



**International Association
of Geodesy**

Newsletter

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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

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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

Meeting Announcements

*19th General Assembly of WEGENER**

WEGENER 2018: Earth Deformation and the study of earthquakes

Dear Colleagues,

We are pleased to announce for the 19th. General Assembly of WEGENER on Earth Deformation and the study of earthquakes to take place in *Grenoble, France, 10-13th September, 2018* hosted by Univ. Grenoble Alpes.

You will find details of the proposed sessions, relevant dates, and conference events in the attached flyer and on the conference website at <https://wegener2018.sciencesconf.org>

We look forward to welcoming you in Grenoble,

Prof.Dr. Haluk Ozener
Chair
IAG S.C. 3.5./WEGENER

Dates for IUGG2019 SPC activities

IAMAS, in it latest newsletter, published a summary of dates for IUGG2019 Scientific Program Committee (SPC) activities. Please visit http://iamas.org/NewsLetters/IAMAS-InfoEmail_201802_.pdf for details.

Franz Kuglitsch, IAG Assistant Secretary General

Meetings Calendar

IAG Sponsored Meetings

International Review Workshop on Satellite Altimetry Cal/Val Activities and Applications

April 23-26, 2018, Chania, Greece

URL: <http://frm4alt.eu/int-cal-val-review>

UN GGIM AP / IAG / FIG Technical Seminar on Reference Frames in Practice

May 4-5, 2018, Istanbul, Turkey

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

EUREF Symposium 2018

May 30 – June 1, 2018, Amsterdam, The Netherlands

URL: <http://euref2018.nl>

10th IVS General Meeting

June 3-8, 2018, Longyearbyen, Spitsbergen, Norway

URL: <http://www.ivs2018.no>

First Workshop on the International Geodynamics and Earth Tide Service (IGETS)

June 18-20, 2018, Potsdam, Germany

URL: <http://isdc.gfz-potsdam.de/igets-data-base/igets-workshop-2018/>

* World Earthquake GEodesy Network for Environmental Hazard Research. Since 2012, WEGENER has become Sub-commission 3.5 of the International Association of Geodesy: Tectonics and Earthquake Geodesy.

IX Hotine-Marussi Symposium on Mathematical Geodesy

June 18-22, 2018, Rome, Italy

URL: <https://sites.google.com/uniroma1.it/hotinemarussi2018/>

42nd COSPAR Scientific Assembly (with REFAG2018 and Panel on Satellite Dynamics)

July 14-22, 2018, Pasadena, CA, USA

URL: <http://cospar2018.org/>

IAU XXXth General Assembly

August 20-31, 2018, Vienna, Austria

URL: <http://astronomy2018.univie.ac.at/>

19th General Assembly of WEGENER

September 10-13, 2018, Grenoble, France

URL: <https://wegener2018.sciencesconf.org>

GGHS2018

September 17-21, 2018, Copenhagen, Denmark

“Gravity, Geoid and Height Systems 2” Symposium, 2nd joint meeting of the International Gravity Field Service and Commission 2 of the IAG

URL: <http://www.space.dtu.dk/gghs2018>

International DORIS Service (IDS) Workshop

September 24-29, 2018, Ponta Delgada, Azores

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

IGS 2018 Workshop

October 29 – November 2, 2018, Wuhan, China

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

21st International Workshop on Laser Ranging

November 5-9, 2018, Canberra, Australia

URL: <http://www.serc.org.au/iwlr-2018/>

27th IUGG General Assembly

July 8 – 17, 2019, Montreal, Canada

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

IAG Related Meetings

Munich Satellite Navigation Summit 2018

March 15-17, 2018, Munich, Germany

URL: <http://www.munich-satellite-navigation-summit.org>

EGU General Assembly 2018

April 8-13, 2018, Vienna, Austria

URL: <http://www.egu2018.eu/>

Scientific Congress of the National Geodesy and Geophysics Union of Turkey

May 30 – June 2, 2018, Izmir, Turkey

URL: <http://www.tujbkongre2018.org/en/>

AOGS 15th Annual Meeting

June 3-8, 2018, Hawaii, USA

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

Baltic Geodetic Congress 2018

June 21-23, 2018, Olsztyn, Poland

URL: <http://bgc2018.systemcoffee.pl>

IX International Symposium "Metrology of Time and Space"

September 12-14, 2018, Mendeleevo, Russia

URL: <http://www.vniiftri.ru/index.php/en/news/conferences/741-sym9>

ION GNSS+ 2018

September 24-28, 2018, Miami, Florida, USA

URL: <https://www.ion.org/gnss/>

GGOS Days 2018

October 2-4, 2018, Tsukuba, Japan

URL: <http://ggosdays.com/en/meetings/2018/ggos-days/general/>

EVN Symposium and Users' Meeting

October 8-11, 2018, Granada, Spain

URL: <http://evnsymp2018.iaa.es/>

AGU 2018 Fall Meeting

December 10-14, 2018, Washington, D.C., USA

URL: <https://meetings.agu.org/>

EGU General Assembly 2019

April 7-12, 2019, Vienna, Austria

URL: <http://www.egu2019.eu/>

AOGS 16th Annual Meeting

July 28 – August 2, 2019, Singapore, Singapore

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

Obituary

Yoshihide Kozai (1928-2018)



Dr. Yoshihide Kozai, Honorary Professor of the National Astronomical Observatory of Japan (NAOJ) and also the founding Director General of NAOJ from 1988 to 1994, passed away due to liver failure at 6:15 p.m. on Monday, February 5, 2018, at age 89.

Dr. Kozai was first appointed to the University of Tokyo's Tokyo Astronomical Observatory (TAO) in 1952 and ever since then he consistently made efforts to develop TAO and later NAOJ. He became Director General of TAO in 1981. After TAO was reorganization away from the University of Tokyo and combined with other institutes into an Inter-University Research Institute Corporation in 1988, he became the founding Director General of NAOJ and continued in that position for another 6 years. He served as the President of the International Astronomical Union (IAU) from 1988 to 1991. He was the first Japanese president of IAU and worked internationally. In the

International Association of Geodesy (IAG), Yoshihide Kozai served as a President of the Commission VIII on Artificial Satellites between 1975-1979. For his great contributions he was awarded "IAG Fellow" in 1991.

On the research side, he specialized in celestial mechanics and proposed the "Kozai mechanism (Kozai-Lidov mechanism)" which explains the orbital changes of asteroids in inclined orbits due to the gravity of the planets. He was also a worldwide authority on artificial satellite motion. He pioneered in geopotential recovery from satellite motions including odd order harmonics, and analyzed orbit of geostationary satellites. He produced many very important achievements in astronomy and geodesy. He received the Imperial Prize and the Japan Academy Prize in 1979, Second Class Order of the Sacred Treasure in 2002, and Person of Cultural Merit in 2009. On the other hand, he was warm and approachable with amateur astronomers. He wrote books for the public and was also an editorial committee member of astronomical magazines. For more info from NAOJ please visit: <https://www.nao.ac.jp/en/news/announcements/2018/20180213-kozai.html>.

We respectfully mourn his passing.

KOJI MATSUMOTO

József Závoti (1949-2017)



Photo: Tamás Pluzsik

Professor József Závoti, mathematician and geodesist, passed away in mid-November 2017. A colleague left the scientific community, who was respected for his knowledge and scientific achievements, and who was loved for his modesty, helpfulness both in his country and abroad.

József Závoti was born on November 30, 1949 in Szekszárd (South Hungary). He studied applied mathematics at the Eötvös Loránd University in Budapest. After his university studies at the end of 1974 József moved to Sopron where he lived with his family until the end of his life. His wife is a speech therapist, associate professor at Sopron University, his son Zoltán economist, daughter Zsuzsa researcher of English and Norwegian linguistics. From 1975 he started working at the Geodetic and Geophysical Research Institute (GGRI) of the Hungarian Academy of Sciences. His initial institute work was computer program and instrument (e.g. calibration of levelling rods, gyrotheodolite procedures) developments.

His first big research project was related to the digital terrain modelling (DTM) that revolutionized the accuracy of the maps. In his terrain model Závoti used spline interpolation based height estimates, which, in addition to continuity, also provided differentiability, what is a prerequisite for fracture free automatic level line drawing. In a co-operation with his colleagues, he developed new algorithms for altitude estimation based on the neighbourhood relationship. Relying on his grid-based digital terrain model by his colleagues special DTM applications have been developed (e.g. to designate watershed and catchment area boundary lines), for which special graph theory algorithms have been also used. Based on his research results in 1985 Závoti defended his candidate's thesis (which corresponds to today's PhD thesis).

The next major step in his scientific career has been the research and development of robust estimation procedures which are of decisive importance in eliminating various measurement errors. His purpose was to reduce the impact of rough errors in the case when measurement data do not have normal distribution. According to geodetic traditions, the weighted least squares based methodology was used by him for practical purposes. Based on these results, in 1998, he defended his habilitation thesis at the Budapest University of Technology and Economics (Faculty of Civil Engineering, Specialization Geographical Information Systems and Surveying Engineering). Shortly thereafter, in 2000, he became a Doctor of Technical Sciences (DSc) of the Hungarian Academy of Sciences.

Since the early 1990s, József Závoti dealt with time-series analysis. The results achieved in this field were used in cooperation with German, Austrian, Belgian and Hungarian experts for the study of earth-rotation, earth tidal and tidal friction research. For the study of the tidal friction phenomenon the robust estimation procedures were successfully applied. Thanks to this, the international research team has been able to show that in the rise of the length of day jump-like changes happened during the history of Earth. During the analysis of the global GPS time series the detection of high frequency components of the polar motion has become possible, among them the periods of diurnal and semi-diurnal tidal waves.

In the early 2000s, jointly with Professor D. Fritsch (University of Stuttgart), Závoti developed a new Helmert transformation based alternative photogrammetric method. Also to Stuttgart is linked a research related

to geographic information systems. A wavelet transformation based data compression procedure has been developed by Závoti during his stay in Germany.

An important point in his professional career was when on the basis of recommendation of the GGRI research community he was appointed by the president of the Hungarian Academy of Sciences to the director of the institute. In addition to his professional skills, Závoti was particularly suitable for this position because his patient and thoughtful personality. The director's activities were undertaken by him till 2012, until his retirement. Then Závoti worked as a scientific consultant.

He was an active member of the scientific community all the time. Závoti was the President of the Geodetic and Geoinformatics Committee between 2002 and 2008. He was the Editor-in-Chief of *Acta Geodaetica et Geophysica* between 2008 and 2013. Until his retirement in 2015, he was executive chairman of the Learned Society of Sopron.

The passing away of our colleague and friend is an irreplaceable loss for the community of geodesists and geophysicists.

PÉTER VARGA