# INTERNATIONAL GLACIOLOGICAL SOCIETY

# INTERNATIONAL SYMPOSIUM ON RADIOGLACIOLOGY AND ITS APPLICATIONS

Madrid, Spain 9–13 June 2008



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SECOND CIRCULAR

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# INTERNATIONAL GLACIOLOGICAL SOCIETY

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# SYMPOSIUM ON RADIOGLACIOLOGY AND ITS APPLICATIONS

The International Glaciological Society will hold an International Symposium on Radioglaciology and its Applications in 2008. The symposium will be held in Madrid, Spain, from 9–13 June.

# SYMPOSIUM ORGANIZATION

Magnús Már Magnússon (International Glaciological Society).

# LOCAL ARRANGEMENTS COMMITTEE

Francisco José Navarro (Chairman), Jaime Otero (Secretary), Javier Jesús Lapazaran, María Isabel de Corcuera, María Luisa Cuadrado, Francisco Machío, Ricardo Rodríguez.

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# INFORMATION ABOUT THE SYMPOSIUM MAY BE OBTAINED FROM:

International Glaciological Society, Scott Polar Research Institute,

Lensfield Rd, Cambridge CB2 1ER, UK.

Tel: +[44] (0)1223 355 974 Fax: +[44] (0)1223 336 543

Email: igsoc@igsoc.org

Web: <a href="http://www.igsoc.org/symposia/">http://www.igsoc.org/symposia/</a>

http://sympradar08.krios-hyperion.com/ available 22 October 2007

# **PARTICIPATION**

This circular includes instructions for registration and for arranging accommodation both through the travel agency website. A registration form (available at the symposium website) is also included, though online registration is strongly encouraged. The registration and accompanying payment are due 17 March 2008. There is a surcharge for late registration. The participant's registration fee includes organization costs, a set of abstracts, the icebreaker, coffee breaks and lunch, the banquet, and a copy of the *Annals of Glaciology*.

Registration fees	€
Participant (IGS member)	375
Participant (not IGS member)	450
Student or retired IGS member	175
Accompanying person	175/125/75
Late registration surcharge (after 17 March 08)	100
Symposium study tour (estimate)	550

Registration refunds will be made according to date of notification. Cancellations made before 25 April 2008 will receive a full refund. Cancellations between 26 April and 23 May 2008 will receive a 50% refund. After 23 May it will not be possible to make any refund. A limited number of grants for free registration of potential participants, students in particular, will be available. More details will be given in the symposium webpage.

### THEME

Radio echo-sounding of ice reveals the bed topography, the properties of the bed and the internal glacio-stratigraphy. In the 1970s and 80s the bed topography of the Antarctic and Greenland ice sheets were mapped using a relatively restricted range of frequencies, with analogue logging devices. Since then, ice-penetrating radar technology has developed, extending the frequency bands to target different parts and depths of glaciers, relating electromagnetic returns to the physical properties of the ice and bed, and using radar layers in forward and inverse models of ice flow.

The conference will encompass all aspects of radar-sounding of ice and glaciers and its applications to glaciology, earth science and climate studies. We will welcome studies from shallow and deep sounding of ice; how electromagnetic interactions affect satellite returns; satellite deep sounding of Earth and other planets; the physical interpretation of intra-glacial and basal returns; how crystal fabric affects electromagnetic wave propagation; snow and firn studies; estimation of accumulation rates from radar stratigraphy; synergistic coupling of radar sounding with other geophysical techniques; large-scale mapping and imaging of radar layers and basal reflections; electromagnetic modelling of radar sounding; flow modelling, dating and stratigraphic correlations from radar surveying.

# **TOPICS**

The suggested topics include:

- 1. Deep sounding, including:
  - Subglacial topography, ice-bed interface, bed structure, subglacial lakes, subglacial water channels, sounding subglacial material.
- 2. Internal structure, including:
  - Internal stratigraphy and correlation of ice cores, detection of structures (buried crevasses, folding, faults, etc.), englacial water channels, polythermal structure, physical properties of ice (density-porosity, water content of temperate ice, etc.), electrical properties of ice, echo-free structure in ice.
- 3. Shallow sounding, including:
  - Internal stratigraphy: snow, firn, superimposed ice, estimation of accumulation rates, sea ice.
- 4. Planetary/orbital sounding, including:
  - Theoretical aspects, sounding ice masses from satellite, ice cover of Mars, Europa and Enceladus
- 5. Numerical modelling (direct and inverse problems), including:
  - Ice flow, dating layers, inversion of flow parameters.
- 6. Instrumentation and processing techniques, including:
  - Radar equipment (coherent radar, synthetic aperture radar, etc.), complementary geophysical techniques, processing of radar data.
- 7. Theoretical and empirical aspects of propagation of electromagnetic waves in ice, including: Influence of ice fabric and physical properties, volume and interface scattering.

# SESSIONS AND POSTERS

Oral presentations will be held on four full days and one half-day. There will also be two poster sessions. The size of poster presentations will be given on the website.

# **PUBLICATION**

Selected papers from the symposium will be published by the Society in the *Annals of Glaciology*. All papers (including those based on posters) will be refereed and edited according to the Society's regular standards before being accepted for publication.

#### **PAPERS**

#### (1) SUBMISSION OF ABSTRACTS

Participants who want to contribute to the Symposium should submit an abstract of their proposed presentation. This abstract must contain sufficient detail for its scientific merit and relevance to the symposium theme to be judged by the Editorial Board. A web site will be available from 1 December

2007 where authors can upload their abstract and all the relevant contact information. The abstract itself should not exceed 400 words. References and illustrations should not be included.

You will be required to enter all your details with the submission and in particular to state whether you intend to submit a paper for publication in the *Annals of Glaciology*. We will only solicit referees for abstracts that have explicitly stated that they intend to submit a paper. Referees are a scarce commodity and we do not want to trouble them unnecessarily.

Those that are unable to submit their abstract via the internet can submit electronic files on a CD or diskette to the IGS office where a member of staff will upload them onto the website.

# LAST DATE FOR RECEIPT OF ABSTRACTS: 15 JANUARY 2008

Final versions of papers accepted for publication should not exceed five printed pages in the *Annals of Glaciology*. Extra pages will be charged at the rate of UK £90 per page. Papers with colour figures will accrue page charges, at the colour rate of UK £150 for all pages. Honouring page charges (also £90 per page) for the first five pages in encouraged.

#### (2) SELECTION OF ABSTRACTS

Each abstract will be assessed on its scientific quality and relevance to the Symposium theme. Authors whose abstracts are accepted will be invited to make either an oral or poster presentation at the Symposium and submit a paper for publication in the *Annals of Glaciology*. First or corresponding authors will be advised by 15 February 2008 of the acceptance or otherwise; other authors will not be informed separately. Authors who have not received notification by that date should contact the IGS office in Cambridge in case their abstract was not received. Acceptance of an abstract means that a paper based on it can be submitted to the *Annals of Glaciology*. Papers submitted for consideration in the *Annals* cannot be submitted to another publication as well. Note: abstracts alone will not be published in the *Annals of Glaciology*.

#### (3) DISTRIBUTION OF ABSTRACTS

A set of the accepted abstracts will be provided to participants upon registration on 8 June 2008.

#### (4) SUBMISSION OF PAPERS AND PUBLICATION

Manuscripts should be submitted as a PDF file to the IGS office by e-mail annals@igsoc.org stating clearly the abstract number in the file name and in the subject line of the e-mail. Papers should be prepared in accordance with the instructions sent to authors with the abstract acceptance notification and must be submitted as PDF's (portable document format). Authors who submit in other electronic formats will be asked to re-submit as PDF. All manuscripts should be submitted by **7 April 2008**. ALL AUTHORS ARE EXPECTED TO ADHERE TO THIS DEADLINE. Papers will be refereed according to the usual standards of the Society before being accepted for publication. Final papers, based on presentations at the Symposium, which have been submitted and accepted by the Editorial Board following review, will be published in English in the *Annals of Glaciology* (Vol. 50). Final, revised versions of papers must be submitted by **21 July 2008**. Timely publication of the *Annals of Glaciology* will depend upon strict adherence to deadlines.

# LAST DATE FOR RECEIPT OF PAPERS: 7 April 2008

# LAST DATE FOR RECEIPT OF REVISED PAPERS: 21 July 2008

# **EXCURSIONS**

MID WEEK FIELD TRIP:

Excursion to Toledo, a famous middle-age town not far from Madrid combining Christian, Muslim and Jewish architectures and cultures. Buffet dinner included.

Other options: Various short excursions are available. Information will be provided at the conference desk and at the travel agency website

https://congresos.hostingtravel.com/registration/registration.asp?congress=30000000032&language=e\_n&agency=ultramar\_madrid which will be available from 22 October 2007 onwards.

BANQUET to be held on Tuesday evening, 10 June.

SYMPOSIUM STUDY TOUR - THREE DAYS June 13-16, 2008:

#### GRANADA AND ALPUJARRA VALLEY:

The tour will include the visit of the magnificent city of Granada, that holds the well-known palace-fortress of La Alhambra (which stands out as the most famous example of Moorish architecture(, and a field trip to Alpujarra valley. The aim of the latter is to visit the western Sierra Nevada, where an interaction of late kilometre-size folds and faults determines the present-day relief. The impressive Padul-Niguelas normal fault is overprinted on the low-angle normal faults developed since Neogene, which are well exposed in the Alpujarra Valley.

The departure will be on June 13 in the late afternoon, upon completion of the symposium, arriving to Granada on the evening. The return trip from Granada will start on June 16 in the afternoon, arriving to Madrid in the evening. Lodging in Madrid during the night from 16 to 17 June will be provided. Approximate cost is 550 € per person, including bus transfer, guide, all meals, overnight stays in double rooms in Granada (3 nights) and Madrid (1 night upon return), and admission to monuments. Price based on 30 participants.

Participants should register, through the travel agency website, by 17 March 2007. Later registration will be possible, though subject to availability. Places are limited so register early.

#### ACCOMPANYING PERSONS PROGRAMME

The accompanying person registration fee (14 and over, €175; 10-13 €125; 6-9 €75; under 6, free) includes the icebreaker, the mid-week excursion and the banquet. A sightseeing tour of Madrid and short excursions near Madrid will be offered, at additional cost, through the travel agency website. Staff will be on hand at the registration/information desk during the conference and will assist with further arrangements.

#### LOCATION AND WEATHER

Spain covers an area of 505,990 km² (195,364 sq. miles), including the Balearic and Canary Islands and two small north-African cities, Ceuta and Melilla. It occupies about 85 per cent of the Iberian Peninsula, surrounded by the Atlantic ocean at the west and the Mediterranean sea at the east, and separated from France by the mountain chain of the Pyrenees. At the South, less than 13 km (8 mi) separate Spain from Africa in the narrowest area of the Gibraltar Strait. Spanish topography is characterised by its central plateau –la Meseta–, with an average elevation of about 610 m (2,000 ft), broken and surrounded by several mountain ranges, reaching altitudes up to 3,478 m (11,411 ft). The variety of geographical features ensure pronounced regional climatic differences. The climate is humid and cool in the north-west and the north, Mediterranean in the east and south-east, Mediterranean-continental in the central plateau and quite dry and hot in the south. In Madrid area, daily mean temperature during June is 21°C (70°F), with an average maximum of 27°C (81°F) and an average minimum of 15°C (59°F), and rains are occasional (typically 4 days in a month).

# TRAVEL AND ACCOMMODATION

Spain is a member of the Schengen Treaty. Information about which nationalities need Visa, where and how to apply (including forms) is to be found at

http://www.mae.es/en/MenuPpal/Consulares/Servicios+Consulares/Informacion+a+Extranjeros/Visados/visas\_emblondon.htm (English version)

http://www.mae.es/fr/MenuPpal/Consulares/Servicios+Consulares/Informacion+a+Extranjeros/Visado s/visas frances.htm (French version)

http://www.mae.es/es/MenuPpal/Consulares/Servicios+Consulares/Informacion+a+Extranjeros/Visados/Visados2.htm (Spanish version)

#### Venue

The symposium is to be held at the School of Telecommunication Engineering of the Technical University of Madrid (<a href="http://www.etsit.upm.es/">http://www.etsit.upm.es/</a>).

The Local Organizing Committee has reserved **accommodation** at the following hotels, located in Madrid downtown but not far from the university area, all of them having a good link by underground and/or bus. All the listed prices are per room and per night w/breakfast, with single/double/triple occupancy. Taxes are included (rounded to the nearest integer).

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Tryp Ambassador Hotel (****)

170/180 €

Husa Moncloa Garden Hotel (****)

143/143 €

Tryp Gran Vía OR Tryp Rex OR Tryp Washington hotels (***)

119/143 €
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Alexandra Hotel (\*\*) 67/88/131 €

Further details about the individual hotels can be found on the travel agency website <a href="https://congresos.hostingtravel.com/registration/registration.asp?congress=30000000032&language=en&agency=ultramar madrid">https://congresos.hostingtravel.com/registration/registration.asp?congress=30000000032&language=en&agency=ultramar madrid</a> where it is also possible to make the booking. For further information about booking of accommodation please contact Ultramar Express at

E-mail: SympRadar08@ultramarexpress.com

Phone: + 34 93 482 71 40 Fax: +34 93 482 71 58

It is possible to book into hostels (see e.g.: http://www.hostels.com/es/es.ma.html) at a cheaper rate, but this must be done by the individual participants themselves.

# IMPORTANT DATES

Abstracts due	15 Jan 08
Notification of acceptance	15 Feb 08
Pre-registration due	17 March 08
Papers due	7 April 08
Deadline for full refund	25 April 08
Deadline for partial refund	23 May 08
Registration	8 June 08
Conference starts	9 June 08
Symposium study tour starts	13 June 08
Final revised papers due	21 July 08

#### REGISTRATION

Registration will be through the travel agency website

https://congresos.hostingtravel.com/registration/registration.asp?congress=30000000032&language=en&agency=ultramar\_madrid which will be available from 22 October 2007 onwards. It will be possible to reserve and pay for accommodation, field trips and various other things through this site as well.

A hard copy of the registration form will be sent out via regular mail along with this circular. Nevertheless, registration through the web is strongly encouraged.