

The International Association of Geodesy (IAG)

Update of the History of the International Association of Geodesy

József Ádám

President of IAG Communication and Outreach Branch

In 1828, *J.J. Baeyer* published a paper with *C.F. Bessel* proposing collaboration between East Prussia and Russia on long arc measurements. The life's work of General Baeyer to promote international geodesy was finally realized following an initiative "Über die Größe und Figur der Erde" submitted to the King of Prussia in April 1861. In his memorandum J. J. Baeyer suggested that the states of Europe should work together to measure the size and shape of the Earth and proposed methods to achieve this aim. The origin of the International Association of Geodesy (IAG) goes back to 1862, the year, in which the "Mitteleuropäische Gradmessung", predecessor of the IAG, was established. The first "General Conference of the Representatives to the Mitteleuropäische Gradmessung" (Central European Arc Measurement) took place in Berlin in 1864, which might be considered as the forerunner of the General Assemblies of the IAG.

The IAG has a long history which is well documented by a number of papers, see e.g. *Angus-Leppan (1984 a, b, 1992)*, *Beutler (2004)*, *Beutler et al. (2004)*, *Mueller (1990, 1992, 1997)*, *Levallois (1980)*, *Louis (1992)*, *Schwarz (2000)*, *Torge (1996, 2005)*, *Whitten (1988)*. My interest is to collect some main information connected to the IAG history in tables and to make a few related tables complete, cf. *Levallois (1980)*.

1. Assemblies of the IAG

1.1 General Conferences and Assemblies

The first General Conference of the "Mitteleuropäische Gradmessung", being the forerunner of IAG, took place in Berlin in 1864, where also a Central Bureau (CB) was established. By 1867 the name of the organization had

changed to "Europäische Gradmessung". Since this organization developed well, therefore in 1886 it was extended to the "Internationale Erdmessung", or International Geodetic Association (or in French: Association Internationale de Géodésie). In 1919, the Association was a founding member of a larger scientific group and became the Section of Geodesy of the International Union of Geodesy and Geophysics (IUGG). Due to the changes of the IUGG's statutes, the name of the organization changed first to the Association of Geodesy, then in 1946 to the current name, International Association of Geodesy.

The General Assembly (earlier General Conference) is a very important date and event in the administrative and scientific life of the Association. Since 1922 the General Assembly (GA) of the IAG is held concurrently with the IUGG's GA at the same time and same place. (The first IUGG's GA was in 1922.) Since 1963, the IUGG/IAG GAs are held every four years. The IUGG GAs are numbered with Roman numerals, thus the next GA will be number XXV (25th) in Melbourne, Australia in 2011. This will be the 43rd GA of the IAG from the very beginning General Conference in Berlin, in 1864. Table 1 lists the years and locations of IAG's GAs as well as the previous names of the IAG.

1.2 Scientific Assemblies

The IAG Scientific Assemblies (SAs) are generally held mid-way during the period between two meetings of the IUGG/IAG GA. An SA usually consists of a group of scientific symposia and a group of component meetings, held at the same time and place. The first SA (which was called that time as General Meeting) was held in Japan in

1982 and the next one will be in Argentina in 2009 (see Table 2).

2. Officers and Office of the IAG

2.1 Past IAG Presidents and Secretaries General

Based on the publications of *Levallois (1980)*, *Kukkamäki (1980)* and *Joselyn (2007)*, Table 3 and 4 list the past IAG Presidents and Secretaries General. Brief biographical memoirs of former Presidents and Secretaries General are in The Geodesist's Handbooks and available in the new IAG website.

2.2 Hosts of the IAG Central Bureau

By the new IAG By-Laws (§37) the Secretary General is assisted by an IAG Office established by the Association in the country in which the Secretary General resides. Currently this Office is hosted by the Deutsches Geodätisches Forschungsinstitut (DGFI) in Munich, Germany. The name of this office before the last GA in Perugia in 2007 was called as Central Bureau (CB), or as Secretariat in the early of last century. The IAG Office is (earlier CB or Secretariat was) the secretariat of the Bureau and the Executive Committee (EC, which was earlier called as Permanent Commission). It maintains organization and liaison for the Association and is responsible for financial management, organizing and running of GAs, etc. The IAG Office (or CB) is directed by the Secretary General, who has one or more Assistant Secretaries. In the first period of IAG, the CB was headed by nominated directors, as *J.J. Baeyer* between 1864 and 1885, and *F.R. Helmert* between 1886 and 1917. Table 5 lists the hosts of the IAG's Central Bureau.

3. Editors-in-Chief of the IAG Official Journals

3.1 Editors-in-Chief of the Journal of Geodesy

At the GA in Rome in May of 1922, the delegates made a decision for the publication of *Bulletin Géodésique* (BG). For 74 years, BG has been the official journal of the Section of Geodesy of the IUGG and subsequently of the IAG. Published by the IAG Central Bureau in Paris until 1990, it was taken over the Springer publishing house.

In 1975 the *manuscripta geodaetica* (MG) was launched by Kremers Verlag under a spiritual leadership of Professor *Erik W. Grafarend*, to provide a place to publish longer manuscripts and for the fast publication of author produced manuscripts. The MG was also established for the international publication of contributions from the field of geodesy. From 1988 the MG was also published by the Springer-Verlag.

As of the beginning of 1991, i.e. Vol. 65, No. 1. BG and MG had a joint editorial board. On the basis of a common interest of the IAG Executive Committee (EC) and Springer-Verlag expressed in merging the two journals, beginning from January 1, 1996 the new official organ of the IAG, *Journal of Geodesy* (JoG) replaced the BG and MG. Therefore, the JoG is the continuation and merger of the BG and MG. The volume numbering of the BG is carried on. For the list of the Editors-in-Chief see Table 6.

3.2 Editors of the Geodesist's Handbook

On the basis of a decision of the IAG EC, from 1980 the BG (and currently the JoG) publishes, after every GA, a special issue called *The Geodesist's Handbook* which is devoted to a detailed description of the Association. It provides the actual information on the Association, including the reports of the President and Secretary General presented at the previous IAG GA meeting, the resolutions taken at that meeting, and the Association structure listing components and sub-components for the running period, rules for the IAG Fund, IAG Awards and for the conduct of scientific meetings as well as relevant scientific information. The Editors (see Table 7) were nominated by the IAG EC. This issue is the eighth one in a series appeared up to now.

4. Awards Established by the IAG

The IAG EC established prestigious awards for outstanding contributions to geodesy and distinguished service to the Association. The rules for the awards are published in The Geodesist's Handbooks. These awards and their winners are as follows.

4.1 The Guy Bomford Prize

The Guy Bomford Prize is awarded by the IAG for outstanding contribution to Geodesy. It was established by the British National Committee for Geodesy and Geophysics to mark the contributions to geodesy of Brigadier G. Bomford, formerly of the University of Oxford and an IAG Past President. It has been inaugurated by the IAG in 1975. The Prize is normally awarded at intervals of four years on the occasion of the IAG's GA.

The Guy Bomford Prize is awarded to a young scientist or a team of young scientists for outstanding theoretical or applied contributions to geodetic studies, particularly in the four year period preceding the GA at which the award is made. Scientists who are under 40 years of age on December 31, of the year preceding the GA at which the award is made, are eligible for the award. Nominations will be invited by the IAG Bureau from all National Committees of IUGG member countries at least one year

ahead of the GA. The Prize is presented to the successful candidate at the opening Plenary Session of the IAG Assembly. He or she shall be invited to deliver a lecture during the course of the IAG Assembly. Table 8 lists the winners of the Bomford Prize. A few speeches of the Bomford Prize winners are published in The Geodesist's Handbook (see Vol. 1980, 1988, 1996, 2000, 2004, and this issue).

4.2 The Levallois Medal

The Levallois Medal was established in 1979 to honour Jean-Jacques Levallois, and to recognize his outstanding contribution to the IAG, particularly his long service as Secretary General between 1960 and 1975. The award of the Medal is made in recognition of distinguished service to the Association, and/or to the science of geodesy in general.

The Medal is normally awarded at four year intervals, on the occasion of the GA of the IAG and IUGG; but the award may be omitted if it is considered that there is no candidature of sufficient merit, and an additional award may be made at any time if justified by exceptional circumstances. A nomination for the award shall be made by an ad hoc committee consisting of the IAG Honorary Presidents and must be confirmed by the IAG Executive Committee. Table 9 lists the winners of the Levallois Medal. Some laudations for Levallois Medal winners are in the Geodesist's Handbook (see Vol. 1996, 2000, 2004, and this issue).

4.3 The IAG Young Author Award

The purpose of the IAG Young Author Award is to draw attention to important contributions by young scientists in the Journal of Geodesy and to foster excellence in scientific writing. The applicant must be 35 years of age or younger when submitting the paper for publication. The paper must present the applicant's own research, and must have been published in the two annual volumes of the Journal of Geodesy (JoG) preceding either the IAG GA or the IAG SA. Although multiple author papers are considered, single author papers are given more weight in the selection process. Presentation of the awards will be made at each IAG GA and each IAG SA.

For each two-year period the Editor-in-Chief of the Journal of Geodesy will propose a minimum of three candidates for the award. In addition, proposals made by at least three IAG Fellows or Associates will be considered for the competition. The voting members of the IAG Executive Committee will make the final selection. It will be based on the importance of the scientific contribution, which may be either theoretical or practical, and on the quality of the presentation. The name and picture of the award winner and a short biography are published in the

IAG Newsletter part of the Journal of Geodesy. The winners of the Young Author Award are listed in Table 10.

5. The Science Services Hosted by the IAG

The IAG is the home of a number of science services whose goals include providing the user community with various geodetic products and/or information and to foster international cooperation. There are four types of services, one related to (a) geometry, one to (b) gravity, one to (c) both geometry and gravity and one to (d) documentation and information. Table 11 contains the IAG science services (in consistent with the new IAG By-Laws) with the address of their webpages, which are listed in alphabetical order. There are two services among them acting as „umbrella” service, that is the IERS over the geometry related services and the IGFS over the gravity related services.

The history of the IAG services is well documented, see e.g. Mueller (1998), Beutler et al. (2004), and web-pages of the services (see Table 11).

6. Fellows of the IAG

Past officers of the IAG shall be eligible for appointment as Fellows and shall be invited to become such. In recognition for esteemed services rendered in different IAG entities (EC, Commissions, Services, JoG, etc), these types of „memberships” of the „Fellows of the International Association of Geodesy” were established in 1991. The EC makes these appointments by which scientists become affiliates of the IAG.

Table 12 lists the Fellows of the IAG appointed at the IUGG/IAG GAs beginning in Vienna in 1991.

References

- Ádám J. (2000): Geodesy in Hungary and the Relation to IAG around the turn of the 19th/20th Century-A Historical Review. In: The Geodesist's Handbook 2000. *Journal of Geodesy*, 74 (2000), 1 (7-14).
- Angus-Leppan P. V. (1984a): A Note on the History of the International Association of Geodesy. The Geodesist's Handbook 1984. *Bulletin Géodésique*, 58 (1984), 3 (224-229).
- Angus-Leppan P. V. (1984b): Introduction to the Structure and Activities of the I.A.G. In: The Geodesist's Handbook 1984. *Bulletin Géodésique*, 58 (1984), 3 (243-245). (also in: The Geodesist's Handbook 1988. *Bulletin Géodésique*, 62 (1988), 3 (207-209).
- Angus-Leppan P. V. (1992): Introduction to the I.A.G. In: The Geodesist's Handbook 1992. *Bulletin Géodésique*, 66 (1992), 2 (82-83).

- Beutler G. (2004): The New IAG Structure. In: The Geodesist's Handbook 2004. *Journal of Geodesy*, 77 (2004), 10-11 (560-565).
- Beutler G., Drewes H., Verdun A. (2004): The new structure of the International Association of Geodesy (IAG) viewed from the perspective of history. In: The Geodesist's Handbook 2004. *Journal of Geodesy*, 77 (2004), 10-11 (566-575).
- Buschmann E. (1994) (Ed.): *Aus Leben und Werk von Johann Jacob Baeyer*. Verlag des Instituts für Angewandte Geodäsie, Frankfurt am Main.
- Joselyn J. A. (2007): *I.U.G.G. Yearbook January 2007*. University of Colorado, US-Boulder, USA.
- Kukkamäki T. J. (1980): Presidential Address. In: The Geodesist's Handbook 1980. *Bulletin Géodésique*, Vol. 54 (1980), 3 (335-338).
- Levallois J. J. (1980): The History of the International Association of Geodesy. In: The Geodesist's Handbook 1980. *Bulletin Géodésique*, Vol. 54 (1980), 3 (249-313).
- Louis M. (1992): History of the International Association of Geodesy. In: The Geodesist's Handbook 1992. *Bulletin Géodésique*, 66 (1992), 2 (79-81).
- Mueller I. I. (1990): 125 Years of International Cooperation in Geodesy. IAG Symp. Proceed 102, pp. 421-432, Springer – Verlag.
- Mueller I. I. (1992): The role of the International Association of Geodesy in Establishing User Services. IAG Symposia No. 112, pp. 3-4, Springer-Verlag, Berlin-Heidelberg.
- Mueller I. I. (1997): Science Services: International Association of Geodesy (IAG)/Federation of Astronomical and Geophysical Services (FAGS). Special Volume presented at the IAG Scientific Assembly, Rio de Janeiro, Brasil, Sept. 3-9, 1997, 62 pages, IAG Central Bureau c/o Dept. Of Geophysics, Copenhagen, Denmark.
- Past Officers of the International Association of Geodesy. In: The Geodesist's Handbook 1984. *Bulletin Géodésique*, 58 (1984), 3 (230-242).
- Schwarz K. P. (2000): What is the IAG? In: The Geodesist's Handbook 2000. *Journal of Geodesy*, 74 (2000), 1 (2-6).
- Torge W. (1996): The International Association of Geodesy (IAG) – More than 130 Years of International Cooperation. In The Geodesist's Handbook 1996. *Journal of Geodesy*, 70 (1996), 12 (840-845).
- Torge W. (2005): The International Association of Geodesy 1862 to 1922: from a regional project to an international organization. *Journal of Geodesy*, 78 (2005), 9 (558-568).
- Whitten Ch. (1988): History of the International Association of Geodesy. In The Geodesist's Handbook 1988. *Bulletin Géodésique*, 62 (1988), 3 (197-206).

Table 4: IAG General Secretaries

No	Period	Name	Place of Homestead
1	1886 – 1900	Adolf Hirsch	Neuchatel, Switzerland
2	1900 – 1918	Hendricus G. van de Sande-Bakhuysen	Leiden, The Netherlands
3	1919 – 1945	Georges Perrier	Paris, France
4	1946 – 1960	Pierre Tardi	Paris, France
5	1960 – 1975	Jean-Jacques Levallois	Paris, France
6	1975 – 1991	Michel Louis	Paris, France
7	1991 – 1995	Claude Boucher	Paris, France
8	1995 – 2007	Carl C. Tscherning	Copenhagen, Denmark
9	2007 –	Hermann Drewes	Munich, Germany

Table 5: Hosts of the IAG Central Bureau

No	Period	Name	Place of Homestead
1	1864 – 1919	Royal Prussian Geodetic Institute	Potsdam, Prussia/Germany
2	1919 – 1995	Institut Géographique National (IGN)	Paris, France
3	1995 – 2007	Niels Bohr Institute, Department of Geophysics, University of Copenhagen	Copenhagen, Denmark
4	2007 –	Deutsches Geodätisches Forschungsinstitut (DGFI)	Munich, Germany

Table 6: Editors-in-Chief of Official Journals of the IAG (BG = Bulletin Géodésique, MG = *manuscripta geodaeica* and JoG = Journal of Geodesy)

No	Journal	Period	Name of Editor-in-Chief	Place of homestead
1	BG	1922 – 1945	Georges Perrier	Paris, France
2	BG	1946 – 1951	Pierre Tardi	Paris, France
3	BG	1952 – 1964	Jean-Jacques Levallois	Paris, France
4	BG	1965 – 1975	Michel Louis	Paris, France
5	BG MG	1975 – 1986 1976 – 1980	Ivan I. Mueller	Columbus, USA
6	MG	1980 – 1982	Peter Meissl	Graz, Austria
7	MG	1982 – 1988	Erwin Groten	Darmstadt, Germany
8	MG	1989 – 1991	Clyde C. Goad Erik W. Grafarend	Columbus, USA Stuttgart, Germany
9	BG	1987 – 1991	Carl Christian Tscherning	Copenhagen, Denmark
10	BG MG	1991 – 1995	Carl Christian Tscherning Petr Vaníček	Copenhagen, Denmark New Brunswick, Canada
11	JoG	1995 – 2003	Peter J. G. Teunissen	Delft, The Netherlands
12	JoG	2003 – 2007	William Featherstone	Perth, Australia
13	JoG	2007 –	Roland Klees	Delft, The Netherlands

Table 7: Editors of the Geodesist's Handbook

No	Year	Editor	Place of homestead
1	1980	Ivan I. Mueller	Columbus, USA
2	1984	Carl Christian Tscherning	Copenhagen, Denmark
3	1988	Carl Christian Tscherning	Copenhagen, Denmark
4	1992	Carl Christian Tscherning	Copenhagen, Denmark
5	1996	Pascal Willis	Paris, France
6	2000	Ole B. Andersen	Copenhagen, Denmark
7	2004	Ole B. Andersen	Copenhagen, Denmark
8	2008	Hermann Drewes, Helmut Hornik József Ádám, Szabolcs Rózsa	Munich, Germany Budapest, Hungary

Table 8: Bomford Prize Awardees of the IAG

No	Year	Name of Scientist	Place of homestead
1	1975	Erik W. Grafarend	Munich, Germany
2	1979	Fernandó Sansó	Milan, Italy
3	1983	John Wahr	Boulder, USA
4	1987	Peter J. G. Teunissen	Delft, The Netherlands
5	1991	Shuhei Okubo	Tokyo, Japan
6	1995	Thomas A. Herring	Cambridge, USA
7	1999	Véronique Dehant	Brussels, Belgium
8	2003	Ramon Hanssen	Delft, The Netherlands
9	2007	Masato Furuya	Tokyo, Japan

Table 9: Levallois Medal Awardees of the IAG

No	Year	Name of Scientist	Place of homestead
1	1983	Charles A. Whitten	Washington, USA
2	1983	Rudolf Sigl	Munich, Germany
3	1987	Arne Bjerhammar	Stockholm, Sweden
4	1991	Paul Melchior	Brussels, Belgium
5	1995	Willem Baarda	Delft, The Netherlands
6	1999	Torben Krarup	Copenhagen, Denmark
7	2003	George Veis	Athen, Greece
8	2007	Carl Christian Tscherning	Copenhagen, Denmark

Table 10: IAG Best Young Author Awardees

No	Year	Author's name	Country	Title of the publication
1	1993	Hussein Abou-Elsoaad Abd-Elmotaal	Egypt	Vening-Meinesz Moho depths: traditional, exact and approximated. <i>Manuscripta Geodaetica</i> , 18 (1993), 4 (171-181)
2	1994	Jean-Pierre Barriot	France	Line of sight operators in planetary Geodesy <i>Manuscripta Geodaetica</i> , 19 (1994), 5 (269-283)
3	1995	Srinivas V. Bettadpur	India	Hotine's geopotential formulation: revisited. <i>Bulletin Géodésique</i> , 69 (1995), 3 (135-142)
4	1996	Giovanna Sona	Italy	Numerical problems in the computation of ellipsoidal harmonics. <i>Journal of Geodesy</i> , 70 (1995), 1-2 (117-126).
5	1997	none		
6	1998	Cheinway Hwang	Taiwan	Inverse Vening-Meinesz formula and deflection geoid formula: applications to the predictions of gravity and geoid over the South China Sea. <i>Journal of Geodesy</i> , 72 (1998), 5 (304-312)
7	1999	Peiliang Xu	China	Biases and accuracy of, and an alternative to, discrete nonlinear filters. <i>Journal of Geodesy</i> , 73 (1999), 1 (35-46).
8	2000	Christopher Kotsakis Rüdiger Lehmann	Canada Germany	The multiresolution character of collection. <i>Journal of Geodesy</i> , 74 (2000), 3-4 (275-290). Altimetry-gravimetry problems with free vertical datum. <i>Journal of Geodesy</i> , 74 (2000), 3-4 (327-334).
9	2001	Susan Skone	Canada	The impact of magnetic storms on GPS receiver performance. <i>Journal of Geodesy</i> , 75 (2001), 9-10 (457-468).
10	2002	none		
11	2003	Michael Kern	Germany	A study on the combination of satellite, airborne and terrestrial gravity data (with K.-P. Schwarz and N. Sneeuw). <i>Journal of Geodesy</i> , 77 (2003), 3-4 (217-225).
12	2004	Shfaqat Abbas Khan	Pakistan	Shallow water loading tides in Japan from superconducting gravity (with J. L. Hoyer). <i>Journal of Geodesy</i> , 78 (2004), 4-5 (245-250).
13	2005	Roland Pail	Austria	A parametric study on the impact of satellite attitude errors on GOCE gravity field recovery. <i>Journal of Geodesy</i> , 79 (2005), 4-5 (231-241).
14	2006	Steffen Schön	Germany	Uncertainty in GPS networks due to remaining systematic errors: the internal approach (with H. Kutterer). <i>Journal of Geodesy</i> , 80 (2006), 3 (150 -162).

Table 11: IAG Services

No	Name of the IAG Service / Address of the Homepage	Acronym	Year of Establishment
1	Bureau Gravimétrique International – http://bgi.cnes.fr	BGI	1951
2	Bureau International de Poids et Mesures – Section Time, Frequency and Gravimetry – http://www.bipm.org	BIPM	1920
3	International Altimetry Service – http://ias.dgfi.badw.de/	IAS	2008
4	IAG Bibliographic Service – http://www.bkg.bund.de/nn_159384/DE/Bundesamt/Informationsdienste/iag_node.html__nnn=true	IBS	1984
5	International Center for Earth Tides – http://www.astro.oma.be/ICET/	ICET	1958
6	International Center for Global Earth Models – http://icgem.gfz-potsdam.de/ICGEM	ICGEM	2003
7	International DEM Service – http://www.eso.dmu.ac.uk/EAPRS/iag	IDEMS	2003
8	International DORIS Service – http://ids.cis.fr	IDS	2003
9	International Earth Rotation and Reference Systems Service – http://www.iers.org	IERS	1987 (1895)
10	International Geoid Service – http://www.iges.polimi.it	IGeS	1991
11	International Gravity Field Service – http://www.igfs.net	IGFS	2003
12	International GNSS Service – http://igsb.jpl.nasa.gov	IGS	1994
13	International Laser Ranging Service – http://ilrs.gsfc.nasa.gov	ILRS	1997
14	International VLBI Service for Geodesy and Astrometry – http://ivsc.gsfc.nasa.gov	IVS	1999
15	Permanent Service for Mean Sea Level – http://www.pol.ac.uk/psmsl	PSMSL	1933

Table 12: Fellows of the IAG

No.	Last name	First name	Country
- awarded in 1991 -			
1	Adebekun	O.A.	Nigeria
2	Ajakaiye	Deborah-Enilo	USA
3	Ashkenazi	Vidal	UK
4	Augath	Wolfgang	Germany
5	Baker	Trevor F.	UK
6	Balmino	Georges	France
7	Baran	Lubomir W.	Poland
8	Birardi	Giuseppe	Italy
9	Bjerhammar	Arne	Sweden
10	Blitzkow	Denisar	Brazil
11	Bock	Yehuda	USA
12	Boedecker	Gerd	Germany
13	Bosler	John D.	USA
14	Boucher	Claude	France
15	Brosche	Peter	Germany
16	Brunner	Fritz K.	Austria
17	Bursa	Milan	Czech Republic
18	Campbell	James	Germany
19	Carrera	Galo	Canada
20	Charfi	Mohamed	Tunisia
21	Chen	Junyoung Y.	China
22	Chovitz	Bernard H.	USA
23	Coker	Oluwole	Nigeria
24	Colombo	Oscar L.	USA
25	Comolet-Tirman	André	France
26	Cook	Alan H.	UK
27	Cross	Paul A.	UK
28	Daugherty	Kenneth I.	USA
29	de Jonge	Paul	USA
30	Dermanis	Athanasios	Greece
31	Dickey	Jean O.	USA
32	Dodson	Alan H.	UK
33	Douglas	Bruce C.	USA
34	Drozyner	Andrzej	Poland
35	Dufour	Henri	France
36	Eckhardt	Donald	USA

No.	Last name	First name	Country
- awarded in 1991 (cont'd) -			
37	Fadahunsi	Olagoke	Nigeria
38	Fajemirokun	Francis	Nigeria
39	Feissel-Vernier	Martine	France
40	Fejes	István	Hungary
41	Fischer	Irene K.	USA
42	Forsberg	Rene	Denmark
43	Forsyth	P.	Canada
44	Fritsch	Dieter	Germany
45	Gaignebet	J.	France
46	Gaposchkin	Edward M.	USA
47	Gemael	Camil	Brazil
48	Goad	Clyde C.	USA
49	Grafarend	Erik W.	Germany
50	Grotten	Erwin	Germany
51	Gubler	Erich	Switzerland
52	Guinot	Bernard	France
53	Heck	Bernhard	Germany
54	Hein	Günter	Germany
55	Henneberg	Heinz	Venezuela
56	Henriksen	Soren	USA
57	Holota	Petr	Czech Republic
58	Hora	L.	Czech Republic
59	Hsu	Hou Tse	China
60	Huddle	James R.	USA
61	Jekeli	Christopher	USA
62	Jentzsch	Gerhard	Germany
63	Juó	István	Hungary
64	Joshi	C.S.	India
65	Kahle	Hans-Gert	Switzerland
66	Kahmen	Heribert P.	Austria
67	Kakkuri	Juhani	Finland
68	Kasahara	K.	Japan
69	Kausel	Edgar	Chile
70	Kautzleben	Heinz	Germany
71	Kearsley	A. H. William	Australia
72	King	Robert W.	USA

Table 12 cont'd: Fellows of the IAG

No.	Last name	First name	Country
– awarded in 1991 (cont'd) –			
73	Kiviniemi	Aimo	Finland
74	Klees	Roland	The Netherlands
75	Koch	Karl Rudolf	Germany
76	Kolaczek	Barbara	Poland
77	Konan	K.	Ivory Coast
78	Kovalevsky	Jean	France
79	Kozai	Yoshihide	Japan
80	Krynski	Jan	Poland
81	Kumar	Muneendra	USA
82	Kuo	John T.	USA
83	Lefebvre	Michael P.M.	France
84	Legemann	Dieter	Germany
85	Lennon	Geoff W.	Australia
86	Lensen	G.	New Zealand
87	Levallois	Jean-Jacques	France
88	Livieratos	E.	Greece
89	Louis	Michel	France
90	Mader	Gerald R.	USA
91	Makris	Janis	Germany
92	Mancini	Armando	USA
93	Marson	Iginio	Italy
94	Mc Nutt	Marcia	USA
95	McCarthy	Dennis D.	USA
96	Melbourne	William G.	USA
97	Melchior	Paul	Belgium
98	Morelli	Carlo	Italy
99	Moritz	Helmut	Austria
100	Mueller	Ivan I.	USA
101	Nakagawa	Ichiro	Japan
102	Nobili	Anna	Italy
103	Obel	J.D.	Kenya
104	Odlanicki-Poczobut	M.	Poland
105	Pertsev	B.P.	Russia
106	Poder	Knud	Denmark
107	Poitevin	Christian	Belgium
108	Prilepin	Mikhail T.	Russia

No.	Last name	First name	Country
– awarded in 1991 (cont'd) –			
109	Rais	Jacub	Indonesia
110	Rapp	Richard H.	USA
111	Reigber	Christoph	Germany
112	Robbins	A.R.	UK
113	Rostom	R.S.	Kenya
114	Rummel	Reiner	Germany
115	Sacerdote	Fausto	Italy
116	Sansó	Fernando	Italy
117	Saxena	Narendra K.	USA
118	Schaffrin	Burkhard	USA
119	Schmitt	Günter	Germany
120	Schutz	Bob E.	USA
121	Schwarz	Klaus-Peter	Canada
122	Seeber	Günter	Germany
123	Sevilla	Miguel J.	Spain
124	Shelus	Peter J.	USA
125	Sideris	Michael G.	Canada
126	Sjöberg	Lars E.	Sweden
127	Snay	Richard A.	USA
128	Sünkel	Hans	Austria
129	Tanaka	Toraō	Japan
130	Teunissen	Peter J.G.	The Netherlands
131	Torge	Wolfgang	Germany
132	Tscherning	Carl Christian	Denmark
133	Vanicek	Petr	Canada
134	Veillet	Christian	France
135	Vyskocil	Pavel	Czech Republic
136	Wahr	John	USA
137	Wells	David E.	Canada
138	Welsch	Walter M.	Germany
139	White	Lawry A.	Australia
140	Wilson	Peter	Germany
141	Woodworth	Philip L.	UK
142	Waalewijn	A.	The Netherlands
143	Yatskiv	Yaroslav Y.	Ukraine
144	Yokoyama	Koichi	Japan

Table 12 cont'd: Fellows of the IAG

No.	Last name	First name	Country
– awarded in 1991 (cont'd) –			
145	Zilkoski	David B.	USA
146	Zund	Joseph David	USA
– awarded in 1995 –			
147	Ádám	József	Hungary
148	Barzaghi	Riccardo	Italy
149	Becker	Matthias	Germany
150	Beutler	Gerhard	Switzerland
151	Bosch	Wolfgang	Germany
152	Chao	Benjamin Fong	USA
153	Denker	Heiner	Germany
154	Dow	John	Germany
155	Elgered	Gunnar K.	Sweden
156	Engen	Bjorn	Norway
157	Geiger	Alain	Switzerland
158	Kato	Teruyuki	Japan
159	Kleusberg	Alfred	Germany
160	Kouba	Jan	Canada
161	Landau	Herbert	Germany
162	Langley	Richard B.	Canada
163	Linkwitz	Klaus	Germany
164	Molodensky	Serguei	Russia
165	Neilan	Ruth	USA
166	Noll	Carey	USA
167	Okubo	Shuhei	Japan
168	Páquet	Paul	Belgium
169	Ries	John C.	USA
170	Rueger	Jean M.	Australia
171	Schrama	Ernst J.O.	Netherlands
172	Shum	Che-Kwan	USA
173	Spoelstra	T.A.Th.	Netherlands
174	Takemoto	Seyuzo	Japan
175	Thomas	Claudine	France
176	Weightman	Jack A.	UK
177	Willis	Pascal	France
178	Yunck	Thomas	USA

No.	Last name	First name	Country
– awarded in 1999 –			
179	Andersen	Ole Baltazar	Denmark
180	Andersen	Niels	Denmark
181	Arabelos	Dimitris	Greece
182	Arur	M.G.	India
183	Ballani	Ludwig	Germany
184	Benciolini	G. Battista	Italy
185	Bevis	Michael G.	USA
186	Blewitt	Geoffrey	UK
187	Bosworth	John M.	USA
188	Cazenave	Anny	France
189	Clark	Thomas A.	USA
190	Degnan	John	USA
191	Dehant	Veronique	Belgium
192	Drewes	Hermann	Germany
193	Ducarme	Bernard	Belgium
194	Featherstone	William	Australia
195	Freedden	Willi	Germany
196	Herring	Thomas	USA
197	Ilk	Karl-Heinz	Germany
198	Johanssen	Jan	Sweden
199	Jonge	P. de	The Netherlands
200	Knudsen	Per	Denmark
201	Li	Zheng-Xin	China
202	Manning	John	Australia
203	Pavlis	Nicos	USA
204	Rizos	Chris	Australia
205	Rocken	Christian	USA
206	Tziavos	Ilias N.	Greece
207	Vermeer	Martin	Finland
208	Wei	M.	Canada
209	Wolf	Detlef	Germany
210	Zerbini	Suzanna	Italy
– awarded in 2003 –			
211	Arias	Elisa Flicitas	Argentina
212	Barriot	Jean-Pierre	France
213	Berry	Philippa Anne	UK

Table 12 cont'd: Fellows of the IAG

No.	Last name	First name	Country
– awarded in 2003 (cont'd) –			
214	Brunini	Claudio A.	Argentina
215	Bruyninx	Carine	Belgium
216	Gambis	Daniel	France
217	Gendt	Gerd	Germany
218	Gross	Richard S.	USA
219	Gurtner	Werner	Switzerland
220	Han	Shaowei	Australia
221	Hanssen	Ramon	The Netherlands
222	Harsson	Bjørn Geirr	Norway
223	Hwang	Cheinway	Taiwan
224	Keller	Wolfgang	Germany
225	Kenyon	Steve C.	USA
226	Kursinski	Robert	USA
227	Kutterer	Hansjorg	Germany
228	Lehmann	Rüdiger	Germany
229	Marchenko	Alexander	Ukraine
230	Scharroo	Remko	The Netherlands
231	Schlüter	Wolfgang	Germany
232	Schönc	Tilo	Germany
233	Skone	Susan	Canada
234	Sneeuw	Nico	Canada
235	Stewart	Mike	Australia
236	Strykowski	Gabriel	Denmark
237	Tibcrius	Christian	The Netherlands
238	van der Marel	Hans	The Netherlands
239	Vandenberg	Nancy	USA
240	Visser	Pieter	The Netherlands
241	Vitushkin	Leonid	France
242	Vondrak	Jan	Czech Republic
243	Weber	Robert	Austria
244	Yuanxi	Yang	China
– awarded in 2007 –			
245	Altamimi	Zuheir	France
246	Biancale	Richard	France
247	Craymer	Michael	Canada
248	Crossley	David	USA

No.	Last name	First name	Country
– awarded in 2007 (cont'd) –			
249	Dietrich	Reinhard	Germany
250	Ding	Xiaoli	Hong Kong
251	Fortes	L Luiz Paulo Sonto	Brazil
252	Gao	Yang	Hong Kong
253	Grejner-Brzezinska	Dorota	USA
254	Heki	Kosuke	Japan
255	Hothem	Larry	USA
256	Huang	Jianliang	China
257	Ihde	Johannes	Germany
258	Kuhn	Michael	Australia
259	Kusche	Jürgen	The Netherlands
260	Marti	Urs	Switzerland
261	Merry	Charles	South Africa
262	Moore	Angelyn W.	USA
263	Noll	Carey	USA
264	Novák	Pavel	Czech Republic
265	Pacino	Maria Christina	Argentina
266	Pearlman	Michael R.	USA
267	Plag	Hans-Peter	USA
268	Poutanen	Markku	Finland
269	Richter	Bernd	Germany
270	Rothacher	Markus	Germany
271	Rózsa	Szabolcs	Hungary
272	Scheinert	Mirko	Germany
273	Schuh	Harald	Austria
274	Sun	He-Ping	China
275	Torres	Joao Agria	Portugal
276	Tóth	Gyula	Hungary
277	Verroneau	Mark	Canada
278	Vitushkin	Leonid	France
279	Wang	Jinling	Australia
280	Wonnacott	Richard	South Africa
281	Xu	Peiliang	Japan
282	Yu	Jinhai	China
283	Zhu	Shen Yuan	Germany

Table 1: General Assemblies of the International Association of Geodesy

No	Meeting Location	Year
I. General Conferences		
<i>I.a. "Mitteleuropäische Gradmessung" (1862-1867)</i>		
1	Berlin, Prussia	1864
2	Berlin, Prussia	1867
<i>I.b. "Europäische Gradmessung" (1867-1886)</i>		
3	Vienna, Austria-Hungary	1871
4	Dresden, Saxony	1874
5	Stuttgart, Württemberg	1877
6	Munich, Bavaria	1880
7	Rome, Italy	1883
8	Berlin, Prussia	1886
<i>I.c. International Geodetic Association (Internationale Erdmessung) (1886-1919)</i>		
9	Paris, France	1889
10	Brussels, Belgium	1892
11	Berlin, Germany	1895
12	Stuttgart, Germany	1898
13	Paris, France	1900
14	Copenhagen, Denmark	1903
15	Budapest, Austria-Hungary	1906
16	Cambridge, United Kingdom	1909
17	Hamburg, Germany	1912

No	Meeting Location	Year
II. General Assemblies of the Section and the Association of Geodesy as part of the General Assemblies of the IUGG		
<i>II.a. Section of Geodesy of the IUGG (1920-1933)</i>		
18	Belgium (Constitutive Assembly)	1919
19	Rome, Italy	1922
20	Madrid, Spain	1924
21	Prague, Czechoslovakia	1927
22	Stockholm, Sweden	1930
23	Lisbon, Portugal	1933
<i>II.b. Association of Geodesy (1933-1946)</i>		
24	Edinburgh, United Kingdom	1936
25	Washington, United States	1939
<i>II.c. International Association of Geodesy (IAG; 1946-....)</i>		
26	Oslo, Norway	1948
27	Brussels, Belgium	1951
28	Rome, Italy	1954
29	Toronto, Canada	1957
30	Helsinki, Finland	1960
31	Berkeley, United States	1963
32	Zurich-Lucerne, Switzerland	1967
33	Moscow, USSR	1971
34	Grenoble, France	1975
35	Canberra, Australia	1979
36	Hamburg, Germany	1983
37	Vancouver, Canada	1987
38	Vienna, Austria	1991
39	Boulder, USA	1995
40	Birmingham, United Kingdom	1999
41	Sapporo, Japan	2003
42	Perugia, Italy	2007
43	Melbourne, Australia	2011

Table 2: Scientific Assemblies of the IAG

No	Meeting Location	Date	Number of participants
1	Tokio, Japan	May 7-15,1982	200
2	Edinburgh, Scotland	August 3-12,1989	NA
3	Beijing, China	August 8-13,1993	350
4	Rio de Janeiro, Brasil	September 3-9,1997	350
5	Budapest, Hungary	September 2-7, 2001	461
6	Cairns, Australia (*)	August 22-26, 2005	724 (IAG:145)
7	Buenos Aires, Argentina	August 31- Sept. 4, 2009	

(*) together with IAPSO and IABO

Table 3: IAG Presidents

No	Period	Name	Place of Homestead
1	1864 – 1885	Johann J. Baeyer	Potsdam, Prussia
2	1886 – 1891	Carlos Ibanez de Ibero	Madrid, Spain
3	1892 – 1902	Hervé E. A. A. Faye	Paris, France
4	1903 – 1918	Léon J. A. Bassot	Paris, France
5	1919 – 1933	William Bowie	Washington, USA
6	1933 – 1945	Felix A. Vening-Meinesz	Amersfoort, The Netherlands
7	1945 – 1951	Walter D. Lambert	Washington, USA
8	1951 – 1954	Carl F. Baeschlin	Zürich, Switzerland
9	1954 – 1957	James de Graaf Hunter	London, United Kingdom
10	1957 – 1960	Gino Cassinis	Milan, Italy
11	1960 – 1963	Charles A. Whitten	Washington, USA
12	1963 – 1967	Guy Bomford	London, United Kingdom
13	1967 – 1971	Antonio Marussi	Trieste, Italy
14	1971 – 1975	Youri D. Boulanger	Moscow, USSR
15	1975 – 1979	Tauno J. Kukkamäki	Helsinki, Finland
16	1979 – 1983	Helmut Moritz	Graz, Austria
17	1983 – 1987	Peter V. Angus-Leppan	Kensington, Australia
18	1987 – 1991	Ivan I. Mueller	Columbus, USA
19	1991 – 1995	Wolfgang Torge	Hannover, Germany
20	1995 – 1999	Klaus-Peter Schwarz	Calgary, Canada
21	1999 – 2003	Fernandò Sansó	Milan, Italy
22	2003 – 2007	Gerhard Beutler	Berne, Switzerland
23	2007 – 2011	Michael G. Sideris	Calgary, Canada