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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

NGDM 2016

12-13 April 2016, Prague, Czech Republic

New Geotechnologies for Disaster Management

The conference will be focused on the following topics:

- Trends and new technologies in deformation monitoring and disaster management
- Mine surveying in disaster management
- New instruments and measuring techniques
- Using InSAR and radar interferometry for deformation monitoring and disaster management
- Laser scanning applications
- Remote sensing and GNSS applications
- Engineering surveys in managing natural disasters
- Deformation measurement
- Recent industrial surveying and sensing technologies and applications
- Contribution of geodesy to disaster management
- Spatial planning in post-disaster and post-conflict situations

All theoretical, methodological and conceptual reports presenting contemporary geosciences development and problems solving ideas are welcome.

Papers intended for the Conference Proceedings might be technical papers, company and institution developments, cases studies, practical solutions or research in progress. Authors must submit an abstract (150 - 300 words). Abstracts of papers together with the names of all authors have to be submitted to Milan.Talich@utia.cas.cz 13 March 2016 at the latest. Please find the presentation format requirements on the website of the conference at <http://p-insar.cz/ngdm2016/>.

Important Dates:

13 March 2016-Abstract submission deadline
18 March 2016 -Notification on paper acceptance
19 March 2016-Early bird registration deadline
10 April 2016-Paper submission deadline
12-13 April 2016-Conference

Conference Publication

All abstracts will be reviewed. Papers accepted on the basis of abstracts will be published online in ISBN proceedings and sent to the ISI Proceedings indexing.

Selected papers will be sent for publication in the following journals based on their quality and reviewers' recommendations:

- [Acta Geodynamica et Geomaterialia](#) (Impact factor Web of Science = 0.389)
- [Geoinformatics FCE CTU](#) (Articles are licenced under a Creative Commons Attribution 4.0 International licence (CC BY 4.0) and the journal is included in the Directory of Open Access Journals (DOAJ). All articles have DOIs assigned and are indexed in the CrossRef database.)

Other information related to the conference will be included in the second circular and posted on the web. Should you have any further questions, please do not hesitate to contact Milan.Talich@utia.cas.cz

Prof. Pavel Novák, Ph.D.
Conference Committee Chair

Milan Talich, Ph.D.
Chairman of the Organizing Committee

*NEW School on Geoid Computation
6-10 June 2016, Ulaanbaatar, Mongolia*

The International Service for the Geoid (ISG) is pleased to inform you that the new School on geoid computation methods will be held in Ulaanbaatar, Mongolia, during the second week of June 2016 (6-10 June 2016).*

The Local Organizing Committee, at The Ministry of Construction and Urban Development (MCUD) of Mongolia, is preparing the official website with all news on costs, registration and logistic. In the meantime, while the website is under preparation, interested people can contact ISG. (<http://www.isgeoid.polimi.it>)

We kindly ask you to disseminate this news.

Sincerely

Mirko Reguzzoni (President)
Giovanna Sona (Director)
Cinzia Vajani (Technical Staff)

*IAG Commission 4 „Positioning and Applications” Symposium
4-7 September 2016, Wroclaw, Poland*

Invitation

The Institute of Geodesy and Geoinformatics, Wroclaw University of Environmental and Life Sciences, in a collaboration with the Institute of Geodesy, University of Warmia and Mazury in Olsztyn, would like to cordially invite you to the IAG Commission 4 „Positioning and Applications” Symposium, that will be held in Wroclaw, Poland, on September 4-7, 2016 (Sunday to Wednesday). Website of the Symposium is <http://www.igig.up.wroc.pl/IAG2016/>.

Venue location:

Faculty of Environmental Engineering and Geodesy

Local Organizing Committee

Tomasz Hadaś, tomasz.hadas@up.wroc.pl
Krzysztof Sośnica, krzysztof.sosnica@up.wroc.pl
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MARCELO SANTOS

*Fourth International School on “The KTH Approach to Modelling the Geoid”
25-29 September 2016, Johor Bahru, Malaysia*

After the successful experiences in the determinations and evaluations of precise local geoid models in different countries, we plan to arrange the fourth International Geoid School based on the KTH approach. (KTH is a Swedish abbreviation for Royal Institute of Technology, Stockholm, Sweden.). The school will be arranged at Universiti Teknologi Malaysia (UTM) from 25 to 29 September, 2016, to be hosted again by the Department of Geomatic Engineering, Faculty of Geoinformation and & Real Estate, UTM, Johor Bahru, Malaysia.

Detailed information and registration form can be downloaded from the following webpage:

<https://www.kth.se/en/abe/inst/som/avdelningar/geo/geodesi/handelser-1.78120>

LARS SJÖBERG

Meetings Calendar

Munich Satellite Navigation Summit

March 1 – 3, 2016, Munich, Germany

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

2nd IVS Training School on VLBI for Geodesy and Astrometry

March 9 – 12, 2016, Hartebeesthoek, South Africa

URL: http://www.evga.org/2nd_vlbi_school.html

9th IVS General Meeting

March 13 – 17, 2016, Ekudeni (Johannesburg), South Africa

URL: <http://ivs2016.hartrao.ac.za/>

JISDM 2016

March 30 – April 1, 2016, Vienna, Austria

3rd Joint International Symposium on Deformation Monitoring

URL: <http://www.jisd2016.org/>

NGDM 2016

April 12 – 13, 2016, Prague, Czech Republic

New Geotechnologies for Disaster Management

URL: <http://p-insar.cz/ngdm2016/>

TG-SMM 2016

April 12 – 15, 2016, Saint Petersburg, Russia

4th IAG Symposium “Terrestrial gravimetry. Static and mobile measurements”

URL: <http://www.elektropribor.spb.ru/tgsmm2016/eindex>

EGU General Assembly 2016

April 17 – 22, 2016, Vienna, Austria

URL: <http://www.egu2016.eu/>

ICEE-PDRP 2016

April 24 – 26, 2016, Bhaktapur, Nepal

International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning

URL: <http://icee-pdrp2016.com>

FIG Commission 5 Technical Seminar on Reference Frames in Practice

May 1 - 2, 2016, Christchurch, New Zealand

URL: <http://www.fig.net/fig2016/commission5.htm>

FIG Working Week 2016

May 2 – 6, 2016, Christchurch, New Zealand

URL: <http://www.fig.net/fig2016/>

ESA Living Planet Symposium 2016 and 6th GOCE User Workshop

May 9 – 13, 2016, Prague, Czech Republic

URL: <http://lps16.esa.int/>

Airborne Gravimetry for Geodesy Summer School

May 23 – 27, 2016, Silver Spring, Maryland, USA

URL: <http://geodesy.noaa.gov/>

EUREF Symposium 2016

May 25 - 27, 2016, San Sebastian, Spain

URL: http://www.euref.eu/euref_symposia.html

European Navigation Conference 2016

May 30 – June 2, 2016, Helsinki, Finland

URL: <http://www.enc2016.eu>

Baltic Geodetic Congress

June 2 – 4, 2016, Gdansk, Poland

URL: <http://www.bgc.geomatyka.eu/2016/>

18th Geodynamics and Earth Tide Symposium 2016

June 5 – 9, 2016, Trieste, Italy

URL: <http://www.lithoflex.org/g-et/>

ISG Geoid School

June 6 – 10, 2016, Ulaanbaatar, Mongolia

URL: <http://www.isgeoid.polimi.it/>

6th International Conference on Cartography & GIS

June 13-17 2016, Albena, Bulgaria

URL: <http://www.iccgis2016.cartography-gis.com/>

ISDE 2016

July 7-8 2016, Beijing, China

URL: www.isde2016summit.org

International Conference “Data Intensive System Analysis for Geohazard Studies”

July 18 – 21, 2016, Sochi region, Mountain cluster, Russia

URL: <http://sochi2016.gcras.ru/>

GAGER 2016

July 18 – 23, 2016, Wuhan, Hubei, China

Geodesy, Astronomy and Geophysics in Earth Rotation (GAGER2016) – A Joint IAU / IAG / IERS Symposium

URL: <http://main.sgg.whu.edu.cn/gager2016/>

International Symposium on Geodesy and Geodynamics (ISGG2016)

July 22 – 26, 2016, Tianjin, China

URL: <http://isgg2016.csp.escience.cn>

ICG+2016

July 27 – 30, 2016, Shanghai, China

IAG/CPGPS International Conference on GNSS+

URL: <http://202.127.29.4/meetings/icg2016>

41st COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

URL: <http://www.cospas-assembly.org/>

AOGS 13th Annual Meeting

July 31 – August 5, 2016, Beijing, China

URL: <http://www.asiaoceania.org/aogs2016/>

IAG Commission 4 „Positioning and Applications” Symposium

September 4-7, 2016, Wroclaw, Poland

URL: <http://www.igig.up.wroc.pl/IAG2016/>

18th General Assembly of WEGENER

September 12-15, 2016, Azores, Portugal

WEGENER 2016: Understanding earth deformation at plate boundaries

URL: <http://wegener.segal.ubi.pt>

ION GNSS+ 2016

September 12-16, 2016, Portland, USA

URL: <http://www.ion.org/gnss/index.cfm>

GGHS2016

September 19-23, 2016, Thessaloniki, Greece

URL: <http://www.gghs2016.com>

4th International School on "The KTH Approach to Modelling the Geoid"

September 25-29, 2016, Johor Bahru, Malaysia

URL: <https://www.kth.se/en/abe/inst/som/avdelningar/geo/geodesi/handelser-1.78120>

INTERGEO, Geodätische Woche

October 11 – 13, 2016, Hamburg, Germany

URL: <http://www.intergeo.de/>

IDS Workshop

October 31 – November 1, 2016, La Rochelle, France

URL: <http://ids-doris.org/meetings/ids-meetings.html>

SAR Altimetry Workshop

October 31 2016, La Rochelle, France

URL: <http://www.aviso.altimetry.fr/en/news/events-calendar.html>

OSTST 2016

November 1 – 4, 2016, La Rochelle, France

URL: <http://ids-doris.org/meetings/ids-meetings.html>

AGU 2016 Fall Meeting

December 12 – 16, 2016, San Francisco, California, USA

URL: <http://meetings.agu.org/upcoming-meetings/>

EGU General Assembly 2017

April 23-28, 2017, Vienna, Austria

URL: <http://www.egu2017.eu/>

IAG and IASPEI Joint Scientific Assembly

July 30 – August 4, 2017, Kobe, Japan

URL: <http://iag.dgfi.tum.de/index.php?id=291>

AGU 2017 Fall Meeting

December 11-15, 2017, New Orleans, LA, USA

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

AGU 2018 Fall Meeting

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

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

27th IUGG General Assembly

July 8 – 17, 2019, Montreal, Canada

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

Reports

IGS Analysis Workshop Held for the First Time in Australia

The IGS (International GNSS Service) Workshop was held in Sydney, Australia, 8-12 February 2016. The workshop attracted about 180 participants, two thirds of which were from countries other than Australia, and was hosted in the new conference facilities of the University of New South Wales (UNSW). There were 62 papers and 89 poster presentations. Three keynote presentations were made:

- *Precise Positioning for the Mass Market*, by Todd Humphreys
- *GNSS Radio Occultation Science & Applications*, by Jan Weiss
- *Sea Level Change: A Scientific & Social Challenge for the 21st Century*, by John Church

All previous IGS workshops had been held on a biennial basis in either North America or Europe (the last one was in Pasadena, USA, 23-27 June 2014). It is noteworthy that from the very beginning Australia contributed GPS tracking data from its core Australian receiver stations to the IGS Data Centres. Peter Morgan and John Manning were early members of the IGS Governing Board (GB). Over the years Australia has provided GNSS data from ever more stations, on the Australian continent, from its territories, from Antarctica, and from a dozen sites across the South Pacific. It participates in the Multi-GNSS Experiment (MGEX) and the Real-Time Service (RTS). The current chair of the GB is Gary Johnston from Geoscience Australia (GA). The new Analysis Centre Coordinators both have links to Australia. One is based at GA (Michael Moore), the other at MIT (Tom Herring). Australia also contributes to the development of eGeodesy standards, and to a number of WGs. Hence the hosting of this workshop in Australia acknowledges the important contributions made by Australian GNSS geodesists.

The IGS Workshop provides an opportunity for the IGS community to come together to present the latest results in high accuracy GNSS techniques, to discuss the quality of the IGS products, and to decide future strategies. In particular the IGS Working Groups (such as Analysis Centres, Data Centres, Infrastructure, Bias & Calibration, RTS, MGEX, Troposphere, Ionosphere, Orbit Modelling, and others) meet to decide on changes to software, models, analysis methodologies, data management, GNSS network operations, etc, that will improve the quality, timeliness and relevance of current (and planned) IGS data products. The IGS GB also met twice to set future directions and consider a series of recommendations from the workshop.

Amongst the highlights of the IGS Workshop were an analysis of the IGS's contribution to the recent ITRF2014 solution (see GIM March article), progress in the MGEX, progress of the RTS, and the role of the IGS in the International GNSS Monitoring & Assessment initiative proposed by the UN's International Committee on GNSS (ICG). However the most important outcome is that the IGS reaffirmed its commitment to increase the range of its products to include the BeiDou, Galileo, QZSS and IRNSS constellations.

IGS continues to evolve into a true multi-GNSS service, providing unique high quality products to support many scientific and societal applications of GNSS. All workshop presentations will be available from the IGS web site <http://www.igs.org>.

CHRIS RIZOS



IGS Workshop participants at UNSW, 8-12 February 2016

Obituary

Alexander Kopaev (1962 – 2016)



On February 17, 2016 Alexander Kopaev, the candidate of physical and mathematical sciences, the senior research associate of the Department of gravitational measurements of the State Shernberg Astronomical Institute, the associate professor of celestial mechanics, an astrometry and gravitation measurements of Physical Faculty of Lomonosov Moscow State University untimely died. Alexander was the author of about hundred scientific articles, five monographs, numerous reports at conferences, the course of lectures "Gravitation measurements", the manual "Use of High-precision Gravitation Measurements for the Study of Vertical Earth Movements", training examples for university practical studies "Application of microgravitation measurements for search near surface objects", "Use of high-precision gravitation measurements

for research of vertical earth movements". He had defended of the PhD thesis "Spatial reductions of precise gravity measurements" under Marat Sagitov management.

Alexander Kopaev was the recognized talented researcher in the field of instrumental gravimetric measurements. Its scientific interests covered many areas of Earth sciences, such as geodesy, geophysics, geodynamics, geotectonics. He was the active and regular participant of the International comparisons of absolute ballistic gravity meters, thus skillfully solving a problem of microgravimetric support for these important metrological actions.

Alexander Kopaev was the permanent and active member, and also the secretary of the Geodesy Section of the National Geophysical Committee of the Russian Academy of Sciences. The last years Alexander Kopaev fruitfully combined teaching activity with work at the Federal State Unitary Enterprise "National research institute of physico-technical and radio engineering measurements" (FSUE "VNIIFTRI").

Everybody who had enough to work with Alexander Kopaev in Russia and abroad knows him as sincere, sociable and kind person.

The Russian and world scientific community lost the talented researcher and the teacher. Light memory of Alexander Kopaev remains in the hearts of his colleagues and pupils.

VLADIMIR I. KAFTAN