's Core and Its Relation to the Mantle;
- JA02 - Geophysical Data Assimilation;
- JA03 - Geophysical Records of Tectonic and Geodynamic Processes;
- JA06 - Space Weather Throughout the Solar System: Bringing Data and Models Together;
- JA07 - Geoscience Data Licensing, Production, Publication, and Citation (IAGA);
- JA08 - Probing the Earth's Lithosphere and Its Dynamics Using Geophysical Modeling;
- JH02 - Climate and Hydrological Services: Bridging from Science to Practice and Adaptation;
- JP01 - Tides of the Oceans, Atmosphere, Solid Earth, Lakes and Planets;
- JS01 - Cryoseismology;
- JS02 - Early Warning Systems for Geohazards;
- JS03 - Subduction Zone Deformation and Structure: Tracking the Sea Floor in Motion;
- JS04 - Seismo - Geodesy;
- JS05 - Probabilistic & Statistical Approaches in Geosciences;
- JS06 - Old Data for New Knowledge: Preservation and Utilization of Historical Data in the Geosciences;
- JS07 - Integrated Geophysical Programs for Earth Systems Monitoring;
- JV03 - Strain Localisation and Seismic Hazards.

The IAG specific symposia are the main issue of the IAG General Assembly:

- G01 - Reference Systems and Frames;
- G02 - Static Gravity Field and Height Systems;
- G03 - Time-variable Gravity Field;
- G04 - Earth Rotation and Geodynamics;
- G05 - Multi-signal Positioning, Remote Sensing and Applications;
- G06 - Monitoring and Understanding the Dynamic Earth with Geodetic Observations.

For all details of the symposia descriptions and the program, please visit the IUGG2019 Homepage (<http://iugg2019montreal.com/>).

IAG invites all geodesists to participate in the General Assembly 2019 and to present their work in one of the symposia. We look forward to seeing you in Montreal!

HERMANN DREWES
IAG Secretary General

Meeting Announcements

Meetings Calendar

IAG Sponsored Meetings

27th IUGG General Assembly

July 8 – 19, 2019, Montreal, Canada

URL: <http://www.iugg.org/assemblies/>

Centennial International Cooperation in Earth and Space Sciences

July 29, 2019, Paris, France

URL: <http://100.iugg.org/events.php>

Ninth Session of UN-GGIM

August 7 – 9, 2019, New York, USA

URL: <http://ggim.un.org/meetings/GGIM-committee/9th-Session/>

Workshop for the Implementation of the GGRF in Latin America

September 16 – 20, 2019, Buenos Aires, Argentina

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

Munich Remote Sensing Symposium 2019 (MRSS19)

September 18 – 20, 2019, Munich, Germany

URL: www.pf.bgu.tum.de/isprs/mrss19/index.html

CODATA 2019

September 19 – 20, 2019, Beijing, China

Towards next-generation data-driven science: Policies, practices and platforms

URL: https://conference.codata.org/CODATA_2019/

DORIS Analysis Working Group meeting

September 30 – October 1, 2019, Paris, France

URL: <https://ids-doris.org/ids/reports-mails/meeting-presentations/ids-awg-09-2019.html>

ILRS Analysis Standing Committee (ASC) meeting

October 1, 2019, Paris, France

URL: <https://ilrs.cddis.eosdis.nasa.gov/science/awg/awgActivities/index.html>

5th IAG Symposium on Terrestrial Gravimetry: Static and Mobile Measurements

October 1 – 4, 2019, Saint Petersburg, Russia

URL: <http://www.elektroribor.spb.ru/tgsmm2019/eindex>

GGOS/IERS Unified Analysis Workshop

October 2 – 4, 2019, Paris, France

URL: <https://www.iers.org/IERS/EN/NewsMeetings/ForthcomingMeetings/forthcoming.html>

Journées 2019: Astrometry, Earth Rotation and Reference

October 7 – 9, 2019, Paris, France

URL: <https://synte.obspm.fr/astro/journees2019/>

BIPM Workshop on Advanced Time and Frequency Transfer

October 10, 2019, Sèvres, France

URL: <https://www.bipm.org/en/conference-centre/bipm-workshops/advanced-time/>

2019 ILRS Technical Workshop

October 21 – 25, 2019, Stuttgart, Germany

URL: <http://www.dlr.de/ilrs2019>

GGOS Days 2019

November 11 – 14, 2019, Rio de Janeiro, Brazil

URL: <https://iag.dgfi.tum.de/en/meetings-calendar/>

SIRGAS Symposium 2019

November 11 – 14, 2019, Rio de Janeiro, Brazil

URL: <https://iag.dgfi.tum.de/en/meetings-calendar/>

11th IVS General Meeting

March 22 – 28, 2020, Annapolis, MD, USA

URL: <https://www.iers.org/IERS/EN/NewsMeetings/ForthcomingMeetings/forthcoming.html>

IGS Workshop "IGS 2020: Science from Earth to Space"

August 10 – 14, 2020, Boulder, CO, USA

URL: <https://www.iers.org/IERS/EN/NewsMeetings/ForthcomingMeetings/forthcoming.html>

43rd COSPAR Scientific Assembly

August 15 – 23, 2020, Sydney, Australia

URL: <http://www.cospar2020.org/>

22nd meeting of the Consultative Committee for Time and Frequency (CCTF)

October 26 – 30, 2020, Sèvres, France

URL: <https://www.iers.org/IERS/EN/NewsMeetings/ForthcomingMeetings/forthcoming.html>

IAG Related Meetings

AOGS 16th Annual Meeting

July 28 – August 2, 2019, Singapore, Singapore

URL: http://www.asiaoceania.org/society/public.asp?view=up_coming

Earth & Geo Science-2019

August 12-13, 2019, Prague, Czech Republic

URL: <https://scientificfederation.com/earth-science-2019/>

First International School on "Geoid Modelling, Gravity Inversion and its Applications"

September 9-13, 2019, Gävle, Sweden

URL: <https://www.hig.se/4.6c77c68166435adf0b3d060.html>

4th Symposium of the Committee on Space Research (COSPAR)

November 4-8, 2019, Herzliya, Israel

URL: <http://www.cospar2019.org/>

Reports

International Scientific Societies meet in Hannover for the Day of Geodesy

During the *Day of the Geodesy* on May 24, 2019, the leaders of four international scientific societies in the field of geodesy and geoinformatics met in Hannover for talks on possible collaboration. Prof. Monika Sester (Leibniz University Hannover) represented the International Cartographic Association (ICA) as its Vice President; the other three societies were represented by their presidents: Prof. Harald Schuh (German Research Centre for Geosciences GFZ in Potsdam) participated in the meeting for the International Association of Geodesy (IAG), Prof. Rudolf Staiger (University of Bochum) for the International Federation of Surveyors (FIG) and Prof. Christian Heipke (Leibniz University Hannover) for the International Society for Photogrammetry and Remote Sensing (ISPRS). What is remarkable about this meeting is that all four representatives come from Germany; an unprecedented constellation in the, for some of the societies, more than 100-year history.

The morning began at the Leibniz University with presentations from each international organization to an interested professional audience. The four representatives then met for a 45-minute public panel discussion in the city centre, in which they highlighted the role of geodesy and geoinformatics for society at large. In addition to the classical task of surveying and mapping of the earth's surface and documenting the legal boundaries, the main topic was the role of geodesy in the age of digitization and climate change, e.g. for mobility and autonomous driving, for sustainable urban and rural development, for earth observation and natural hazards, and also in robotics and navigation. Without the often less visible geodetic contributions, reliable data would not be available in the required quality, neither for sea level rise nor for high-precision positioning in real-time or in disaster management.

With the use of the full range of their research, the geodesists also expect to make significant contributions to achieving the United Nations' Sustainable Development Goals (SDGs). According to estimates by the World Bank, approximately just 30% of land is registered worldwide, which is why experts in cadastre and land management are in great demand.

In addition to this, all speakers emphasized the broad field of activity and the fascination of geodesy - a field in which full employment is virtually guaranteed in most countries today. With this background, the subject of geodesy and geoinformatics is highly recommended to prospective students.

The representatives of the scientific societies later met for an internal exchange of ideas, in which possibilities for closer cooperation were discussed. An improved exchange of information between the societies, and a common representation at, and organisation of, scientific and professional meetings and events for outreach and further education were agreed upon, especially in areas where overlapping interests exist. Cooperation is also to be intensified in areas relating to geodesy and geoinformatics in general, such as education and recruitment, scientific publications, and the visibility of the subject in politics, administration and the society at large, on a national and international level.

Further information about the scientific societies can be found here:

FIG:	International Federation of Surveyors	www.fig.net/
IAG:	International Association of Geodesy	www.iag-aig.org/
ICA:	International Cartographic Association	icaci.org/
ISPRS:	International Society for Photogrammetry and Remote Sensing	www.isprs.org/



The leading representatives of the four geodesic scientific societies, all of which are currently from Germany, in front of the Leibniz University Hannover booth at the Day of Geodesy: (from left) Prof. Rudolf Staiger (President FIG), Prof. Monika Sester (Vice President ICA), Prof. Harald Schuh (President IAG) and Prof. Christian Heipke (President ISPRS).

Authors: Ch. Heipke, H. Schuh, M. Sester, R. Staiger

Submitted by H. Schuh