Summary of the Seventh Meeting of the IAG EC 2015-2019

Place: Marriott at Metro Center, Penn Quarter Room, 12th Street NW, Washington DC, USA **Time:** Monday, 10 December 2018, 09:00 – 18:00

Attendees (voting): H. Schuh (IAG President), Z. Altamimi (IAG Vice President), H. Drewes (IAG Secretary General), G. Blewitt (President of Commission 1), R. Pail (President of Commission 2), M. Santos (President of Commission 4), P. Novák (President of ICC on Theory), R. Gross (Chair of GGOS), A. Nothnagel (Representative of the Services), Y. Dang (Member-at-Large), S. Rozsa (substitute of President of the COB), C. Rizos (Immediate Past President (via telecom during agenda items 13 and 14)

Attendees (non-voting): F. Kuglitsch (IAG Assistant Secretary General, minute taker), M. Sideris (IAG Past President)

Guests: J. Kusche (Editor in Chief, Journal of Geodesy), J. Freymueller (Editor in Chief, IAG Symposia Series, during agenda item 11), G. Johnston (Chair of the IGS Governing Board, during agenda item 7)

Regrets: M. Hashimoto (President of Commission 3), J. Adám (President of the COB), R. Barzaghi, R. Neilan (Representatives of the Services), C. Pacino (Member-at-Large)

Summary of Agenda Items:

1. Welcome and adoption of agenda

The 7th IAG EC Meeting in the term 2015-2019 took place on 10 December 2018 on the occasion of the AGU Fall Meeting 2018 at Marriott at Metro Center, Penn Quarter Room, 775 12th Street NW in Washington DC, USA. The agenda was distributed previously by e-mail and was unanimously adopted. *H. Schuh*, the President of the IAG, welcomed the members of the IAG Executive Committee (11 out of 16 voting members, 2 non-voting members and 3 guests). The EC Members approved the minutes of the 6th IAG EC Meeting in the term 2015-2019, which took place on 13 April 2018 in Vienna, Austria.

2. Reports of the Commissions

G. Blewitt gave the presentation about Commission 1 (Reference Frames). He reported about the work of the four Sub-commissions and the Joint Working Group 2.1 (Relativistic Geodesy). He further reported about the meeting on Reference Frames for Applications in Geosciences (REFAG), which was organized during the COSPAR Assembly in July 2018, in Pasadena, CA, USA and summarized the preparations of Commission 1 for the IUGG General Assembly 2019.

R. Pail gave the presentation about Commission 2 (Gravity Field). He reported about the International Symposium on Gravity, Geoid and Height Systems 2 (GGHS), which was organized in September 2018, in Copenhagen, Denmark, the preparations for the IUGG General Assembly 2019 and other meetings. He presented a proposal for a new Joint Working Group (JWG 2.1.2; Unified file formats and processing software for high-precision gravimetry) and for a new subcomponent dealing with Geodesy for Climate Research. The EC Members agreed on establishing a Joint Working Group on "Unified file formats and processing software for high-precision gravimetry"

On behalf of *M. Hashimoto*, *R. Gross* gave the presentation about **Commission 3** (Earth Rotation and Geodynamics). *He* reported about the work of the five Sub-commissions. *He* further reported about the 19th WEGENER General Assembly, which was organized in

September 2018 in Grenoble, France, the work of the Joint Working Group 3.1 (Theory of Earth Rotation and Validation), the Joint Working Group 3.2 (Constraining vertical land motion of tide gauges), and joint inter-association activities with IASPEI and IAVCEI. *He* summarized recent developments on establishing an IAG subcomponent "Marine Geodesy". *H. Drewes* suggested writing ToR including the structure for the new Sub-commission 3.2 (Volcano Geodesy), and to think about possible Study and Working Groups and members.

M. Santos gave the presentation about **Commission 4** (Positioning and Applications). He reported about the work of the four Sub-commissions. He further noted that Sub-commission 4.2 (Geo-spatial Mapping and Geodetic Engineering) has not submitted a report, however, he confirmed that Sub-commission 4.2 is active.

3. Report of the Inter-Commission Committee on Theory

P. Novák gave a presentation about **ICCT**. *He* reported about the 9th Hotine-Marussi Symposium on Mathematical Geodesy, which was organized by ICCT in June 2018, in Rome, Italy.

4. Report of the Communication and Outreach Branch

S. Rozsa reported about current **COB** activities. He highlighted the IAG website, the IAG newsletter, GIM International, Social Media, and the UN GGIM WG (focus group on Outreach and Communication). He underlined the need to get regularly news/input for the IAG website, newsletter and social media. In addition, he noted that IAG should implement a Privacy Policy following the EU General Data Protection Regulation (GDPR). F. Kuglitsch offered sending the IUGG Privacy Policy to S. Rozsa.

5. Establishment of (if necessary Planning Groups for) IAG Projects or Intercommission Committees: "Marine Geodesy", "Novel Technologies and Sensors", "Geodesy for Climate Research"

H. Schuh summarized the proposal on establishing a subcomponent on "Marine Geodesy". The EC Members agreed on establishing a Planning Group on "Marine Geodesy" with the aim to establish an Inter-commission Committee at IUGG2019 in Montreal. Possible committee members should be identified. H. Schuh noted that Heidrun Kopp is a Professor for Marine Geodesy in Kiel, Germany, who could act as a possible member of the Planning Group. Y. Dang suggested asking Prof. Y. Yang from Shanghai, China, to act as a possible Planning Group Chair. If he agrees, ToR for this Committee should be developed until IUGG2019 and possible project members should be identified.

R. Pail summarized the proposal on establishing a subcomponent on "Geodesy for Climate Research". The EC Members approved the proposal on "Geodesy for Climate Research" as a Planning Group with the aim to establish an Inter-commission committee at IUGG2019 in Montreal. R. Pail agreed on setting up an appropriate structure together with A. Eicker (as Planning Group Chair) and invited the EC Members to provide ideas for the structure and names for possible members.

H. Schuh summarized the proposal on establishing a Planning Group on "Novel Geodetic Sensors and Technologies". *He* clarified that this Planning Group should now start to consolidate with the aim to establish an IAG project at IUGG2019 in Montreal. *J. Müller* already agreed on taking the lead (as Planning Chair) on this project.

The EC Members discussed the importance of strengthening Seismo-Geodesy within IAG and concluded that Sub-commission 3.5 (and IASPEI) should do more work in this field. The EC Members agreed on establishing a Planning Group on "Seismo-Geodesy" with the aim to establish an Inter-commission project on Seismo-Geodesy at IUGG2019 in Montreal. Possible committee members should be identified. *H. Drewes* noted that the project should consist of a Chair, Vice-Chair and Steering Committee (including members from all Commissions) to be appointed by the EC Members. In addition, the project should consist of Working Groups with a Chair, Vice-Chair and members. The project Chair should follow IAG By-Law 16.

6. Report of the Global Geodetic Observing System, GGOS

R. Gross gave a presentation about the current activities of **Global Geodetic Observing System** (**GGOS**). *He* reported about the GGOS Structure, the GGOS Coordinating Office, the GGOS Focus Areas, GGOS Affiliates, the GGOS Bureau of Products & Standards, DOIs for Geodetic Data, the GGOS 2018 Days in Tsukuba, Japan, other past and future meetings, and the revised ToR. The EC Members approved the revised GGOS.

7. Reports of the Services' representatives

G. Johnston gave the first presentation about the current activities of IGS. He reported about the 2018 IGS Workshop, which was organized in Wuhan, China, the IGS Multi-GNSS Working Group, the new IGS Working Group on PPP Ambiguity Resolution, the IGS recommendations to International Laser Ranging Service (ILRS), the Real Time GNSS Service (RTS), new standards, project preparations and upcoming events.

On behalf *R. Barzaghi*, *R. Pail* gave the second presentation about the Services. *He* reported about recent activities of the following Gravity Field Services:

- International Gravity Field Service (IGFS),
- International Gravimetric Bureau (BGI),
- International Service for the Geoid (ISG),
- International Geodynamics and Earth Tide Service (IGETS),
- International Center for Global Earth Models (ICGEM),
- International DEM Service (IDEMS), and
- International Combination Service for Time-variable Gravity Field Solutions (COST-G).

A. Nothnagel gave the third presentation about the Services. He reported about recent activities of the following Services:

- International Earth Rotation and Reference Systems Service (IERS),
- International DORIS Service (IDS),
- International Laser Ranging Service (ILRS),
- International VLBI Service for Geodesy and Astrometry (IVS), and
- Permanent Service for Mean Sea Level (PSMSL).

There was no report available from the Bureau International des Poids et Mesures (BIPM). *H. Drewes* noted that IAG has good contact with BIPM. The new head of the time department is *P. Tavella*.

No report was available from *R. Neilan*.

8. International Altimetry Service (IAS): Draft Terms of Reference & Call for Proposals

H. Schuh mentioned that IAS has been inactive since 2015. R. Pail suggested structuring IAS rather as a Product Center than a Service (comparison with COST-G). H. Drewes noted that IAS should offer a product if it is re-established as a Service. R. Gross offered including IAS a Focus Area in GGOS. H. Schuh suggested asking C.K. Shum and his group to plan the next steps (e.g., to set up a Planning Group; to set up a call for participation; to include IAS as a Focus Area in GGOS). H. Drewes agreed on asking C.K. Shum to take the lead on that and to interact with Sub-commission 2.5.

9. Report of the Members-at-Large

Y. Dang gave a presentation about recent geodetic activities in Asia Surrounding Regions, and the organization plan for the IAG Scientific Assembly 2021 to be held in Beijing, China. *H. Schuh* suggested holding the IAG Scientific Assembly 2021 rather from Monday to Friday than over a weekend (as proposed by *Y. Dang*).

There was no report available from M. C. Pacino.

10. Report on the Journal of Geodesy

J. Kusche gave the presentation about the Journal of Geodesy. He reported about changes in the Editorial Board, major numbers and statistics of the Journal of Geodesy, Special Issues, editorial practices and new policies including the author contribution statement and data availability statement. The EC Members discussed the possibilities of digitizing Manuscripta Geodaetica. H. Schuh invited the EC Members to search for possibilities to digitize Manuscripta Geodaetica at their institutes.

11. Status of the IAG Symposia Series

J. Freymueller gave the presentation about the IAG Symposia Series. He reported about the status of recent and active volumes including GGHS 2016, IAG-IASPEI Joint Scientific Assembly 2017, and the Hotine-Marussi Symposium 2018, recurring problems and recommendations. H. Schuh clarified that already at the 6th EC Meeting in Vienna, it was decided that the IAG Symposia Series should become open access. H. Drewes mentioned that he was in contact with Springer and noted that open access for a series of up to 200 pages would costs EUR 6,000. Open access for a series of 201-500 pages would cost EUR 14,250. Open access for a series of 501-1,000 pages would costs EUR 21,600. H. Drewes mentioned that IAG could cover the costs for open access of the IUGG General Assembly and IAG Scientific Assembly Series. Z. Altamimi and J. Freymueller suggested increasing the registration fee for the other symposia to cover the costs for publishing open access. Participants of the symposia should be informed about the open access publishing well in advance. The EC Members agreed on making the future IAG Symposia Series open access starting at IUGG2019 in Montreal. The head fee should be USD 50. H. Drewes agreed on informing Springer accordingly.

12. Status of the IUGG General Assembly, Montreal, Canada, 8-18 July 2019

H. Drewes mentioned that the scientific program for IUGG 2019 is now complete (see http://iugg2019montreal.com/. *He* mentioned that the abstract deadline is on 18 February 2019. *H. Schuh* encouraged the EC Members to advertise IUGG2019 whenever possible.

13. Revision of the IAG Statutes and Bylaws

C. Rizos presented the report of the Cassinis Committee and the revised IAG Statutes and Bylaws via telecon. H. Drewes invited the EC Members to read the revised IAG Statutes and Bylaws and to give further comments. C. Rizos agreed on implementing final changes to the revised IAG Statutes and Bylaws by the end of January 2019 and circulating this version among the EC Members. In the middle of February 2019, the IAG Council Members should be asked to give further comments on the revised IAG Statutes and Bylaws.

14. Nomination procedure for IAG officers 2019-2023

C. Rizos presented the report of the Nominating Committee. He confirmed that he has received at least two nominations for each position. H. Drewes clarified that the EC Members are not directly involved in the nominating process, which is a task of the Council. H. Schuh suggested C. Rizos to ask the nominated people whether they have enough travel support from their institutions when they accept their nomination.

15. Interview with candidates for IAG Secretary General 2019-2023

H. Schuh welcomed the two candidates for the IAG Secretary General 2019-2023 and clarified that the Council will make the final decision about the future IAG Secretary General at IUGG2019. The EC Members will give a recommendation to the Council based on the interviews today. H. Schuh summarized the role and tasks of the IAG Secretary General (as defined by the IAG Bylaws). H. Drewes noted that the workload of the IAG Secretary General is typically around 2.5 days per week on average. After interviewing the candidates, the EC Members agreed that the candidates are well qualified for the position of the IAG Secretary General.

IAG strategy discussion

H. Schuh summarized the IAG Strategy document and noted that final updates need to be done. *He* invited the EC Members to add further suggestions for revision until 7 January 2019. *H. Drewes* agreed on finalizing the document. The EC Members agreed that once the Strategy document is finalized it should be distributed together with the Guiding document among the Council Members for information.

16. Report from IUGG and ICSU

F. Kuglitsch reported about the status of the IUGG Member Countries, proposed candidates for the IUGG Bureau and Finance Committee 2019-2023, IUGG Awards, preparations and deadlines related to the IUGG General Assembly 2019 and the Centennial celebrations, and news from the International Science Council (ISC). H. Schuh invited the EC Members to suggest more candidates for IUGG Awards in future.

17. Liaisons with international scientific and professional bodies

H. Drewes discussed the list of IAG Representatives to Scientific Bodies, which is published at https://iag.dgfi.tum.de/fileadmin/IAG-docs/IAG_Representatives_2018.pdf. *R. Gross* noted that he is still trying to find a new IAG Representative to UNOOSA (United Nations Office for Outer Space Affairs) and confirmed that *C. Rizos* became the IAG Representative to ICG.

18. IAG sponsored meetings

H. Drewes discussed the list of IAG sponsored meetings (https://iag.dgfi.tum.de/en/meetings-calendar/).

19. Any other business

F. Kuglitsch noted that IAG has around 220-240 individual members. Around 170 people are paying members; around 50 people are either student or lifetime member who do not pay membership fees. He mentioned that the fee for an IAG individual membership is USD 50 for 1 year or USD 150 for 4 years. H. Drewes urged the EC Members to advertise the IAG student membership, which is free of charge. H. Schuh and M. Sideris highlighted the importance of encouraging more young people getting involved in IAG activities (e.g., Working Groups).

The EC Members confirmed to organize the next IAG EC Meetings on occasion of the IUGG General Assembly 2019 in Montreal, Canada, on Monday, 8 July 2019 from 09:00-13:00, and possibly on 15 or 16 July and on 18 July 2019 from 16:00-19:00.

H. Schuh announced a new table of IAG Service Contributions by Organizational Categories (https://iag.dgfi.tum.de/fileadmin/IAG-docs/IAG_Service_Contributions_20181210.pdf). The GGOS Bureau of Networks and Observations collected the information.

20. Adjournment

H. Schuh thanked the participants for their contributions and closed the session at 18:20.

Respectfully submitted F. Kuglitsch, Assistant Secretary General H. Drewes, Secretary General