



## **International Association of Geodesy (IAG) Annual Report 2015**

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

### **INTRODUCTION**

The fundamentals of geodesy are the measurement and representation of the geometry, gravity field and spatial orientation of the Earth including their temporal variations, i.e. crustal deformation, mass displacements and variations of Earth rotation. The mission of the IAG is the advancement of geodesy by furthering geodetic theory through research and teaching, collecting, analysing, modelling and interpreting observational data, stimulating technological development, and providing consistent, time-dependent parameters of the Earth's geometry and gravity field for global change research.

The IAG is structured in four Commissions, the Inter-Commission Committee on Theory (ICCT), thirteen International Scientific Services, the Global Geodetic Observing System (GGOS), and the Communication and Outreach Branch (COB). The Commissions are divided into Sub-commissions, Study Groups and Working Groups. The ICCT investigates geodetic science problems in close cooperation with the Commissions. The Services generate scientific products by means of Operations, Data and Analysis Centres. One of the roles of GGOS is the coordination of the different IAG components, relating in particular to the maintenance of the global reference frame for measuring and consistently interpreting key global change processes, and to promote its use to the scientific community, policy makers and the public. The COB provides communication, public information and outreach links, in particular via the IAG Website and the monthly Newsletters.

IAG's administration is supervised by the Council and conducted by the Executive Committee, the Bureau and the Office. The Council is composed by the delegates appointed by the national adhering bodies; the Bureau comprises the IAG President, Vice-President and Secretary General; the Executive Committee consists of the Bureau and other members elected by the Council; and the Office assists the Secretary General. The detailed programme of the IAG is published in the quadrennial Geodesist's Handbook, and reports are published in the bi-annual IAG Reports (Travaux de l'AIG).

### **ADMINISTRATION**

#### **IAG Council**

The IAG Council meets regularly at the IUGG General Assemblies, so in Prague, Czech Republic, on June 24 and 30, 2015. Main topics were the election of the members of the IAG Executive Committee (done by e-mail voting before the Assembly), the periodic (every eight years) review of the IAG Statutes and Bylaws, the preparation of the General Assembly 2015, and the decision on the venue of the next IAG Scientific Assembly 2017, which was assigned to Kobe, Japan, as a joint Assembly with the International Association of Seismology and Physics of the Earth's Interior (IASPEI).

#### **IAG Executive Committee (EC)**

The EC 2011-2015 met three times during the General Assembly in Prague, Czech Republic (June 23, 26 and 29, 2015), and the EC 2015-2019 met in Prague (July 2, 2015) and in San Francisco, CA/USA

(December 12, 2015). Important topics were the assessment of the IAG Services, the activity reports of all the EC members and the editors of the Journal of Geodesy and the IAG Series (published by Springer), the preparation of the Symposia at the General Assembly, and the new structure for 2015-2019. The meeting summaries are regularly published in the IAG Website ([www.iag-aig.org](http://www.iag-aig.org)).

## **IAG Bureau**

The IAG Bureau met before each of the EC meetings and held monthly teleconferences to facilitate day-to-day decisions. It decided on 65 travel award applications of young scientists and granted 59.

## **IAG Office**

Main activity of the IAG Office was the organisation of the IAG General Assembly held together with the IUGG General Assembly, and the handling of the IAG budget. EC, Bureau and Council meetings were organised; minutes were written for internal use, the IAG Homepage and the Journal of Geodesy. The individual IAG membership (actually 216 paid-up and student members) was managed.

## **ACTIVITIES**

### **Commissions, Inter-Commission Committee, and Services**

The four IAG Commissions (Reference Frames, Gravity Field, Earth Rotation and Geodynamics, Positioning and Applications), the Inter-Commission Committee on Theory (ICCT), and the thirteen Services maintain their individual Webpages (all accessible via the IAG Homepage). Several Services and sub-components (Sub-Commissions, Working and Study Groups) held administrative meetings (Coordinating, Directing or Governing Board), and organised symposia and workshops (see below).

### **Global Geodetic Observing System (GGOS)**

The GGOS is implementing its new structure and updated the Terms of Reference accordingly. The vision is advancing our understanding of the dynamic Earth System by quantifying our planet's changes in space and time. GGOS works with the IAG Services and Commissions to comply its mission. GGOS is representing the IAG in the Group on Earth Observation (GEO) and prepared a draft for the establishment of the United Nation's Global Geodetic Reference Frame (GGRF).

### **Communication and Outreach Branch (COB)**

Main activities of the COB were the publication of the monthly Newsletters (online and in the Journal of Geodesy), and the maintenance of the IAG Homepage. The IAG Newsletter is sent to the IAG officers and individual members, to the Presidents and Secretaries General of the IUGG and its Associations, and to the members of the Joint Board of Geospatial Information Societies (JBGIS).

### **Important Meetings of IAG Components and IAG Sponsored Meetings in 2015**

- Eighth International VLBI Service for Geodesy and Astrometry (IVS) Technical Operations Workshop (TOW 2015), Westford, MA, USA, 4-7 May 2015.
- 8th Workshop on GNSS Reflectometry (GNSS+R 2015), Potsdam, Germany, 11-13 May 2015.
- 22nd Meeting of the European VLBI Group for Geodesy and Astrometry (EVGA) Ponta Delgada, Azores, Portugal, 17-21 May 2015.
- Latin American Reference System (SIRGAS) Workshop on Vertical Reference Frames, Curitiba, Brazil, 18-22 May 2015.
- GIA Modeling 2015, Fairbanks, Alaska, May 26-29, 2015.
- European Reference Frame (EUREF) Symposium, Leipzig, Germany, 3-5 June 2015.
- IAG General Assembly together with the XXVI IUGG General Assembly, Prague, Czech Republic, 22 June – 02 July 2015.

- International DORIS Service (IDS) Analysis Working Group Meeting, Greenbelt, MD, USA, 15-16 October 2015.
- International Laser Ranging Service (ILRS) Analysis Working Group Meeting, Matera, Italy, 24 October 2015.
- International Laser Ranging Service (ILRS) Technical Workshop 2015, Matera, Italy, 26-30 October 2015.
- Latin American Reference System (SIRGAS) Symposium, Santo Domingo, Dominican Republic, 18-20 November 2015.
- 9th International Symposium on Mobile Mapping Technology (MMT2015), Sydney, Australia, 9-11 December 2015.

### **Schools organised by the IAG and sponsored by IUGG**

- VII SIRGAS School on Reference Systems, Santo Domingo, Dominican Republic, 16-17 November 2015.

### **Cooperation with other Organisations**

IAG maintains close cooperation with several organisations outside IUGG: Advisory Board on the Law of the Sea (ABLOS, presently with IAG presidency), Group on Earth Observation (GEO), ICSU Commission on Space Research (COSPAR, Sub-commission B2 and PSD), International Astronomic Union (IAU, Commission A2), International Standards Organisation (ISO, TC211 Geographic Information / Geomatics), Joint Board of Geospatial Information Societies (JBGIS), United Nations Initiative on Global Information Management (UN-GGIM), United Nations Offices for Outer Space Affairs (UNOOSA, with Space-based Information for Disaster Management and Emergency Response, UN-SPIDER, and International Committee on Global Navigation Satellite Systems, ICG).

### **Publications**

The main publications in 2015 were the monthly issues of the Journal of Geodesy, the IAG Symposia Series (Vols. 141 “Gravity, Geoid and Height Systems and 142 “VIII Hotine-Marussi Symposium on Mathematical Geodesy”) and the IAG Reports Vol. 39 (Travaux de l’AIG 2011-2015).

### **Awards, Anniversaries, Obituaries**

Four Awards were granted at the IUGG General Assembly 2015: (1) The Levallois Medal for distinguished service to IAG and the science of geodesy in general to Reiner Rummel, Germany, (2) the Guy Bomford Prize for outstanding contributions to geodetic studies to Yoshiyuki Tanaka, Japan, (3) the Young Authors Award for the best paper in 2013 to Krzysztof Sońnica, and (4) in 2014 to Álvaro Santamaría, France. Three obituaries were written for former IAG officers and associates.

### **PLANNED FUTURE ACTIVITIES**

In 2016, the new structure of IAG Commissions and Inter-commission Committee will be set up and be implemented by projects, study groups and working groups. The IAG Scientific Assembly 2017 will be organised together with IASPEI in Kobe, Japan. An IAG strategy plan will be discussed and designed, and the assessment of the IAG Services will be continued and may eventually lead to a restructuring. All GGOS sub-components will fully be implemented.

Submitted by  
Hermann Drewes, IAG Secretary General



Fig. 1: Participants of the IAG Opening Session, IUGG General Assembly, Prague, Czech Republic, 25 June 2015



Fig. 2: Scholars of the SIRGAS School on Reference Systems, Santo Domingo, Dominican Republic, 16-17 November 2015