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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](mailto: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

**Books for review are the responsibility of:**

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## General Announcements

### ***Reopened Call for Proposals for hosting the Central Bureau of the International Gravity Field Service***

The International Gravity Field Service (IGFS) is a unifying ‘umbrella’ IAG service which



- coordinates collection, validation, archiving and dissemination of gravity field related data,
- coordinates exchange of software for gravity field activities,
- coordinates courses, information materials and general public outreach relating to the Earth’s gravity field,
- implements practical standards for general gravity field-related reference system issues, such as a global vertical datum.

The IGFS was established by the International Association of Geodesy Executive Committee at the IUGG General Assembly in Sapporo, Japan, August 2003, and is an IAG ‘Level-2’ service under IAG Commission 2 – Gravity Field. One of the main arguments for establishing the IGFS was to provide a leading role of the gravity field services, as one of the three fundamental pillars in the IAG’s first project - GGOS, the Global Geodetic Observing System, which now is a major component of the IAG.

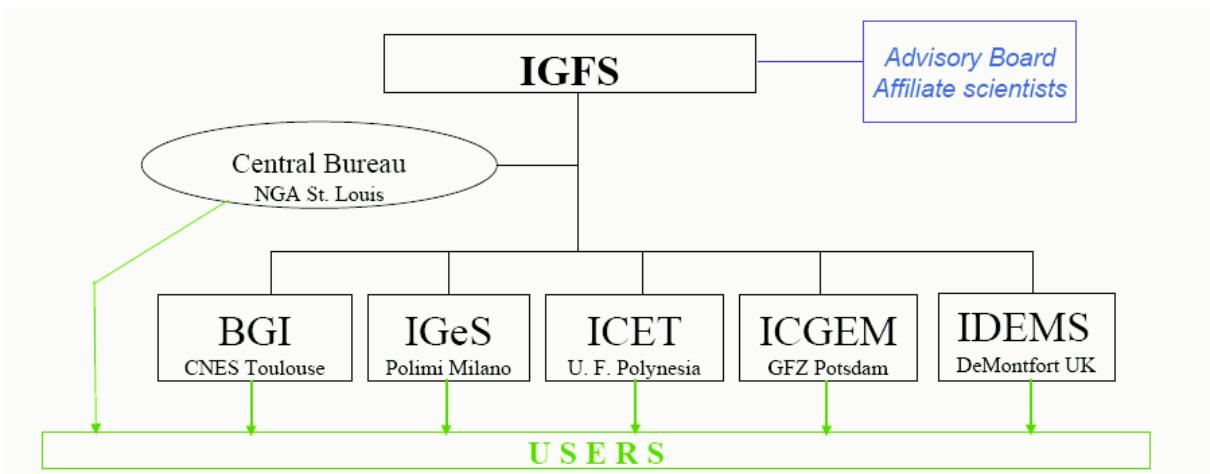
The overall goal of the IGFS is to coordinate the servicing of the geodetic and geophysical community with gravity field related data, software and information. The combined data of the IGFS entities data will include satellite-derived global models, terrestrial, airborne and marine gravity observations, time-dependent gravity data, GPS levelling data, digital models of terrain and bathymetry, as well as ocean gravity field and geoid from satellite altimetry. Thus both the static and the temporal variations of the Earth’s gravity field will be covered by the IGFS.

Another important role of the IGFS is to take new initiatives and coordinate international data collection projects, such as, e.g., Arctic and Antarctic Gravity and Geoid Projects, and the support of development of high and ultra-high resolution global geopotential models, such as NGA’s EGM08 and its evaluation.

The IGFS is not handling gravity field data distribution directly. The IGFS will function as a unifying service and contact for the following gravity field related services (IGFS Centres):

- **BGI** – International Gravimetric Bureau – collection, archiving, distribution of gravity data. Hosted by CNES, Toulouse.
- **IGeS** – International Geoid Service – collection and distribution of geoid models and related software, geoid schools – hosted by Politecnico di Milano.
- **ICET** – International Centre for Earth Tides – collection and archiving of global Earth tide data, including data from the Global Geodynamics Project – hosted by the University of French Polynesia.
- **ICGEM** – International Centre for Global Earth Models – distribution of satellite and surface spherical harmonic models – hosted by GFZ Potsdam.
- **IDEMS** – International DEM Service – provision of Global Digital Terrain Models – hosted by DeMontfort University, UK.
- **GGP** – Global Geodynamics Project – the coordination of global network of superconducting gravimeters (to be confirmed)
- **IGFS Technical Centre** – National Geospatial-Intelligence Agency, USA (G&G dept.) – advises on global models, geoid and gravity, supplementing other services.

The structure of the IGFS centres is shown in Figure 1, and can be seen on [www.igfs.net](http://www.igfs.net).



Currently only one working group under the IGFS is active (EGM08 validation WG has terminated the work):- Working Group on Absolute Gravimetry - Standardization and Networks – chaired by H. Wilmes, BKG, Germany.

The IGFS held a Retreat in 2008, and has identified areas such as implementation of a new global vertical datum, coordination of repeated global absolute gravity measurements, and the unification of temporal satellite gravity field solutions, as potential future tasks for the IGFS.

### **THE ROLE OF THE CENTRAL BUREAU**

#### **Charter**

The Central Bureau of the IGFS serves as the executive arm of the IGFS Directing Board (former Advisory Board). The CB should organize and coordinate task forces to

- Define standards for gravity field data observation procedures, anomaly computations, and associated data corrections (meteorology, hydrology, postglacial rebound, etc.)
- Provide recommendations for data processing methods and reductions
- Establish data exchange and archival formats
- Define and implement fundamental geopotential reference systems
- Evaluate and recommend relevant auxiliary geophysical models
- Facilitate the provision of digital elevation models and density values for gravity field determination and modeling

The CB should coordinate activities related to

- The design and realization of global absolute and superconducting gravimetry networks, with special emphasis on co-located sites for GGOS and regional densifications
- The facilitation and coordination of regional gravity field determination and data exchange projects in order to improve medium to short wavelengths (e.g., Arctic and Antarctica)• The definition and realization a global vertical datum
- The integration of terrestrial, airborne and satellite measurements in practice
- The improvement of the use of satellite-derived DEMs for gravity field modeling
- The evaluation and calibration of satellite-derived temporal gravity field variations as well as the improvement of processing of satellite data
- Making gravity data, geopotential models (static and time-variable), geoid estimates and other gravity field related products available for general use
- Public outreach on the Earth's gravity field by
  - Organizing meetings and schools on gravity, geoid and related geophysics
  - Making software and tutorials for gravity and geoid analysis available.
  - Establishing and maintaining a web site with links to IGFS Centres

#### **High Level Tasks**

- Provide link between the IGFS entities, IAG, and external projects, networks or organizations (oceanic, atmospheric, hydrologic, ...).
- Provide link to the GGOS bureau and communicate their requirements and recommendations to the IGFS. Implement standards and recommendations related to gravity field observations, secure consistency with geometric standards, and promote their use within the geoscientific community.

### ***Organization***

- Tasks of permanent nature concerning all IGFS shall reside within the Central Bureau. Tasks of temporary nature may be delegated to ad-hoc committees and . The Central Bureau will be headed by a Director, and will have a secretariat to provide administrative, communication and web support.
- The Central Bureau will include such expertise as is necessary to conduct Bureau business and provide guidance and oversight to the supporting entities.
- Dedicated working groups and analysis may be set up for specific issues dealing with particular aspects of gravity field related issues.
- The Director will report to the IGFS Directing Board and the IAG Executive Committee. The Director forms together with the IGFS Chairman and the head of the Technical Centre the IGFS management group.
- The Director of the Central Bureau will be a member of the GGOS Steering Committee on behalf of the IGFS.

### ***Interfaces with Internal and External Entities***

The Central Bureau acts essentially as representative of the IGFS and is liaison to other geodetic and geophysical services, especially to the GGOS entities. There must be a routine exchange of information and regular meetings with representatives of the IGFS. A close contact has to be kept to the GGOS Bureaus for 'Standards and Conventions', 'Networks and Communications' and 'Satellite Missions' as well as the 'Coordination Office'.

### ***IGFS Central Bureau – Call for Proposals***

On behalf of the International Association of Geodesy, the IGFS and its member services hereby request proposals for the operation of the IGFS Central Bureau. An organizational structure to operate the Central Bureau and an operational plan must be provided in the proposal. The proposal should clearly address the capabilities being offered by the institution, its financial ability and commitment to carry them out, and appropriate points of contact.

The funds required for the IGFS Central Bureau have to be provided by the proposing institution. Proposers may also solicit support from external entities in terms of financial contributions and expertise. From the proposal it should be clear that the proposing institution has the expertise, capabilities and financial background to perform the proposed tasks.

The initial term of this appointment will be 4 years. The term will be automatically renewed subject to satisfactory performance, unless either party gives notice 6 months prior to the end of the term.

Earlier applicants from the previous calls for hosting of the IGFS CB are encouraged to resubmit a proposal with more details on the implementation plan.

### ***Proposal Structure, Deadline and Submission***

The proposal should contain the following parts: title, proposing institution and its address, designated head of the bureau, abstract, goals, expertise, work, schedule and allocated resources.

The proposal should outline an implantation plan for the daily functioning of the Central Bureau, including names and experience of staff (if already known).

The proposal should include planned points of contacts, and the anticipated way of securing efficient communication with the individual gravity field services (IGB, IGeS, ICGEM, ...), the elected president of the IGFS and the GGOS executive. If the director of the Central Bureau is not physically located at the same place as the CB secretariat, details should be provided on how the CB will secure the smooth operation of its regular business.

Some ideas or vision on how to improve the performance of the IGFS in terms of better supporting global geodesy and GGOS from the gravity field community would be welcome.

A time schedule should be given for setting up the web site and communications.

Proposals should be concise, no more than 7-8 pages in length. Proposals should be submitted electronically and by mail not later than **June 1, 2010**. A pdf (or mailed-in) letter by the responsible head of the proposing institution, with the authority for the commitment of human and financial resources, should be enclosed.

The detailed Call for Proposal can also be downloaded from the IAG website <http://www.iag-aig.org>.

Applications to be send to the IAG General Secretary:

*International Association of Geodesy (IAG)*

*c/o Deutsches Geodätisches Forschungsinstitut (DGFI)*  
*Alfons-Goppel-Straße 11*  
*D - 80 539 Muenchen, Germany*  
*Tel +49 - 89 - 23 031 -1113*  
*Fax +49 - 89 - 23 031 -1283*  
*E-mail [iag@dgfi.badw.de](mailto:iag@dgfi.badw.de)*

with a copy to the IGFS Chair Rene Forsberg at DTU-Space ([rf@space.dtu.dk](mailto:rf@space.dtu.dk)).

Questions to the present call can be directed to Rene Forsberg, to Steve Kenyon ([Steve.C.Kenyon@nga.mil](mailto:Steve.C.Kenyon@nga.mil)), member of the IAG Executive Committee and head of the IGFS Technical Centre, or to Michael Sideris ([sideris@ucalgary.ca](mailto:sideris@ucalgary.ca)), President of IAG.

The proposals will be evaluated and ranked by an evaluation committee appointed by the IGFS. The decision for awarding the IGFS Central Bureau will be taken by the IAG Executive Committee based on the recommendation of the IGFS committee. The successful proposer will be notified by July 2010 with the goal to start the IGFS Central Bureau activities no later than the end of 2010.

### **Schedule**

June 1, 2010:	Due date for proposals.
July 15, 2010:	Decision by Review Committee and IAG executive.
September 22-24:	Fairbanks IGFS Meeting, detailed implementation plan details.
November 1, 2010 (or as agreed):	Start of Central Bureau activities

IGFS, MARCH 17, 2010

## **Meeting Announcements**

### **EUREF Symposium 2010**

*June 2-5, 2010, Gävle, Sweden*

The next EUREF Symposium will be held in Gävle, Sweden, June 2-5, 2010. The 2010 symposium is organised by Lantmäteriet - the Swedish mapping, cadastral and land registration authority - and co-sponsored by KTH Royal Institute of Technology and Onsala Space Observatory at Chalmers University of Technology.

The scientific programme will cover the following preliminary topics:

- Activities of the TWG
- New Developments in GNSS Networks
- Modelling the Earth with GNSS
- Mitigation of GNSS Error Sources
- Height, Gravity, Geoid, and Combination of Techniques
- Improvements and Densifications of the ETRS89
- National Reports

The website of the 2010 symposium [www.lantmateriet.se/euref2010](http://www.lantmateriet.se/euref2010) from time to time will be completed. A *Best Student Poster Award* is offered and the winner will be awarded by 100 Euro. Last day for registration is **May 20, 2010**.

HELMUT HORNİK

### **IAG School on Reference Frames**

*June 7-12, 2010, Aegean University, Mytilene, Lesvos, Greece*



Organized by the IAG Study Group IC-SG1: Theory, implementation and quality assessment of geodetic reference frames (Commission 1: Reference Systems, ICCT, IERS)

School Topics:

- Basic Concepts of Reference Systems in Geodesy, Astronomy and Geophysics
- Reference Frame Combination and Time Series Analysis
- Models and Strategies for Global VLBI, SLR, GPS & DORIS Networks
- Height Systems

Lecturers:

- Z. Altamimi, IGN-LAREG, Chairman IAG Commission 1
- A. Dermanis, Aristotle University of Thessaloniki , Chairman IAG Study Group IC-SG1
- T. Herring, M.I.T.
- E. Pavlis, NASA Goddard & University of Maryland, Chairman ILRS Analysis Working Group
- M. Sideris, University of Calgary, IAG President
- P. Willis, Institut de Physique du Globe de Paris

Inquiries: Prof. Athanasios Dermanis, [dermanis@topo.auth.gr](mailto:dermanis@topo.auth.gr)

School web page: [http://www.topo.auth.gr/IAG2010\\_RefSchool/](http://www.topo.auth.gr/IAG2010_RefSchool/)

On behalf of the organization committee

ATHANASIOS DERMANIS

**TG-SMM2010: IAG Symposium on Terrestrial Gravimetry: Static and Mobile Measurements**

June 22-25, 2010, Saint Petersburg, Russia

Symposium topics include:

- instrumentation and methods for absolute and relative measurement of gravity fields, static and mobile measurements and their application to shipborne, airborne platforms (planes, helicopters, airships) and other mobile platforms;
- absolute ballistic gravimeters (including those based on the use of cold atoms), relative gravimeters of all types including superconducting gravimeters;
- gravity gradiometers;
- new results of measurement of gravity networks and the coverage of new regions;
- metrology issues in gravimetry, the results of the comparisons of absolute gravimeters, application of gravity measurements in metrology;
- standardization and databases of absolute measurements of the gravity field;
- gravitational experiments.

The following topics are especially welcome for presentation at the Symposium:

- new technologies and applications of gravity measurements such as planetary absolute and relative gravimetry;
- links between satellite and terrestrial or planetary gravity measurements;
- possible applications of terrestrial gravimetry in combination with GPS/GLONASS technologies;
- gravimetry applications in navigation.

Detailed information, online registration is at: <http://www.elektropribor.spb.ru/cnf/tg-smm2010/enfrset.html>.

L. F. VITUSHKIN

## **10<sup>th</sup> International Geoid School**

*"The Determination and Use of the Geoid"*  
June 8 – July 2, 2010, Saint Petersburg, Russia

Dear Colleagues!

We invite you and your colleagues to take part in the work of the 10th International Geoid School "The Determination and Use of the Geoid", which will be held on 28 June - 3 July 2010 at the State Research Center of the Russian Federation - Concern CSRI Elektropribor, JSC (Saint Petersburg, Russia).

The School is organized by the International Geoid Service (IGeS) and Concern CSRI Elektropribor, JSC. The School language is English.

The School program includes the lectures presented in English by the known scientists in geodesy:

- Introduction to Physical Geodesy - Prof. R.Barzaghi (Italy, DIIAR-Sec.Surveying Politecnico di Milano)
- Global Models - Prof. N.Pavlis (USA, NGA, Geodesy and Geophysics Basic and Applied Research)
- Collocation - Prof. I.Tziavos (Greece, Aristotle University of Thessaloniki, Department of Geodesy and Surveying)
- Terrain Correction - Prof. R.Forsberg (Denmark, DTU Space, National Space Institute, Technical University of Denmark, President of the International Gravity Field Service)
- Fourier Methods - Prof. M.Sideris (Canada, Department of Geomatics Engineering, Schulich School of Engineering, University of Calgary, President of the International Association of Geodesy)
- Marine Gravity - Prof. O.Andersen (Denmark, DTU Space, National Space Institute, Technical University of Denmark)

The seminars and practical exercises will be held. The School participants are provided with lecture abstracts, the CD with the geoid computation software from the International Geoid Service, and data for the exercises. After the lectures are over, each participant receives a CD-ROM with updated lectures.

Full information for the School participants, including the registration fee, the preliminary program, the registration form of a participant etc. will be available at the School website:

<http://www.elektropribor.spb.ru/cnf/school2010/enfrset.html>

To participate please apply in advance. The application for participation is submitted ONLINE at the School website.

LOCAL ORGANIZING COMMITTEE

## **WEGENER 2010 in Istanbul**

September 14-17, 2010, Istanbul, Turkey



The 15<sup>th</sup> General Assembly of WEGENER 2010, will be hosted by Bogazici University, Istanbul, Turkey on 14-17 September 2010. The 15<sup>th</sup> Assembly of WEGENER will provide a forum for presentation, discussion, coordination and scientific support for geoscientists interested in unravelling the kinematics and mechanisms of the broad Eurasian/African/Arabian collision zone. Contributions on new aspects arising from the new satellite missions for gravity, SAR and Laser Altimetry are welcome in particular. The call for abstracts is attached and further details are also available at [www.koeri.boun.edu.tr/jeodezi/wegener2010/](http://www.koeri.boun.edu.tr/jeodezi/wegener2010/).

All contributions will be subject to peer-review and will also be published in the formal proceedings of the WEGENER 2010. A special issue of the Journal of Geodynamics for WEGENER 2010 will be published and a limited number of papers will be invited for submission to a full refereeing process.

- Registration is now open (deadline for early-bird registration is **May 7, 2010**).
- Deadline for abstract submission is **June 18, 2010**.

HALUK OZENER  
On behalf of the Organizing Committee

***Updated Announcement for the 2<sup>nd</sup> General Assembly of the IGFS***

*September 20-22, 2010, Fairbanks, Alaska, USA*

Registration is now open for the 2<sup>nd</sup> General Assembly of the IGFS - International Gravity Field Service will be held 20-22 September, in Fairbanks, Alaska, USA. Alaska has spectacular natural beauty, and exceptional geodetic and geophysical signals due to its active tectonics, volcanism, and rapid changes in the cryosphere. With the ability to measure gravity field changes by satellites (GRACE), as well as by superconducting and repeated absolute gravity, applications of gravity field information have spread from geodesy and geophysics into much broader application errors such as climate studies, glaciology and hydrology, and the meeting will pay special attention to these themes in addition to the geodetic science. Registration is open now via our website, as is abstract submission. The abstract submission and early-bird registration payment deadline are both revised to **June 1**, and we have updated the travel information on the website. More information is on our website, and please email the conference email if you have problems.

Website: <http://www.gps.alaska.edu/IGFS2/>

Email: [igfs2@gi.alaska.edu](mailto:igfs2@gi.alaska.edu)

JEFFREY FREYMUELLER  
for the LOC

***First International School on “The KTH Approach to Modeling the Geoid”***

*September 20-24, 2010, Istanbul, Turkey*

After the successful experiences in the determinations and evaluations of precise local geoid models in different countries, we plan to arrange the First International Geoid School based on the KTH approach. (KTH is a Swedish abbreviation for Royal Institute of Technology, Stockholm, Sweden.). The school takes place on September 20-24, 2010, at, and hosted by, the Department of Geomatic Engineering, Yildiz Technical University, Istanbul, Turkey. The geoid school is lead by

Prof. Lars E. Sjöberg  
Royal Institute of Technology  
Division of Geodesy  
Stockholm, Sweden  
Head of Geoid School

Prof. Serif Hekimoglu  
Yildiz Technical University  
Institute of Geomatic Engineering  
Istanbul, Turkey  
Head of L. O. C.

Detailed information and registration form can be downloaded from the following webpage:  
<http://www.infra.kth.se/geo/events/geoidschool.html>.

MOHAMMAD BAGHERBANDI  
Division of Geodesy  
Royal Institute of Technology (KTH)

***International DORIS Service Workshop 2010***

*October 21-22, 2010, Lisbon, Portugal*

The next International DORIS Service (IDS) workshop will take place at the Lisbon International Fair in Portugal, from 21-22 October 2010.

The purpose of this workshop is to bring together representatives from all DORIS groups to share information about the network, data, products, and to perform inter-comparisons. Developments and scientific results in all aspects of the DORIS system will be highlighted. The meeting will be a forum for discussion and coordination of future activities.

The IDS workshop will be organised in conjunction with:

- The Ocean Surface Topography Science Team (OST-ST) meeting, 18-20 October 2010
- a special meeting: Towards higher resolution remote sensing of ocean dynamics and terrestrial surface waters, 21-22 October 2010

Structure of the meeting:

The IDS workshop will include thematic sessions and a splinter working session over a period of 2 days. The sessions will consist of oral presentations and posters. Among the topics to be discussed will be DORIS results with the new satellites (Jason-2 & Cryosat-2) and progress towards an operational IDS combination.

The workshop is organised by CNES and EUMETSAT.

Organising Committee:

EUMETSAT: Gabriele Kerrmann, Francois Parisot, Madeleine Pooley

CNES: Laurence Amen, Nicole Bellefond, Sophie Coutin-Faye, Pascale Ferrage (IDS)

The Scientific Committee will draw up a programme and an agenda at a later stage, according to the submitted abstracts.

Scientific Committee:

Frank G. Lemoine (chair), John Dow, Laurent Soudarin, Petr Stepanek, Pascal Willis.

Details regarding this IDS workshop as well as more general information on the two other associated meetings will be posted at the end of January 2010, on the conference web site <http://www.ostst-hydro-2010.com>, and on the IDS web site <http://ids-doris.org/html/events/IDS2010/>.

PASCALE FERRAGE

## ***Observing and Understanding Earth Rotation***

*A Joint GGOS/IAU Science Workshop*

*October 25-28, 2010, Shanghai, China*

The Earth's rotation, encompassing both the rate of rotation and the location of the rotation axis with respect to the Earth's crust, is not constant but changes on all observable time scales from subdaily to decadal and longer. The wide range of time scales on which the Earth's rotation changes reflects the wide variety of processes that are causing it to change, including external tidal forces, surficial fluid processes involving the atmosphere, oceans, and hydrosphere, and internal processes acting both within the solid Earth itself and between the fluid core and the solid Earth. Knowing the rotational response of the Earth to these global-scale processes allows Earth rotation measurements to be used to study them.

Measurements of the Earth's time varying rotation have been traditionally provided by optical astrometry and the space-geodetic techniques of satellite and lunar laser ranging (SLR and LLR), very long baseline interferometry (VLBI), global navigation satellite systems (GNSS), and Doppler orbitography and radio positioning integrated by satellite (DORIS). However, the launch of the GRACE twin gravity satellites in March 2002 and the densification of the global GNSS ground receiver network afford new opportunities for studying the Earth's rotation. GRACE is directly observing the effect of mass redistribution on the Earth's rotation, and the global network of GNSS ground receivers can be used to infer changes in the load acting on the Earth's surface and its effect on the Earth's rotation from observations of changes in the Earth's shape. Combining independent observations of the Earth's rotation, gravity, and shape will enable greater insight into the common processes causing them to change.

The Global Geodetic Observing System (GGOS) of the International Association of Geodesy (IAG) provides the geodetic infrastructure necessary for monitoring the Earth system, including changes in its rotation, gravity, and shape. This joint Science Workshop, organized by both GGOS and the International Astronomical Union (IAU), on Observing and Understanding Earth Rotation will be a forum for assessing our current ability to observe the Earth's time varying rotation, for assessing our current understanding of the causes of the observed variations, for assessing the consistency of Earth rotation observations with global gravity and shape observations, for exploring methods of combining Earth rotation, gravity, and shape observations to gain greater understanding of the mass load acting on the surface of the solid Earth, and for identifying

improvements in the global geodetic observing system needed to further our understanding of the Earth^N's variable rotation.

Please visit <http://GGOS-C19.shao.ac.cn/> for more information about this exciting workshop.

RICHARD GROSS

## **Contentious Issues In UNCLOS – Surely Not?**

*The Sixth ABLOS Conference: 25-27 October 2010*

The Advisory Board on the Law of the Sea (ABLOS) is a subsidiary body of the International Association for Geodesy (IAG) and of the International Hydrographic Organization (IHO). One of its mandates is to organize regular conferences that explore and clarify the interface between marine law and science.

The Sixth ABLOS Conference is scheduled for October 25-27, 2010, at the International Hydrographic Bureau in Monaco. This meeting will again gather specialists from a variety of disciplines to discuss challenges that arise in the application of marine science and technology while taking into account the juridical requirements of the UN Convention on the Law of the Sea (UNCLOS). This year's Conference Proceedings will be added to the accumulation of 125 or so Web-accessible presentations that have been delivered at the five previous Conferences, and which address numerous aspects of state practice and jurisprudence in the Law of the Sea. Past ABLOS Conferences have dealt with:

- *Technical Aspects of Maritime Boundary Delineation and Delimitation (1999)*
- *Accuracies and Uncertainties in Maritime Boundaries and Outer Limits (2001)*
- *Addressing Difficult Issues in UNCLOS (2003)*
- *Marine Scientific Research and the Law of the Sea: the Balance between Coastal State and International Rights (2005)*
- *Difficulties in Implementing the Provisions of UNCLOS (2008)*

Proceedings of all past Conferences are available on the ABLOS website at [www.gmat.unsw.edu.au/ablos/index.html](http://www.gmat.unsw.edu.au/ablos/index.html).

As in the past, Conference organizers seek presentations that discuss how the provisions of UNCLOS can affect undertakings in marine science and technology. Special consideration will be given to papers that describe real or anticipated problems, and which propose solutions to those problems. Speakers will be encouraged to outline selected legislation, and where appropriate to describe case histories, actual situations, or real-world experiences that could offer guidance to practitioners in other states. Following are some proposed session topics during the 2010 Conference. Suggestions for other topics will be welcomed.

- *Legal and technical complications specific to polar regions and island regimes*
- *Will international law keep pace with sea level rise and climate change?*
- *Geodesy and its significance in charting and cartography: legal implications*
- *Satellite imagery and its applications in the definition of baselines*
- *Anomalous continental margin features and their impact on maritime boundaries*
- *Regulating navigation and the exploitation of deep seabed resources*
- *UNCLOS obligations: a burden for some developing states?*

Abstracts should be submitted to Chris Carleton ([chris.carleton@ukho.gov.uk](mailto:chris.carleton@ukho.gov.uk)) by April 30, 2010. Formatting instructions are posted on <http://www.gmat.unsw.edu.au/ablos/ABLOS10Folder/AbstractFormat.pdf>.

Completed manuscripts of accepted papers should be submitted no later than August 31, 2010 to ensure inclusion in the Proceedings which will be distributed at the close of the Conference. Formatting and submission instructions are posted on <http://www.gmat.unsw.edu.au/ablos/ABLOS10Folder/PaperFormat.pdf>

A registration form can be downloaded from <http://www.gmat.unsw.edu.au/ablos/ABLOS10Folder/ABLOS2010ConfRego.pdf>

A certain number of rooms have been pre-booked at hotels in and close to Monaco. A hotel booking form can be downloaded from <http://www.gmat.unsw.edu.au/ablos/ABLOS08Folder/ABLOS2010HotelForm.doc>

## **Conference Organizing Committee**

Conference Chairman	Chris Rizos, University of New South Wales
COC Chairman	Ron Macnab, Geological Survey of Canada (Retired)
Programme coordinators	Chris Carleton and John Brown, UK Hydrographic Office
Advisor, Geodesy	Lars Sjoberg, Swedish Royal Institute of Technology
Advisor, Hydrography	Luiz Carlos Torres, Hydrographic Service of the Brazilian Navy
Secretariat services	Steve Shipman, International Hydrographic Bureau
Communications	Sunil Bisnath, York University, and Ron Macnab, Geological Survey of Canada (Retired)

CHRIS RIZOS

## **IAG Sponsored Meetings**

### **IAG School on Reference Frames**

*June 7-12, 2010, Aegean University, Mytilene, Lesvos, Greece*

The IAG School on Reference frames is organized by the IAG Study Group IC-SG1: Theory, implementation and quality assessment of geodetic reference frames (Commission 1, ICCT, IERS). For list of topics and other information please visit the webpage of the IAG School at [http://www.topo.auth.gr/IAG2010\\_RefSchool/](http://www.topo.auth.gr/IAG2010_RefSchool/).

### **TG-SMM2010**

*June 22-25, 2010, Saint Petersburg, Russia*

Terrestrial Gravimetry. Static and Mobile Measurements - TGSMM-2010 conference will be held in St. Petersburg, Russia between 22-25 June, 2010.

URL: <http://www.elektropribor.spb.ru/cnf/tg-smm2010/eindex.php>

### **10<sup>th</sup> International Geoid School**

*"The Determination and Use of the Geoid"*

*June 8 – July 2, 2010, Saint Petersburg, Russia*

The 10<sup>th</sup> International Geoid School "The Determination and Use of the Geoid" will be held on 28 June - 3 July 2010 at the State Research Center of the Russian Federation - Noncern CSRI Elektropribor, JSC (Saint Petersburg, Russia).

The school website: <http://www.elektropribor.spb.ru/cnf/school2010/enfrset.html>

### **IAG Commission 1 Symposium 2010: Reference Frames for Applications in Geosciences (REFAG2010)**

*October 4-8, 2010, IGN, France*

URL: <http://iag.ign.fr/index.php?id=140>

### **Observing and Understanding Earth Rotation**

*October 25-28, 2010, Shanghai, China*

URL: <http://GGOS-C19.shao.ac.cn/>

## **IAG Related Meetings**

### **EGU General Assembly 2010**

*May 2-7, 2010, Wien, Austria*

URL: <http://meetings.copernicus.org/egu2010/>

### **Geophysics, Geodesy and Tectonics of the North Africa Plate Boundary for Better Earthquake and Tsunami Hazard Assessment**

*May 15-21, 2010, Algiers, Algeria*

URL: [http://cdsagenda5.ictp.trieste.it/full\\_display.php?ida=a09134](http://cdsagenda5.ictp.trieste.it/full_display.php?ida=a09134)

## **INTERGEO EAST 2010**

*May 19-21, 2010, Istanbul, Turkey*

The Conference presents the latest international and national knowledge, experience and achievements. Main topics 2010 are urban regeneration, data acquisition technologies, cadastre, spatial technologies, Spatial Information Systems, international outreach, successful studies in the sector, map production and updating, terrestrial and aerial laser scanning applications. Please visit <http://www.intergeo-east.com/> for details.

## **UN-SPIDER Regional Africa Workshop**

*May 25-28, 2010, Addis Ababa, Ethiopia*

The UN-SPIDER Regional Workshop Building upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa will take place from 25 to 28 May 2010 in Addis Ababa, Ethiopia. This workshop, which is being organised together with the United Nations Economic Commission for Africa and supported by the Government of Austria, will be the major outreach event organised by UN-SPIDER on space-based information for disaster risk reduction and emergency management for the African continent in 2010. URL: [www.un-spider.org/workshop-addis-2010](http://www.un-spider.org/workshop-addis-2010)

## **BALWOIS 2010 - Conference on Water Observation and Information System**

*May 25-29, 2010, Ohrid, Republic of Macedonia*

Contact: [secretariat@balwois.com](mailto:secretariat@balwois.com)

## **3rd Joint CMOS-CGU Congress**

*May 31-June 4, 2010, Ottawa, Canada*

This will be the 44<sup>th</sup> Annual Congress of the Canadian Meteorological and Oceanographic Society (CMOS) and the 36<sup>th</sup> Annual Scientific Meeting of the Canadian Geophysical Union (CGU). Geodesy-related sessions are:

- Geodesy and Geodynamics
- On Advanced Geocomputations and Web Collaboration
- Geoid-based North American Vertical Datum
- Methodologies for monitoring geoid change

URL: <http://www.scmo.ca/congress2010/indexe.html>

## **EUREF Symposium 2010**

*June 2-5, 2010, Gävle, Sweden*

The next EUREF Symposium will be held in Gävle, Sweden, June 2-5, 2010. The 2010 symposium is organised by Lantmäteriet - the Swedish mapping, cadastral and land registration authority - and co-sponsored by KTH Royal Institute of Technology and Onsala Space Observatory at Chalmers University of Technology. The website of the 2010 symposium [www.lantmateriet.se/euref2010](http://www.lantmateriet.se/euref2010) from time to time will be completed.

## **ELSA Conference 2010 "Gaia: at the frontiers of astrometry"**

*June 7-11, 2010, Paris, France*

URL: <http://wwwwhip.obspm.fr/gaia/Gaia2010/Welcome.html>

## **Beacon Satellite Symposium 2010**

*June 7-11, 2010, Barcelona, Spain*

URL: <http://www.bc.edu/sites/beacon/>

## **3rd ISDE Digital Earth Summit**

*June 12-14, 2010 - Nessebar, Bulgaria*

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

## **SPACOMM 2010**

*June 13-19, 2010 - Athens, Greece*

The Second International Conference on Advances in Satellite and Space Communications (SPACOMM 2010) will be held in Athens, Greece, June 13-19, 2010. All tracks are open to both research and industry contributions. For details please visit the webpage of the conference <http://www.aria.org/conferences2010/SPACOMM10.html>.

### **3<sup>rd</sup> International Conference on Cartography and GIS**

*June 15-20, 2010 - Nessebar, Bulgaria*

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

### **ISPRS Commission I Symposium - 2010**

*June 16-18, 2010 - Calgary, Canada*

IAG WG SC4.1 "Mobile Multi-Sensor Systems is organizing a session at the ISPRS Com. I Symposium in Calgary Canada June 16-18. Session chairs: Dorota Grejner-Brzezinska and Guenther Retscher. The webpage of the Symposium is <http://sensorweb.geomatics.ucalgary.ca/isprs/symposium/>.

### **SGEM 2010**

*June 20-26, 2010 – Albena Resort, Bulgaria*

The International Multidisciplinary Scientific GeoConference & EXPO – SGEM strengthened its position as one of the largest and successful geoscientific forums in Europe, with popularity exceeding the boundaries of the European Union. It offers the opportunity to share knowledge and experience in the fields of the geosciences. The webpage of the conference is <http://www.sgem.org/>.

### **Western Pacific Geophysics Meeting**

*June 22-25, 2010, Taipei, Taiwan*

URL: <http://www.agu.org/meetings/wp10/>

### **ESA Living Planet Symposium**

*June 28 – July 2, 2010, Bergen, Norway*

URL: <http://www.congrex.nl/10a04/>

### **IGS Workshop and Special Workshop on Vertical Rates from GPS**

*June 28 – July 2, 2010, Newcastle, UK*

URL: <http://www.ceg.ncl.ac.uk/igs2010/index.htm>

### **38<sup>th</sup> COSPAR Scientific Assembly**

*July 18-25, 2010, Bremen, Germany*

URL: <http://www.cospar-assembly.org/home.php>

### **IEEE International Geoscience and Remote Sensing (IGARSS 2010)**

*July 25-30, 2010, Honolulu, Hawaii*

URL: <http://www.igarss2010.org/>

### **2010 The Meeting of the Americas**

*August 8-13, 2010, Foz do Iguaçu, Brazil*

URL: <http://www.agu.org/meetings/ja10/>

### **15<sup>th</sup> General Assembly of WEGENER 2010**

*September 14-17, 2010, Bogazici University, Istanbul, Turkey*

URL: [www.koeri.boun.edu.tr/jeodezi/wegener2010/](http://www.koeri.boun.edu.tr/jeodezi/wegener2010/).

### **First International School on “The KTH Approach to Modeling the Geoid”**

*September 20-24, 2010, Istanbul, Turkey*

First International Geoid School on the KTH Approach will take place on September 20-24, 2010, at Yildiz Technical University, Istanbul, Turkey. Detailed information and registration form can be found on the webpage of the conference <http://www.infra.kth.se/geo/events/geoidschool.html>.

### **IGFS2 – 2009**

*September 20-22, 2010, Fairbanks, Alaska, USA*

The 2<sup>nd</sup> General Assembly of the IGFS - International Gravity Field Service follows the 1<sup>st</sup> IGFS symposium in Istanbul, August 2006, and the Symposium on Gravity, Geoid and Earth Observation, held in Chania, Greece,

2008, and is organized under the auspices of the International Association of Geodesy (IAG). The webpage of the symposium is <http://www.gps.alaska.edu/IGFS2/>.

#### **7<sup>th</sup> International Symposium on LBS & TeleCartography**

*September 20-22, 2010, Guangzhou, China*

The 7<sup>th</sup> International Symposium on LBS & TeleCartography will be held at Spatial Information Research Center (SIRC), in the campus of South China Normal University (SCNU) on 20<sup>th</sup> - 22<sup>nd</sup> Sept, 2010, Guangzhou, China. The symposium will bring together experts from around the world to present the latest research results and developments with focus on Location Based Services in the fields of Cartography, Geoinformation, Computer Sciences, Ubiquitous and Pervasive Computing, Telecommunication, Geodesy, and Geomedia Techniques. Official Web Site: <http://www.lbs2010.org/>.

#### **ION GNSS 2010, 23rd International Technical Meeting**

*September 21-24, 2010, Portland, Oregon, USA*

URL: <http://www.ion.org/meetings/gnss2010cfa.cfm>

#### **Intergeo 2010**

*October 5-7, 2010, Köln, Germany*

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

#### **OSTST Annual Meeting**

*October 18-22, 2010, Lisbon, Portugal*

URL: <http://www.aviso.oceanobs.com/>

#### **International DORIS Service Workshop 2010**

*October 21-22, 2010, Lisbon, Portugal*

The next International DORIS Service (IDS) workshop will take place at the Lisbon International Fair in Portugal, from 21-22 October 2010. The purpose of this workshop is to bring together representatives from all DORIS groups to share information about the network, data, products, and to perform inter-comparisons. Developments and scientific results in all aspects of the DORIS system will be highlighted. The meeting will be a forum for discussion and coordination of future activities. Details regarding this IDS workshop as well as more general information on the two other associated meetings will be posted at the end of January 2010, on the conference web site: <http://www.ostst-hydro-2010.com>, and on the IDS web site: <http://ids-doris.org/html/events/IDS2010/>.

#### **2010 ABLOS Conference**

*October 25-27, 2010, International Hydrographic Bureau, Monaco*

An international conference on "Contentious Issues in UNCLOS - Surely Not?", will be organised by ABLOS, in Monaco, at the International Hydrographic Bureau, on 25-27 October 2010.

URL: <http://www.gmat.unsw.edu.au/ablos/index.html#ABLOS10>

#### **ACM SIGSPATIAL GIS 2010**

*November 2-5, 2010, San Jose, CA, USA*

The 18<sup>th</sup> ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems provides a forum for original research contributions covering all conceptual, design, and implementation aspects of GIS ranging from applications, user interfaces, and visualization to storage management and indexing issues. This conference is the premier annual event of the ACM Special Interest Group on Spatial Information (ACM SIGSPATIAL). URL: <http://acmgis2010.cs.ucsb.edu/>.

#### **AGU Fall Meeting**

*December 13-17, 2010, San Francisco, USA*

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

#### **17<sup>th</sup> International Workshop on Laser Ranging**

*January 17-22, 2011, Concepción, Chile*

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

### **EGU General Assembly 2011**

*April 3-8, 2011, Vienna, Austria*

URL: <http://meetings.copernicus.org/>

### **JURSE 2011 - Joint Urban Remote Sensing Event (URBAN 2011 + URS 2011)**

*April 11-13, 2011, Munich, Germany*

Contact: [jurse2011@bv.tum.de](mailto:jurse2011@bv.tum.de)

### **Third Conference on Earth Observation for Global Changes (EOGC2011)**

*April 13-15, 2011, Munich, Germany*

URL: <http://www.pf.bv.tum.de/eogc2011/>

### **7<sup>th</sup> International Symposium on Mobile Mapping Technology**

*June 13-16, Krakow, Poland*

The Symposium MMT' 2011 will be held on 13 – 16 June 2011, in the Sheraton hotel Cracow, Poland. We strongly invite and encourage all professionals, researchers and academics, business and industry partners, students to participate in this important event. Science Chair: Dorota Grejner-Brzezinska.

The MMT2011 web site is up and running: <http://www.mmtcracow2011.pl/>.

### ***IAG Sister Societies' General Assemblies***

#### **XXV IUGG General Assembly**

*June 27 – July 8, 2011, Melbourne, Australia*

URL: <http://www.iugg2011.com/>