IAG Newsletter

Gyula Tóth¹

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Each IAG Newsletter includes several of the following topics:

- I. General information
- II. Reports of IAG symposia
- III. Reports by commissions, special commissions or study groups
- IV. Symposia announcements
- V. Book reviews
- VI. Fast bibliography

✉ Gyula Tóth
toth.gyula@emk.bme.hu
<http://www.iag-aig.org/>

¹ IAG Communication and Outreach Branch, Department of Geodesy and Surveying, Budapest University of Technology and Economics, 1521 Budapest, Hungary

Reports

IAG Scientific Assembly 28.6.–2.7, 2021

introduction of the poster by the author, and a time slot reserved for questions and discussions.

The Scientific Assembly of the International Association of Geodesy (IAG) was held in Beijing, China on June 28–July 2, 2021. Due to the COVID-19 pandemic, the Assembly was organized as a virtual conference. The main local organizer was the Chinese Society for Geodesy, Photogrammetry and Cartography (CSGPC) with more than 20 co-organizers comprising universities and research institutes, including the Chinese Academy of Surveying and Mapping.

The theme of the Assembly was “Geodesy for a Sustainable Earth” with a total of seven symposia. The topics of these were

1. Reference Frames,
- 2a. Earth’s Static Gravity Field,
- 2b. Earth’s Time-variable Gravity Field,
3. Earth Rotation and Geodynamics,
4. Positioning and applications,
5. Global Geodetic Observing System (GGOS), and
6. The ICC symposium with three Inter-Commission Committees and the IAG Project.

These themes reflect the current structure of IAG. During 5 days, a total of 36 sessions were organised under the themes.

An unknown factor in the planning was the effect of the COVID-19 pandemic, and how much that would affect on the number of participants and the number of abstracts. The Assembly was organised as a virtual meeting, first time in the history of IAG Symposia or Assemblies.

A total of 615 abstracts were submitted which was much more than originally expected. Due to the limited time of sessions each day (less than 4.5 h), the length of the oral talks was decided to restrict to 5 min. In each session, there was reserved about half of the time for questions and discussions, which was meant to mitigate the lack of personal contacts. Similarly, the poster sessions contained a short

A total of 255 orals were presented which is about 42% of total abstracts submitted. The rest were given as posters which were available for the participants during the whole Assembly. There were three parallel oral sessions and one poster session running each day. All sessions were recorded, and the recordings plus the posters are available also after the Assembly on the web site.

The number of participants was equally impressive. A total of 1269 registered attendees is an all-time record in the history of IAG meetings, as is the number of presentations. Of these, 435 are students and early-career scientists which is about 1/3 of all participants. This is a very good number, and we have to continue efforts also in the future meetings to attract young people to participate the IAG events.

The most popular were Symposia 4 and 5, with a total of 167 and 109 presentations, respectively. On the individual sessions, most popular were Session 4.1 Geodetic Remote Sensing, Session 4.3 Techniques and Applications in High Precision GNSS and Session 5.7 Advances in Geodesy for Geohazard Monitoring and Disaster Risk Reduction. These reflect the general trend in several presentations, with topics on emerging observing techniques, climate-related topics and geohazards in addition to the traditional geodetic topics on reference frames, gravity and deformations.

There will be also a very remarkable benefit IAG that is offering to the meeting participants. The authors of accepted presentations are welcome to offer the full paper in the IAG renowned Symposia Series published by Springer. This series is open access, fully peer-reviewed, and the papers will be on-line shortly after the paper is accepted. The open access fees for the IAG Scientific Assembly participants are covered by the IAG; thus, the first author shall be the participant of the Assembly. The IAG Symposia Series is indexed in Web of Science (book by book) and in Scopus (as a series). Deadline to submit the manuscript via Springer electronic submission system is September 15, 2021.

The technical arrangements of the Assembly went extremely well, thanks to the local organizers and skilful technical personnel in Beijing. Sincere thanks to all of them who made this possible. Also many thanks to the Symposium organizers, session conveners and chairpersons for the smooth guiding of the program in spite of these exceptional conditions. We're looking forward to the IAG and IUGG General Assembly 2023 in Berlin, hopefully back to the regular format.

Markku Poutanen
 IAG Secretary General

Observatory of Mizusawa (now a part of National Astronomical Observatory of Japan) in 1967 and earned PhD from Graduate University for Advanced Studies in 2000. He has been working on earth tide in a variety of approaches including instrumentation, observation, data analyses and development of software packages. He spent a lot of time in remote fields such as Arctic (Svalbard), Antarctic (Syowa Base) and southeast Alaska for gravity measurements. He also served as the chair of local organizing committee of the International Earth Tide Symposium held in Mizusawa in September 2000 and played an important role in the Global

A screenshot of opening ceremonies of the IAG Scientific Assembly 2021. IAG President Zuheir Altamimi is giving his opening speech

Obituary

Tadahiro Sato (1945–2021)

Prof. Tadahiro Sato passed away by cancer on May 23, 2021, near Mizusawa, Iwate, Japan, at the age of 76. He graduated the Iwate University and joined the International Latitude

Geodynamics Project (GGP). He received the Paul Melchior Medal (formerly called the Earth Tides Commission Medal) in 2008 at the 16th International Symposium on Earth Tides, Jena, Germany.

Selected publications

(Observing systems)

Harrison, J. C., and **T. Sato**, 1984. Implementation of electrostatic feedback with a LaCoste-Romberg model G gravity meter, *J. Geophys. Res.*, 89, 7957–7961.

(Ocean tidal loading software GOTIC)

Sato T. and H. Hanada, 1984, A Program for the Computation of Oceanic Tidal Loading Effects "GOTIC", *Publ. Int. Latit. Obs. Mizusawa*, 10, 29–47.

Matsumoto, K., **T. Sato**, T. Takanezawa, and M. Ooe, 2001, GOTIC2: A Program for Computation of Oceanic Tidal Loading Effect, *J. Geod. Soc. Japan*, 47, 243–248.

(Fluid core resonance)

Sato, T., 1991, Fluid core resonance measured by quartz tube extensometers at the Esashi Earth Tides station, *Proc. 11th Int. Sympos. Earth Tides*, 573–582.

Sato, T., Y. Tamura, K. Matsumoto, Y. Imanishi, and H. McQueen 2004, Parameters of the fluid core resonance inferred from superconducting gravimeter data, *J. Geodynamics*, 38(3):375–389, DOI: <https://doi.org/10.1016/j.jog.2004.07.016>.

(Arctic/Antarctic)

Sato, T., M. Ooe, K. Nawa, K. Shibuya, Y. Tamura and K. Kaminuma, 1997, Long-period tides observed with a superconducting gravimeter at Syowa Station, Antarctica and their Implication to Global Ocean Tide Modeling, *Phys. Earth and Planetary Int.*, 103, 39–53.

Sato, T., J. Okuno, J. Hinderer, D. S. Macmillan, H. P. Plag, O. Francis, R. Falk, and Y. Fukuda, 2006, A geophysical interpretation of the secular displacement and gravity rates observed at Ny-Ålesund, Svalbard in the Arctic—Effects of post-glacial rebound and present-day ice melting, *Geophys. J. Int.* 165, 729–743, DOI: <https://doi.org/10.1111/j.1365-246X.2006.02992.x>.

(Alaska)

Sato, T., C. F. Larsen, S. Miura and Y. Ohta, 2010, Reevaluation of the viscoelastic and elastic responses to the past and

present-day ice changes in Southeast Alaska, *Tectonophysics* 511, 79–88, DOI: <https://doi.org/10.1016/j.tecto.2010.05.009>.

Sato, T., S. Miura, W. Sun, T. Sugano, J. T. Freymueller, C. Larsen, Y. Ohta, H. Fujimoto, D. Inazu, and R. J. Motyka, 2012, Gravity and uplift rates observed in southeast Alaska and their comparison with GIA model predictions, *J. Geophys. Res.* 117, 1401, DOI: <https://doi.org/10.1029/2011JB008485>.

Kosuke Heki & Yoshiaki Tamura

Installation of a superconducting gravimeter in 2004 October in an observing tunnel of the Kamioka station, central Japan. Tadahiro Sato (front, left), Séverine Rosat (front, right), Yoshiaki Tamura (back, left), Hiroshi Ikeda (back, center), Yoichi Fukuda (back, right)