

# **July 2008**

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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: <a href="http://www.iag-aig.org">http://www.iag-aig.org</a>

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**

# Meeting Summary of the Third Meeting of the IAG Executive Committee 2007 – 2011

Place: Technische Universität Wien, Inst. für Geodäsie und Geophysik, Gusshausstr. 27-29, Vienna, Austria

**Time:** Saturday, 19 April 2008, 9:00 - 17:00

Attendees (voting): M. Sideris (IAG President), C. Rizos (IAG Vice-President), H. Drewes (IAG Secretary General), G. Beutler (Immediate Past President), Z. Altamimi (President Commission 1), Y. Fukuda (President Commission 2), R. Gross (Vice-President Commission 3), G. Retscher (Delegate Commission 4), M. Rothacher (Chair of GGOS), J. Ádám (President of the COB), S. Kenyon, H. Schuh (Representatives of the Services), K. Heki (Member at Large)

**Attendees (non-voting):** F. Sansò (IAG Past President), N. Sneeuw (President of ICC on Theory), H. Hornik (IAG Assistant Secretary), W. Bosch (Guest, Coordinator of IAS)

**Regrets:** M. Bevis (President Commission 3), S. Verhagen (President Commission 4), R. Neilan (Representative of Services, R. Wonnacott (Member at Large)

#### **Summary of Agenda Items**

#### 1. Welcome and adoption of agenda

*M. Sideris* welcomed the members of the IAG Executive Committee (13 out of 15 voting members, 3 non-voting members) and one guest. The agenda had been distributed previously by e-mail and was adopted.

#### 2. Reports of the Commissions

*Z. Altamimi* presented the report of **Commission 1**. A website has been installed starting from the previous website, which was provided by the previous President *H. Drewes*. All persons involved in Commission 1 may update the webpage using Typo3 content management. A Steering Committee meeting with seven participants was held on April 16, 2008, during the EGU Assembly in Vienna. Commission 1 will continue as COSPAR Sub-commission B2.1 CSTG. A joint symposium of Sub-commission B2.1 and the Panel on Satellite Dynamics (PSD) will be held during the next COSPAR meeting in Montreal, July 12-20, 2008.

The report of **Commission 2** was given by *Y. Fukuda*. According to the recommendation of the last EC meeting, a Sub-commission 2.5 "Satellite Altimetry" (Chair: *Cheinway Hwang*) was established, Commission Project 2.2 North American Geoid was re-installed (Chair: *Dan Roman*), CP2.5 and CP2.7 on Gravity and Geoid in South America were combined into one CP, and Australia and New Zealand are included in CP 2.6 South Asian and Australian Geoid. Commission 2 cooperated intensively in the establishment of the IAS Steering Committee (see agenda item 9).

**Commission 3** was represented by the Vice-President *R. Gross*, who gave the report. A new SC 3.4 Cryospheric Change and Earth Deformation (Chair: *Jim Davis*) was established with the objective to study the deformation of the cryosphere and effects of the cryosphere on solid Earth deformations According to the recommendation of the previous IAG EC meeting, the Inter-Commission Project WEGENER was re-installed (Chair: *S. Zerbini*); and there is an Inter-commission Study Group on InSAR. A representation of IERS, ICET and/or GGFC will be looked after.

The report of **Commission 4** was given by *G. Retscher*, Chair of Sub-commission 4.2. The Commission is structured into five Sub-commissions with many internal Working Groups, two Commission Study Groups, two Inter-commission Study Groups, and one Inter-commission Working Group. The ongoing activities concentrate on the communication with the Sub-commissions on their objectives and outreach measures, and the activities and cooperation of the Working Groups. He mentioned many international symposia, conferences, sessions and workshops with activities of the Sub-commissions and Study Groups.

# 3. Report of the Inter-Commission Committee on Theory

*Nico Sneeuw* presented the report of the ICCT. There are eight Inter-commission Study Groups, all of them jointly with at least one of the Commissions. The webpage was transferred from the former Vice-president A. Dermanis to the new Vice-President P. Novak. The Steering Committee plans to meet during the GGEO Symposium in Chania, June 2008, and the ICCT intends to organize Summer Schools as it was done in the past period. *Z. Altamimi* appreciated the close cooperation of the ICCT with the Commissions.

# 4. Report of the Global Geodetic Observing System (GGOS)

The report on the Global Geodetic Observing System (GGOS) was given by M. Rothacher. A highlight was the GGOS Retreat together with the 13<sup>th</sup> Steering Committee meeting in Bertinoro, Italy, March 2008. There were discussions of the GGOS2020 documents, the White Papers on new GGOS components, the GGOS Vision, Mission and Terms of Reference, and the preparation of a GGOS Stakeholder Conference. The GGOS2020 Reference Document, Version 0.18 was made available to the IAG EC members before the meeting. An input from the IAG EC is expected, and an external review has to follow. In parallel, the writing of the GGOS Strategy Document has to start. The new components of GGOS are a Coordinating Office and Portal, and three Bureaus on Networks and Communications, Standards and Conventions, and Satellite and Space Missions, which were described in corresponding White Papers. A Call for Participation will be prepared. The preliminary new statement of the Vision of GGOS is "Empowering with geodesy the advancement of society". The Mission was also re-defined, and the objectives shall be put together from the previous descriptions of the vision, mission and objectives. It was decided not to hold just one stakeholder conference, but to plan several small conferences in conjunction with larger inter-disciplinary meetings, e.g., CEOS, GEO, or the IAG Scientific Assembly 2009. The GGOS Commission representatives are Z. Altamimi, M. Craymer; M. Vermeer, U. Marti; M. Bevis, R. Gross; S. Verhagen and D. Brzezinska. It followed a long discussion on the GGOS Documents, the writing of the GGOS Strategic Document, and the GGOS Stakeholder Conference.

#### 5. Reports of the Services

*H. Schuh* presented the IVS and ILRS activities. There was a very successful IVS General Meeting in St. Petersburg, Russia, 3-6 March 2008. A highlight was the next VLBI generation VLBI2010. There is a continuous transition to eVLBI. In August 2008 there will be the next 15-days continuous observation session (CONT2008). The ILRS will hold the 16th International Laser Ranging Workshop in Poznan, Poland, October 13-17, 2008. The first circular has been issued. The problems with respect to the SLR scale in ITRF2005 are not yet completely solved.

M. Rothacher reported on the IERS. There was a Directing Board meeting on April 13, 2008. There will be a call for participation in all the components of the Global Geophysical Fluids Centres (GGFC). The Combination Research Centres (CRC) will be terminated end of 2008, and a call for participation in the new entities – named Research Centres – will be issued and shall study general aspects of data processing including combination at the observation level.

G. Beutler stood in for R. Neilan giving the report on IGS. The IGS Analysis Coordinator changed to J. Ray. A change of the terrestrial coordinates has been made by adopting the new reference frame IGS05 based on ITRF2005 with absolute ground receiver phase centres. There will be a Workshop in Florida, 2-6 June 2008. The annual reports are delayed. M. Sideris requested that IGS uses the new IAG logo, and J. Adam repeated that the IGS report for the Travaux is still missing.

S. Kenyon presented the report for the gravity field services. There are five centres coordinated by the IGFS. In March 2008 there was a retreat of all these components in Bertinoro, Italy, in connection with the GGOS retreat. Nine participants covered the BGI, ICET, ICGEM, IGeS, and IGFS. It is planned to install a Central Bureau. The call shall be released in July 2008. A new gravity network will replace the IGSN71 as the reference. The edition of a world gravity map is a project of BGI. There are discussions among ICET and the Global Geodynamics Project (GGP) about a merging. The IDEMS created a webpage and is slowly developing. F. Sanso added that there will be a IGeS Geoid School in Como, Italy, in September 2008.

# 6. Report of the Communication and Outreach Branch (COB)

The report of the COB was given by *J. Adam*. He started with a summary of a meeting between the COB and the IAG Office on April 18, 2008. It was agreed to reduce the publication of the IAG Newsletter in the Journal of Geodesy to two or maximum three pages. The electronic version sent to all IAG members and put on the Office website will contain the extended version. The IAG homepage shall be revised and continuously updated. The IAG Flyer and Brochure were discussed. The new version of the leaflet was printed with 4000 copies and sent to the EC for comments. Corrections are being prepared for the webpage and the next printed issue. The Brochure is ready in a draft version and was distributed to the EC before the meeting. They shall be sent to big conferences and especially to neighbouring disciplines. It was proposed to compile a list of decision makers, sister associations, high schools, etc. where to send it. *M. Sideris* asked about the status of taking on the responsibility for the GGOS Outreach as successor of the GGOS Working Group on User Linkage and Outreach. *J. Adam* explained that the COB is prepared to take over this task. *Lorant Földvary* will be the responsible person dedicated to the GGOS outreach.

#### 7. Report on developing countries

K. Heki gave a brief report on developing countries. He mentioned activities in Asia, in particular in India and Japan. There will be some interesting meetings in the Asia-Pacific region, namely the Annual General Meeting of the Asia Oceania Geosciences Society in Busan, Korea, June 16-20; the Western Pacific AGU Meeting, Cairns, Australia, 29 July – 1 August 2008; and the Asia-Pacific Space Geodynamics (APSG) Workshop, Novosibirsk, Russia, 22-26 September 2008.

#### 8. Report of the Journal of Geodesy Editor in Chief

N. Sneeuw gave the report standing in for the JoG Editor in Chief, R. Klees. There was a meeting of the JoG Editorial Board in April 2008. The members expressed their concerns about the long latency of publication. It would be very helpful if the IAG Newsletter could be reduced. The waiting period is now very long; there are 40 papers on the waiting list. There was a statement of R. Klees, that the impact factor is declined because of the non-scientific content of the newsletter. However, this could not be confirmed by Springer. R. Gross commented that there have been several special issues on different topics. N. Sneeuw explained that a new paper editorial system was introduced speeding up the waiting time. There was a general agreement that more papers should be published in future, the future Geodesist's Handbooks shall no longer be published in the JoG.

#### 9. Status of the International Altimetry Service (IAS)

W. Bosch was invited as a guest to report on the status of the Altimetry Service. An IAS Steering Committee was established with emphasis on the integration of all concerned groups (Y. Fukuda, C. Hwang, O. Anderson, R. Gross, P. Woodworth, A. Braun, W. Bosch). The first business meeting will be held during the GGEO2008 Symposium in Chania, Greece, June 2008. There is still a need to find an organization/institution to host the "Central Bureau" of the IAS. The general policy of the IAS is to identify deficiencies and needs of the IAG community for altimetry data and products and to build an open service for all bodies and individuals. A proposal was submitted in response to a COST Open Call of the European Community with the title "Coordinating operations and science to establish an International Altimeter Service as a core element of the Global Geodetic Observing System (COSIAS)".

#### 10. Status of the IAG Bibliography Service (IBS)

*H. Drewes* gave the report on behalf of the IBS Chair *A. Michlenz*; the written version was distributed before the meeting. He had several contacts with BKG in Frankfurt and Leipzig, in particular with *J. Ihde*. The IBS is used well internally and has a functioning homepage with an interactive literature search program (GEOPHOKA), where 57600 sources are collected and sorted after various criteria. BKG is prepared to continue the service and to update the software and the database. *J. Adam* was elected as the IAG representative to the IBS.

## 11. Scientific Meeting, Buenos Aires 2009

H. Drewes presented the reports of the Local Organizing Committee (LOC) for the IAG Scientific Meeting 2009 in Buenos Aires. Three reports were made available to the EC members before the meeting including the proposal for a Logo and Website, Setup of the LOC, and Meeting Venues. The proposed Logo was accepted under the condition that the IAG Logo is integrated. The name of the Meeting shall be "Geodesy for Planet Earth" with reference to the International Year of Planet Earth. H. Drewes was elected as the Assembly Secretary. The following EC members were appointed for the Scientific Committee: Z. Altanimi, Y. Fukuda, R. Gross, S. Verhagen, H. Schuh, R. Neilan, S. Kenyon, S. Bonvalot, M. Rothacher, N. Sneeuw, C. Pacino. S. Kenyon is the chair of the SC. The first circular for the meeting shall be sent in June 2008 with the general announcement and the themes of the meeting. The second circular shall follow by September 15 and include the description of the sessions and preliminary accommodation and registration information. Monday morning should be the registration and Friday afternoon the closing of the meeting, i.e., there are eight half-day sessions. GGOS should have a prominent place with clear visibility, with a session preferably in the mid of the week.

#### 12. Status of the Geodesist's Handbook 2007/2008

*H. Drewes* reported on the status of the Geodesist's Handbook. *H. Hornik* circulated three copies of the preliminary printed version. The structure is in principle as in the last handbook; the sequence of chapters has changed from previous issues. All EC members should carefully read not only their own chapters but also the other – in particular the general - parts. It is available on the IAG EC webpage. There will be no lists of geodetic publication series, national data centres, national educational establishments, and directory.

#### 13. Representatives to Services and external bodies

This topic was transferred from the second IAG EC meeting in December 2008 because of missing representatives. *H. Drewes* explained the action items and asked for the nominations as requested in December. *Z. Altamimi* reported on contacts to BIPM (*F. Arias*) and said that IUGG is represented in the Section Time, Frequency and Gravimetry by *C. Boucher*. It was agreed that he should be considered as the IAG representative. The representative in IDS is *M. Otten*. For ABLOS, there were two representatives nominated in addition to the continuing *C. Rizos* and *L. Sjöberg*. Unfortunately both of them (*D. Grant* and *P. Woodworth*) did not accept the nomination. *G. Blick* and *S. Bisnath* were proposed as new representatives. As representative to the IBS the EC elected *J. Adam* (see topic 10). ISO wants to install an International Registry of Geodetic Codes and Parameters. *L. Hothem* and alternatively *M. Craymer* were proposed as IAG representatives. *W. Bosch* was elected as the representative in the IAS. In ICSU, there are representatives in the Ad hoc Strategic Committee on Information and Data (SCID), which was installed to review the structure of the Federation of Astronomical and Geophysical

Services (FAGS) and the World Data Centres (WDC). For FAGS this is *Ruth Neilan*. She was also considered as the representative of IAG.

#### 14. Rules for IAG Scientific Meetings and IAG Travel Award

The rules for scientific meetings, which define what an IAG meeting is, are very old (released 1988) and were now updated by the IAG Bureau. There was no essential change made, just a strengthening and modernization. The rules are available on the IAG EC website. A reduced registration fee for individual IAG members will be included. The IAG travel awards are limited to 800 USD (400 USD in case of symposia in the home country of the applicant) for scientists presenting a paper at a meeting. The maximum is ten awards per year. There were no requests to change that.

#### 15. Adoption of IAG Meetings

The SIRGAS General Meeting, Montevideo, Uruguay, 26-29 May 2008; EUREF Symposium, Brussels, Belgium, 18-21 June 2008; 37<sup>th</sup> COSPAR General Assembly, Montreal, Canada, 13-20 July 2008; 14<sup>th</sup> WEGENER General Assembly, Darmstadt, Germany, 15-18 September 2008 were adopted as IAG sponsored meetings. The Symposium on Gravity, Geoid and Earth Observation, Chania, Greece, 23-27 June 2008, had already been adopted in December 2007.

#### 16. Next IAG EC Meeting

There was a general agreement to have the next EC meeting at the AGU Fall Meeting in San Francisco as a joint meeting together with the GGOS Steering Committee. The date was agreed December 14, 2008.

#### 17. Any other Business

M. Sideris informed about a colloquium to the honour of Helmut Moritz to be organized by the Leibniz Sozietaet in Berlin, Germany, 14 November 2008. H. Drewes will participate. M. Sideris mentioned that two IAG Secretaries General were honoured with decorations: C. Tscherning received the Vening Meinesz Medal of EGU, and Hermann Drewes was granted the Cross of Merit of the Federal Republic of Germany. Both were warmly congratulated. M. Sideris presented the status of the Proceedings of the IAG General Assembly, Perugia 2007. A total of nearly 100 papers were accepted, many papers were rejected. A few papers are still missing in the final version, but the complete set should be sent by the end of the month to Springer.

#### 18. Adjourn

M. Sideris thanked the participants for coming and for their contributions and closed the session at 5:00 p.m.

Respectfully submitted HERMANN DREWES, Secretary General

#### Calls for Proposals for new GGOS Components

Dear Colleagues,

at the IUGG General Assembly 2007 in Perugia the new Terms of Reference (ToR) of the Global Geodetic Observing System (GGOS) were accepted by the IAG Executive Committee. According to these new ToR, the following new components of GGOS are going to be established:

- GGOS Coordination Office and GGOS Portal
- Bureau for Networks and Communication
- Bureau for Standards and Conventions
- Bureau for Satellite Missions

In the GGOS website <a href="http://ggos.gfz-potsdam.de/ggos/index.php?id=20">http://ggos.gfz-potsdam.de/ggos/index.php?id=20</a> you will find the Calls for Proposals (CfP) for these new components. The deadline for submitting your proposal is

#### October 15, 2008.

More details are given in the documents mentioned.

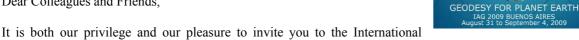
Please consider this unique opportunity to contribute with your institution, possibly in cooperation with other institutions, to these important activities of GGOS.

Looking forward to your proposals,

# Geodesy for Planet Earth

IAG 2009 Scientific Assembly, Buenos Aires, Argentine August 31 to September 4, 2009

Dear Colleagues and Friends,



Association of Geodesy Scientific Assembly IAG2009 that will be hosted by the IUGG National Committee together with the Argentine Association of Geophysics and Geodesy, and will take place in the exciting city of Buenos Aires. Buenos Aires, cradle of tango and gate to Argentina, is the most European city in Latin America. It is a singular, open and integrating destination that allows visitors not only to view the city but also to live an exceptional urban adventure. Buenos Aires is the leader in Latin America regarding to art, culture and tradition. Its night is a legend of its own, filled with lights, magic and mystery. You can choose from a diversity of art expositions, museums and entertainment, including a typical and exciting football game.

IAG2009 will be an event that covers the whole of geodesy in an exciting social environment that extends our knowledge, improves our practice, and widens our friendship networks. Following the long outstanding tradition of these scientific assemblies, IAG2009 will be a major scientific event, bringing together geodesists from all over the world, and demonstrating the vital role that geodesy plays in our society. This will be the main geodetic meeting in 2009. We do hope that you will make it a priority to attend.

The Scientific Programme

The scientific programme will be developed under the theme of "Geodesy for Planet Earth" referencing the International Year of Planet Earth (IYPE). It will provide an opportunity to present the latest research in Geodesy and will be enriched by a focus on Geodesy in South America to discuss all the research and projects in this zone.

Please monitor the web site for conference details: www.iag2009.com.ar

Welcome to our site and see you in Buenos Aires!

Local Organizing Committee:
María Cristina Pacino
Alfredo Augusto Stahlschmidt
Eduardo Andrés Lauría
Claudia Noemí Tocho
Sergio Rubén Cimbaro

Assembly Secretary: HERMANN DREWES

# Call for International Participation in Laser Ranging to the Lunar Reconnaissance Orbiter

A Call for Participation in Laser Ranging (LR) to the Lunar Reconnaissance Orbiter (LRO) was issued in May to all of the ILRS stations. LRO-LR is a one-way (uplink) only measurement. The ground station records its fire times, and the Lunar Obiter Laser Altimeter (LOLA) instrument measures the LR event times at the LRO spacecraft. The LOLA Science Team constructs the ranges from the ground and flight measurements. Laser Ranging will be used, along with S-band, and LOLA altimetric cross-overs, to precisely determine the LRO orbit, which in turn will be used to update the lunar gravity model and to analyze the LOLA altimetry. Global coverage of laser ranging to LRO will help in generating the precise orbit and should allow the Science Team to produce an updated gravity model earlier.

This will be the first time that the ILRS will track an object that is orbiting a body other than earth, and represents our first step into planetary laser transponders.

Proposals from the stations are due at the end of June, with selection of the participants in July. LRO is scheduled to be launched no earlier than November 24, 2008.

CAREY NOLL

## IVS Seeks Host Institutions for Combination Centers and Additional Analysis Centers

The Directing Board of the International VLBI Service for Geodesy and Astrometry solicits proposals IVS Combination Centers and for additional Operational Analysis Centers and Associate Analysis Centers. The existing Associate Analysis Centers are encouraged to apply for becoming Operational Analysis Centers. The calls are posted on the IVS Web site at:

http://ivscc.gsfc.nasa.gov/about/org/components/Call4ComC.txt http://ivscc.gsfc.nasa.gov/about/org/components/Call4OpAC.txt

The deadline for proposals is 1 September 2008. Successful proposers will be notified by October 2008.

DIRK BEHREND IVS Coordinating Center

## Geodetic Publications of C. C. Tscherning and a new version of GRAVSOFT are available

The collected geodetic publications of C.C.Tscherning are available on digital form (mainly PDF) from <a href="http://cct.gfy.ku.dk/publ">http://cct.gfy.ku.dk/publ</a> cct/cct publ.htm.

A new version of the GRAVSOFT FORTRAN program GEOCOL is available **free of charge for IAG individual members**. The program is capable of using multiprocessing (OPENMP) for the evaluation of spherical harmonic series and for the Cholesky reduction of the normal equations. Requests should be send to C.C.Tscherning, e-mail: <a href="mailto:cct@gfy.ku.dk">cct@gfy.ku.dk</a>.

**IAG COB** 

# **Meeting Announcements**

# 14th General Assembly of WEGENER - WEGENER 2008

September 15-18, 2008 Darmstadt, Germany

The Institute of Physical Geodesy (IPGD) of the Technische Universität Darmstadt is pleased to announce that the 14th General Assembly of WEGENER - WEGENER 2008 will take place in Darmstadt, Germany, from September 15-18, 2008. The conference venue will be darmstadtium, the new Science and Conference Center in Darmstadt.

The Wegener project aims to bring together geoscientists interested in using geodetic techniques to measure and understand the 3D surface motion in Europe and the Mediterranean. The 14<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 global observing system GGOS and the new satellite missions for gravity, SAR and Laser Altimetry are welcome in particular. The threat by Natural Hazards to the Mediterranean is addressed in a special session on geohazards.

2nd Circular with Call for Abstracts and additional information available at <a href="http://www.ipg.tu-darmstadt.de/wegener/">http://www.ipg.tu-darmstadt.de/wegener/</a>.

MATTHIAS BECKER

## International IGeS School "THE DETERMINATION AND USE OF THE GEOID"

Organized by Politecnico di Milano, Campus Como COMO, Italy, 15-19 September 2008.

PRELIMINARY PROGRAM (DEADLINE FOR THE REGISTRATION: 15 JULY 2008)

#### **Local Organizing Committee:**

Fernando Sansò

## Riccardo Barzaghi Giovanna Sona

e-mail : <u>iges@polimi.it</u> web : <u>www.iges.polimi.it</u>

Tel: +39 - 02-2399.6527 / 02-2399.7520

Fax: +39 - 02-2399.7519

Organization of accommodation will follow

#### **Preliminary Program:**

#### 1st day (15 September 2008) Prof. F. Sansò and R. Barzaghi

Lecture 1 – General Introduction to Physical Geodesy Lecture 2 – General Theory for Geoid Computation

Lecture 3 – The Remove Restores Concept and Collocation

#### 2nd day (16 September 2008)

Lecture 4 – The Global Geopotential Models **Prof. N. Pavlis** 

Exercises 1 on Global Models Exercises 2 on Global Models

#### 3rd day (17 September 2008) Prof.C.Tscherning

Lecture 5 - The Collocation Method in Geodesy

Exercises 1 on Collocation Exercises 2 on Collocation

**BGI** Seminar

### 4th day (18 September 2008)

Lecture 7 – The Terrain Effect in Geoid Estimation Prof. R. Forsberg

Exercises

# 5th day (19 September 2008) Prof. I.Tsiavos

Lecture 6 – The FFT Methods to Geodesy

Exercises 1 Exercises 2

Note: All the software used during the school will be made available on CD for the participants

#### **REGISTRATION FORM:**

Please send by e-mail or fax this registration form to:

iges@polimi.it

Fax: +39 -02-23997519

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Registration Fee (paid before 15 July, 2008):400 Euros

Registration Fee (paid after 15 July, 2008): 500 Euros

Registration Fee includes the School Lecture Notes and the sw package that will be delivered on CD to the students, the social dinner and coffee breaks.

Details on methods of payment will follow.

F. Sansò – R. Barzaghi – G. Sona

#### ILP workshop at Ensenada, Baja California

(Mexico), 21-26 September 2008:

Volcanism, mantle, paleo-stress and sedimentary basins;. A joint International Lithosphere Programme Task Force conference.

The conference will be held at the Corall Hotel in Ensenada, facing the Ocean, 200 m away from the Earth Science building. A 2 days pre-conference field trip (September 22-23) is scheduled. Already approved sessions comprise: Volcanism and geodynamics: insights from studies of eroded volcanic systems; Long-term evolution of volcanoes and volcanic systems recording lithospheric processes; Lithosphere-astenosphere interactions;

Temporal and spatial changes of stress and strain; Baby plumes; Architecture and evolution of the Gulf of Mexico and other Mexican basins; Sub-Andean basins and Circum-Pacific margins.

On-line abstract submission, hotel infos, and registration are available on the web site of the Mexican Geophysical Union (<a href="www.ugm.org.mx">www.ugm.org.mx</a>), with a deadline for submission on 2 June 2008.

Other contacts: Dr L. Delgado-Argote (<u>ldelgado@cicese.mx</u>), Dr F. Ortuńo-Arzate (<u>fortuno@imp.mx</u>), Prof. A. Tibaldi (<u>alessandro.tibaldi@unimib.it</u>).

A. TIBALDI

# GNSS Reflectometry Course and Workshop

ESTEC Noordwijk, Netherlands, September 24-25, 2008.

This is to announce the forthcoming GNSS-R workshop and one-day course on GNSS-R organized by the European Space Agency and to be held on 24-25 September at ESTEC in Noordwijk, The Netherlands.

## **Preliminary Programme:**

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<u>Day One – Course on GNSS Reflectometry</u>
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08:30 - 09:00 Registration

09:00 Welcome

Basic Principles of GNSS-R

Requirements of the Oceanographic Community

Coverage

Advanced Processing

Information Contained in Reflected Signal

Altimetric Accuracy and Precision

Sources of Error

Ionosphere

Troposphere

Speckle

Instrument Calibration

12:30 Lunch

#### 13:30 In-Orbit Demonstrator

System Concept

Preliminary Design

Link Budget

Performance

On-board Processing

Downlink Launcher

Realization

Practical Results from Campaigns and Lessons Learnt

Galileo Signal Structure

Other Applications

Scatterometry

Ice Freeboard

Soil Moisture

Biomass 17:00 Discussion

#### Day Two - Workshop

08:30 Presentations of papers on any topic related to GNSS-R

Abstracts to be submitted by 1 September 2008

12:30 Lunch

13:30 More Presentations

17:00 Wrap-up

17:30 Close

There will be no cost for participation in the workshop and course. To register or send an abstract (accepted up until 1 September 2008) please send an e-mail to <a href="mailto:Christopher.Buck@esa.int">Christopher.Buck@esa.int</a>. Note that there is only a small number of places left so to reserve your place please register soon.

**CHRISTOPHER BUCK** 

# 16th International Workshop on Laser Ranging – Updated Announcement

Poznan Poland, October 13-17, 2008.

The Space Research Centre of the Polish Academy of Sciences will host the next International Workshop on Laser Ranging in Poznan Poland (15 km from the Borowiec SLR station) on October 13-17, 2008 (note new dates). The theme of this year's workshop is "SLR, The Next Generation". The first circular will be issued soon. In the meantime, we ask you to reserve these dates on your calendars and plan to attend what will surely be another exciting laser workshop.

We are also pleased to announce that the proceedings from the 15th International Workshop on Laser Ranging, held in Canberra Australia in October 2006, have been completed. All presentations and papers from this workshop will also be accessible through the ILRS Web site at: <a href="http://cddis.gsfc.nasa.gov/lw15/index.html">http://cddis.gsfc.nasa.gov/lw15/index.html</a>.

CAREY NOLL

Crustal Dynamics Data Information System (CDDIS)

# Colloquium to honour Helmut Moritz

on November 14, 2008 at Berlin (Germany) (Extract of the First Circular distributed on April 10, 2008)

Announcement and Invitation

On November 1, 2008, Prof. Dr. techn. Dr. h.c. mult. Helmut Moritz, Graz, Member of the Leibniz Society of Sciences at Berlin, Full Member of the Austrian Academy of Sciences (ÖAW), foreign member of over ten national academies of sciences, is reaching the age of 75.

On this occasion the Leibniz Society, to honour its standing member of many years', is organising an all-day Colloquium on the theme "Scientific Geodesy" on November 14, 2008, at Berlin. This colloquium is supported by the Austrian Academy of Sciences (ÖAW), the International Association of Geodesy (IAG) and the Graz Technical University.

Helmut Moritz is also by international standards one of the most important representatives of scientific geodesy in the last half-century heralded by the International Geophysical Year 1957/58, which marked the beginning of space travel and the resulting space research in October 1957, in which the geodesy with all its branches reached a level unimaginable before and became truly international and global. Helmut Moritz served the international geodetic community over many years, to mention only: from 1979 to 1983 as the President of the International Association of Geodesy, and from 1991 to 1995 as the President of the International Union of Geodesy and Geophysics, to which there belong 7 associations, the oldest of these being the IAG.

In the honorary colloquium on the 14<sup>th</sup> of November 2008 the Leibniz Society centres on Helmut Moritz' fields of study and scientific interest. The Society invites his friends, colleagues, coworkers and scholars to present papers on relevant actual and historical subjects Future applications can be accepted only for poster presentation.

The Committee organising the colloquium consists of Erik W. Grafarend (Stuttgart), Bernhard Hofmann-Wellenhof (Graz), Heinz Kautzleben (Berlin) and Reinhard Rummel (Munich). The 2<sup>nd</sup> Circular will be distributed on July 31, 2008.

Colleagues, who intend to take part in the colloquium and are interested to get the  $2^{nd}$  Circular, are asked to contact the address  $\underline{kautzleben.leibniz-sozietaet@t-online.de}$ 

HEINZ KAUTZLEBEN

# Geodesy for Planet Earth

IAG 2009 Scientific Assembly, Buenos Aires, Argentine August 31 to September 4, 2009

Dear Colleagues and Friends,

It is both our privilege and our pleasure to invite you to the International

Association of Geodesy Scientific Assembly IAG2009 that will be hosted by the IUGG National Committee together with the Argentine Association of Geophysics and Geodesy, and will take place in the exciting city of Buenos Aires. Buenos Aires, cradle of tango and gate to Argentina, is the most European city in Latin America. It is a singular, open and integrating destination that allows visitors not only to view the city but also to live an



exceptional urban adventure. Buenos Aires is the leader in Latin America regarding to art, culture and tradition. Its night is a legend of its own, filled with lights, magic and mystery. You can choose from a diversity of art expositions, museums and entertainment, including a typical and exciting football game.

IAG2009 will be an event that covers the whole of geodesy in an exciting social environment that extends our knowledge, improves our practice, and widens our friendship networks. Following the long outstanding tradition of these scientific assemblies, IAG2009 will be a major scientific event, bringing together geodesists from all over the world, and demonstrating the vital role that geodesy plays in our society. This will be the main geodetic meeting in 2009. We do hope that you will make it a priority to attend.

The Scientific Programme

The scientific programme will be developed under the theme of "Geodesy for Planet Earth" referencing the International Year of Planet Earth (IYPE). It will provide an opportunity to present the latest research in Geodesy and will be enriched by a focus on Geodesy in South America to discuss all the research and projects in this zone.

Please monitor the web site for conference details: www.iag2009.com.ar

Welcome to our site and see you in Buenos Aires!

Local Organizing Committee:

MARÍA CRISTINA PACINO
ALFREDO AUGUSTO STAHLSCHMIDT
EDUARDO ANDRÉS LAURÍA
CLAUDIA NOEMÍ TOCHO
SERGIO RUBÉN CIMBARO

Assembly Secretary: HERMANN DREWES

# IAG Sponsored Meetings

# New Challenges in Earth's Dynamics ETS2008

September 1-5 2008, Jena, Germany

Under the sponsorship of the International Association of Geodesy (IAG), the Commision 3 (Geodynamics) & the sub-commissions on earth Tides (3.1), Crustal Deformation (3.2), Geophysical Fluids (3.3) and the Global Geodynamics Project (GGP) organise for the first time a joint meeting which will include the 16th International Symposium on earth Tides. The assembly will provide a unique opportunity to exchange new results and strategies to meet the current challenges of earth's dynamics from different viewpoints. For details, please visit <a href="https://www.ets2008.de">www.ets2008.de</a>.

#### 14th General Assembly of WEGENER - WEGENER 2008

September 15-18, 2008, Darmstadt, Germany

The 14th General Assembly of WEGENER - WEGENER 2008 will take place in Darmstadt, Germany, from September 15-18, 2008. The conference venue will be darmstadtium, the new Science and Conference Center in Darmstadt. The 14<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 global observing system GGOS and the new satellite missions for gravity, SAR and Laser Altimetry are welcome in particular. 2<sup>nd</sup> Circular with Call for Abstracts and additional information are available at <a href="http://www.ipg.tu-darmstadt.de/wegener/">http://www.ipg.tu-darmstadt.de/wegener/</a>.

#### Geodesy for Planet Earth

IAG 2009 Buenos Aires

August 31 to September 4, 2009

The International Association of Geodesy Scientific Assembly IAG2009 that will be hosted by the IUGG National Committee together with the Argentine Association of Geophysics and Geodesy, will take place in the city of Buenos Aires. IAG2009 will be an event that covers the whole of geodesy in an exciting social

environment that extends our knowledge, improves our practice, and widens our friendship networks. Following the long outstanding tradition of these scientific assemblies, IAG2009 will be a major scientific event, bringing together geodesists from all over the world, and demonstrating the vital role that geodesy plays in our society. This will be the main geodetic meeting in 2009. Please monitor the web site for conference details: <a href="https://www.iag2009.com.ar">www.iag2009.com.ar</a>.

# IAG Related Meetings

#### 1st GNSS Vulnerabilities and Solutions Conference

September 7 – 9, 2008, Baška, Krk Island, Croatia

The conference will address the most important aspects of the GNSS that have a huge impact not only to a numerous technical systems already deployed in our everyday life, but also to global economy and geostrategy. Recognised GNSS experts from 11 countries will discuss both core GNSS vulnerabilities issues and their effects on a various applications and services, providing an excellent opportunity to discuss top-priority issues. For more details please visit <a href="http://www.rin.org.uk/node/9901">http://www.rin.org.uk/node/9901</a>.

#### **UN-SPIDER Workshop**

September 16-19 2008, Suva, Fiji

United Nations Regional UN-SPIDER Workshop: Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for the Pacific Region will take place in Suva, Fiji from 16 - 19 September 2008. More information on the workshop is available from the following website: http://www.unoosa.org/oosa/en/unspider/workshops.html.

## Conference on Remote Sensing Techniques in Disaster Management

22-24 September 2008, Zadar, Croatia

The First International Conference on Remote Sensing Techniques in Disaster Management and Emergency Response in the Mediterranean Region will take place in Zadar, Croatia. The subject "Disaster Management and Emergency Response" is a high-priority topic in the Mediterranean region. Risk reduction using remote sensing techniques may be very helpful in various applications. Identification of relevant space-based and airborne information for Disaster Management Support and Emergency Response is a major priority issue. The webpage of the conference is <a href="http://www.earsel.geosat.hr/">http://www.earsel.geosat.hr/</a>.

# Third World Congress "Aviation in the XXI-st Century"

22-24 September 2008, Kyiv, Ukraine

The Third World Congress "Aviation in the XXI-st Century" - "Safety in Aviation and Space Technology", will be held at the National Aviation University, Kiev, Ukraine, September 22-24, 2008. For more information please visit <a href="http://congress.nau.edu.ua/">http://congress.nau.edu.ua/</a>.

#### **GNSS Reflectometry Course and Workshop**

24-25 September 2008, ESTEC in Noordwijk, Netherlands

The forthcoming GNSS-R workshop and one-day course on GNSS-R is organized by the European Space Agency and will be held on 24-25 September at ESTEC in Noordwijk, The Netherlands. There will be no cost for participation in the workshop and course. To register or to submit abstract (up until 1 September 2008), please contact <a href="https://creativecommons.org/christopher.Buck@esa.int">Christopher.Buck@esa.int</a>.

#### 16th International Workshop on Laser Ranging

13-17 October 2008, Poznan, Polan

The next International Workshop on Laser Ranging will be held in Poznan Poland (15 km from the Borowiec SLR station) on October 13-17, 2008. (note new dates). The theme of this year's workshop is "SLR, The Next Generation". The first circular will be issued soon.

#### HydroChange 2008

October 1-3, 2008, Kyoto, Japan

The HydroChange 2008 Symposium "Hydrological changes and management from headwater to the ocean" will be held at Kyoto Garden Palace, Kyoto, Japan. Please visit the official web site of the Symposium at <a href="http://www.chikyu.ac.jp/HC">http://www.chikyu.ac.jp/HC</a> 2008.

#### 21st CODATA International Conference

5-8 October 2008, Kyiv, Ukraine

CODATA - International Council for Science: Committee on Data for Science and Technology's 21<sup>st</sup> International Conference: "Scientific Information for Society - from Today to the Future" will be held in Kyiv, Ukraine. Visit <a href="http://www.codata.org/08conf/index.html">http://www.codata.org/08conf/index.html</a> for more information.

#### **UN-SPIDER Bonn Workshop**

October 13-15 2008, Bonn, Germany

The Second United Nations International UN-SPIDER Bonn Workshop: "Disaster Management and Space Technology – Bridging the Gap" to be held in Bonn, Germany from 13-15 October 2008. The workshop will be organised by the United Nations Office for Outer Space Affairs (UNOOSA) and the German Aerospace Center (DLR) and will build on top of the first workshop held in Bonn last year. More information on the workshop is available on the website <a href="https://www.unspider.org">www.unspider.org</a>.

#### The Role of Hydrology in Water Resources Management

October 13-16 2008, Isle of Capri, Naples, Italy

A joint IAHS UNESCO Symposium on The Role of Hydrology in Water Resources Management will be held in Naples, Italy. The purpose of the Symposium "The Role of Hydrology in Water Resources Management" is to discuss ways in which hydrologists can contribute most effectively to the planning and management of freshwater projects, including the efficient operation of existing systems faced with new socio-political situations. Web page of the Symposium is <a href="https://www.ihp2008capri.it">www.ihp2008capri.it</a>.

## XXXVI IAH Congress

October 26-31, 2008, Toyama, Japan

"Integrating Groundwater Science and Human Well-being" congress is planned to be held in Toyama, Japan. Please visit <a href="http://www.envr.tsukuba.ac.jp/~IAH2008">http://www.envr.tsukuba.ac.jp/~IAH2008</a>.

#### ACM GIS 2008

November 5-7, 2008, Irvine, CA, USA

The ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems 2008 (ACM GIS 2008) is the sixteenth event of a series of symposia and workshops that began in 1993 with the aim of bringing together researchers, developers, users, and practitioners carrying out research and development in novel systems based on geo-spatial data and knowledge, and fostering interdisciplinary discussions and research in all aspects of geographic information systems. Additional information is available through the webpage <a href="http://acmgis08.cs.umn.edu/">http://acmgis08.cs.umn.edu/</a>.

#### <u>Digital Earth Summit on Geoinformatics: Tools for Global Change Research</u>

November, 12-14, 2008, Potsdam, Germany

The summit will be held in Wissenschaftspark Albert Einstein, Potsdam, Germany from 12-14 November 2008. It will bring together leading scientists from Geoinformatics and Global Change research and will foster the exchange of ideas, cooperation between so-far disjoint scientific fields and provide time for in-depth discussion. For details please visit the webpage of conference, <a href="https://www.isde-summit-2008.org">www.isde-summit-2008.org</a>.

#### 6th International Symposium on Mobile Mapping Technology – MMT'09

July 21-24, 2009, Presidente Prudente, São Paulo, Brazil

The 6<sup>th</sup> International Symposium on Mobile Mapping Technology "Mobile Mapping Serving the Information Society" will take place in Presidente Prudente, São Paulo, Brazil, July 21-24, 2009. The main objective of the conference is to discuss the most recent technology and its application, to exchange experiences and to promote future research aiming at the development and the production in the fields related to mobile mapping. You may want to check out the website <a href="http://www.fct.unesp.br/eventos/simposio/mmt09/ingles">http://www.fct.unesp.br/eventos/simposio/mmt09/ingles</a> to get preliminary information on MMT'09.

#### IAG Sister Societies' General Assemblies

# Associations' Scientific Assemblies of the IUGG

- IUGG/IAGA, August 23-30, 2009, Sopron, Hungary
- IUGG/IAHS, September 7-12, 2009, Hyderabad, India

- IUGG/IASPEI, January 10-16, 2009, Cape Town, South Africa
- IUGG/IAG, August 31-September 4, 2009, Buenos Aires, Argentina
- IUGG/IACS-IAMAS-IAPSO, July 19-29, 2009, Montreal, Canada
- IUGG/IAVCEI, August 18-25, 2008, Reykjavik, Iceland

#### 33rd International Geological Congress IGC

August 6-14, 2008, Oslo, Norway

The 2008 Congress will be held in collaboration with the International Union of Geological Sciences (IUGS) and many other international and national organisations, the National IUGS Committees in the five Nordic Countries (Norden): Norway, Denmark, Finland, Iceland and Sweden. Please visit <a href="http://www.33igc.org/">http://www.33igc.org/</a> for more information about the IGC 2008.

#### IAVCEI 2008 General Assembly

August 18-25, 2008, Reykjavik, Iceland

Reykjavik is an excellent place to host the IAVCEI General Assembly in 2008. The main theme of the meeting will be "Understanding Volcanoes". The meeting is devoted to volcanism and volcano-tectonics of all environments and the impact of volcanic eruptions on the surface environment and human activities. The website of the Assembly is <a href="http://www.iavcei2008.hi.is/">http://www.iavcei2008.hi.is/</a>.

# Reports

# A Report on the The IAG International Symposium on "Gravity, Geoid and Earth Observation 2008" (GGEO2008)

The International Symposium on "Gravity, Geoid and Earth Observation 2008" (GGEO2008) was organised by Commission 2 of the International Association of Geodesy (IAG) and the meeting took place in Chania, Crete, Greece, 23-27 June, 2008.

In the International Symposium GGEO 2008 participated more than 210 scientists from Australia, Algeria, Argentina, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Italy, Japan, Luxemburg, the Netherlands, Norway, Poland, Portugal, Russia Federation, Slovakia, Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, United Kingdom and the United States of America.

The International Symposium GGEO2008 was organized by the Laboratory of Geodesy & Geomatics Engineering, Department of Mineral Resources Engineering, the Technical University of Crete. The Symposium venue was the Great Arsenali Building in the Centre of Mediterranean Architecture, old Venetian Harbour, Chania, Crete, Greece.

The new ESA and NASA satellite missions on gravity and the EGM08 have been, among other things, important subjects in many of the sessions. The analysis, modelling and applications of altimetry, INSAR and the gravity field linked various disciplines of the geosciences together at this GGEO2008 International Symposium. Also new developments in the field of instrumentation formed part of the programme as well as recent development in the context of GGOS.

The 88 oral and more than 200 Poster presentations were organised around nine main sessions:

Session 1: Gravimetry (terrestrial, shipborne, airborne) and gravity networks.

Chairs: Yoichi Fukuda (Japan), Leonid F. Vitushkin (BIPM, France), .

Session 2: Space-borne gravimetry: Present and Future.

Chairs: Roland Pail (Austria) and Pieter Visser (The Netherlands).

Session 3: Earth Observation by Satellite Altimetry and InSAR.

Chairs: Wolfgang Bosch (Germany), Masato Furuya (Japan), Roger Haagmans (ESA).

Session 4: Geoid modeling and vertical datums.

Chairs: Ambrus Kenyeres (Hungary) and William Kearsley (Australia).

Session 5: Regional gravity field modeling.

Chairs: Urs Marti (Switzerland) and Steve Kenyon (USA).

Session 6: Global gravity field modelling & EGM08. Chairs: Nikos Pavlis (USA) and Jianliang Huang (Canada).

Session 7: Temporal gravity changes and geodynamics.

Chairs: Nico Sneeuw (Germany) and Juergen Kusche (Germany).

Session 8: Earth observation and the Global Geodetic Observing System (GGOS).

Chairs: Richard Gross (USA) and Hans-Peter Plag (USA).

Session 9: Geodetic monitoring of natural hazards and a Changing Environment.

Chairs: Alexander Braun (Canada) and Rene Forsberg (Denmark).

The composition of the Scientific Committee of the Symposium has been as follows: Michael G. Sideris, Canada; Yoichi Fukuda, Japan; Stelios P. Mertikas, Greece; Rene Forsberg, Denmark; Pieter Visser, The Netherlands; Hermann Drewes, Germany; Leonid F. Vitushkin, France; Martin Vermeer, Finland; Roland Pail, Austria; Marti Urs, Switzerland; Nico Sneeuw, Germany; Jacques Hinderer, France; Juergen Kusche, Germany; Roger Haagmans, ESA and Steve C. Kenyon, USA.

Its Local Organizing Committee was composed of Stelios P. Mertikas (convenor), R. Papadaki (Secretary), G. Tsiskaki (Public Relations), A. Frantzis, A. Tripolitsiotis, Th. Papadopoulos. The support and help provided by graduate students Dimitra Zaharaki, Kelly Manousaki, Zografia Papadaki, Fotini Stathogianni, Chryssa Apostolaki and others has been much appreciated.

The event was sponsored by the International Association of Geodesy, the Technical University of Crete, the European Space Agency, the Technical Chamber of Greece, Division of West Crete, the Hellenic National Cadastre, the Chania Chamber of Commerce & Industry, Agro-Land, S.A., and the National Aeronautics and Space Administration.



The Proceedings of GGEO2008 International Symposium will be published in the IAG Symposia series by Springer Verlag. More information can be found at the Symposium web site: <a href="https://www.geomatlab.tuc.gr/GGEO2008"><u>www.geomatlab.tuc.gr/GGEO2008</u></a>

STELIOS P. MERTIKAS, Ph.D., Professor and Symposium Convenor 04 July 2008