



# CONGRESO Internacional Ciencias de la Tierra

18 al 22 de octubre de 2004, Santiago - Chile

## A.- MUNDO ACADÉMICO Y CIENTÍFICO

### COMISIONES CIENTÍFICAS

HOMBRE Y MEDIO AMBIENTE	GEOMÁTICA	DINÁMICA DE SIST. GLOBALES Y LOC.
Políticas y legislación ambiental Protección de recursos naturales Educación y evaluación ambiental Preservación de la biodiversidad Cartografía de riesgo Riesgos y planificación urbana Protoc. civil para desastres naturales El ciclo del riesgo	Sensores remotos Sistemas de información geográfica Geodésia y Sist. posicionamiento global Cartografía digital Fotogrametría Infraestructuras de datos espaciales	Geografía política Sistemas rurales y urbanos Ordenamiento territorial Geología, geomorfología y geofísica Climatología y meteorología Oceanografía e hidrografía

### SEMINARIOS

- Educación en geografía
- Planificación urbana
- Integrando la información espacial
- Biodiversidad y áreas protegidas
- Geoparitalogía

## B.- MUNDO ESTUDIANTIL

### CONGRESO NAC. DE CIENCIAS DE LA TIERRA PARA ESTUDIANTES DE EDUCACIÓN MEDIA

#### TEMAS

Características geográficas frías del mundo  
La globalización y el nuevo mapa político del mundo  
Problemas del mundo contemporáneo  
Entorno natural y comunidad regional

Inscripción y participación gratuita para estudiantes.  
Recepción de trabajos hasta 31 agosto 2004

### CONCURSO PICTÓRICO "LA CARTOGRAFÍA DE MI REGIÓN"

Para estudiantes de E.M. y Básica

Pueden participar todos los estudiantes de educación básica y media de cualquier establecimiento educacional reconocido por el Ministerio de Educación  
Los trabajos deben enviarse a: SECRETARÍA GEOGRÁFICA / IGM / Nueva Santa Isabel N° 1640 / Santiago

## C.- MUNDO EMPRESARIAL

### STANDS Y EXPOSICIONES TECNOLÓGICAS

Se invita a empresas y organismos relacionados con la temática a presentar sus productos y servicios tanto en stands como en exposiciones tecnológicas especializadas.

#### PATROCINADO POR:

MINISTERIO DE DEFENSA NACIONAL



INSTITUTO PANAMERICANO DE GEOGRAFÍA E HISTORIA



EJÉRCITO DE CHILE



ACADEMIA POLITÉCNICA MILITAR



ORGANIZA:  
INSTITUTO GEOGRÁFICO MILITAR DE CHILE



Informaciones: Nueva Santa Isabel 1640 Teléfono: (56-2) 4606814 E-Mail: cct2004@igm.cl  
Página Web: <http://www.igm.cl> Sede del Congreso: Centro de Convenciones del Edificio Diego Portales

## PRESENTATION

The Military Geographic Institute presents to the national and international scientific community the Eighth International Earth Sciences Congress as means for members of that community to announce and communicate their research results and advances in science and technology, in order to enable the discussion and exchange of experiences.

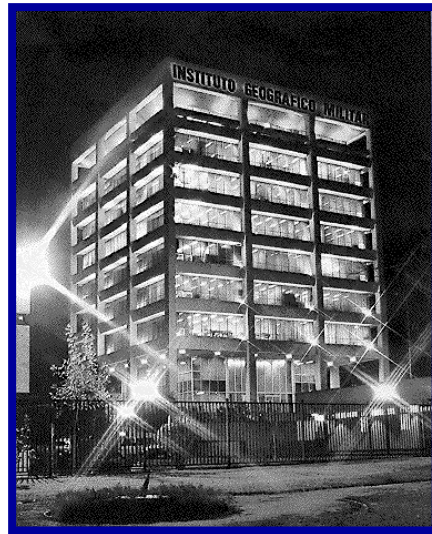
The substantial experience acquired by the Military Geographic Institute in the organization of the previous congresses and the awareness of the benefits provided by an event of this nature, has made it possible for the Eighth Congress to be structured into scientific commissions, international seminars, exhibitions and technical visits. As has become traditional for this Congress, it will be held in the Conference Center of the Diego Portales building, in the city of Santiago, Chile, from the 18th to the 22nd of October 2004.

## OBJECTIVES OF THE CONGRESS

The Eighth International Earth Sciences Congress has the following objectives:

1. To examine the state of the art of the Geosciences, grouped by the following subject areas :
  - Geomatics
  - Man and the Environment
  - Dynamics of global and local systems
2. To encourage the exchange of academic and professional experience that facilitates bringing up to date the knowledge in this field held in national and international scientific communities and distributing it widely.
3. To analyze and to evaluate the new research approaches, techniques, methodologies and information technology tools used and the way they are used for benefiting society.

4. To determine the future tendencies of scientific investigation which enable the gaps between scientific developments, social developments, environmental conservation and economic growth to be closed at the various territorial levels.



## GENERAL PROGRAM

### MONDAY 18th of OCTOBER

- 9:00 hrs.* Registration  
*12:00 hrs.* Inauguration  
Opening Ceremony

### *14:30 - 17:00 hrs.*

- Papers presented in Scientific Commissions
- Seminar : Biodiversity and Protected Areas
- Seminar : Reference Systems in Geodesy

### TUESDAY 19th of OCTOBER

- 9:00-13:00 hrs.*
- Papers presented in Scientific Commissions
  - Seminar : Integrating GeoSpatial Information
  - Seminar : Education in Geography

**14:30-17:00 hrs.**

- Papers presented in Scientific Commissions
- Seminar : Reference Systems in Geodesy

**WEDNESDAY 20<sup>th</sup> of OCTOBER**

**9:00-13:00 hrs.**

- Papers presented in Scientific Commissions
- Seminar : Integrating GeoSpatial Information
- Seminar : S.H.O.A.

**14:30-17:00 hrs.**

- Papers presented in Scientific Commissions
- Seminar : Reference Systems in Geodesy
- Seminar : Geomorphological Dynamics and Diversity in Chile

**THURSDAY 21<sup>st</sup> of OCTOBER**

**9:00-13:00 hrs.**

- Papers presented in Scientific Commissions
- Seminar : Integrating GeoSpatial Information
- Seminar: Urbanism and Planning for the Modern City

**14:30-17:00 hrs.**

- Papers presented in Scientific Commissions
- Seminar : Integrating GeoSpatial Information

**16:30-18:00 hrs.** Technical Visit to the IGM  
**20:30 hrs** Friendship Dinner

**FRIDAY 22<sup>nd</sup> of OCTOBER**

**10:00 hrs.** Plenary Session  
**12:00 hrs.** Closing Ceremony

**SATURDAY 23<sup>rd</sup> of OCTOBER**

**09:00-19:00 hrs.** Excursion : "La Campana" National Biosphere Reserve Park

### SCIENTIFIC PROGRAM

#### Scientific Commissions

The Scientific Program for the Eighth International Earth Sciences Congress is structured into three main themes :

#### Geomatics

- Remote Sensing
- Geographic Information Systems
- Global Positioning Systems
- Computer-aided Cartography
- Photogrammetry
- Geodesy
- Geo-Spatial Data Infrastructures

#### Man and the Environment

- Environmental policies and legislation
- Protection of natural resources
- Environmental education
- Conservation of Bio-Diversity
- Hazards and Urban Planning
- Civil Protection for natural disasters
- Cartography of Hazards

#### Dynamics of Global and Local Systems

- Political Geography
- Rural and Urban Systems
- Territorial Classification and Organisation
- Geology, Geomorphology and Geophysics
- Climatology and Meteorology
- Oceanography and Hydrography

#### INTERNATIONAL SEMINARS

The Military Geographic Institute, as a way of deepening and analyzing knowledge of specific topics, has organized thematic seminars whose main speakers, being of widely-recognised reputation and experience, will cover concepts, methodologies, study cases and results by means of an integrating and combined approach, emphasizing the current state of knowledge, the technologies used and the future outlook for research. To these ends, the following seminars are to be held :

#### 1. Integrating Geo-Spatial Information.

*All activity can be represented spatially and referenced to a uniform system, constituting georeferenced geo-spatial information. If standards are also employed, it becomes interoperable*

information. Standards, the SNIT project and the efforts made within it to achieve interoperable information, Geo-Spatial Data Infrastructures and other interesting topics are part of this Seminar. University academics, members of the National Territorial Information System (SNIT in Spanish initials), researchers in the geosciences area, representatives of the Global Spatial Data Infrastructure (GSDI), of the Permanent Committee for the Spatial Data Infrastructure of the Americas, of the graphics systems industry (Intergraph, ESRI), and of the Pan-American Institute for Geography and History, amongst others will participate in the seminar.

**2. Modern Reference Systems in Geodesy**

The necessary basis for the correct calculation of points on the terrestrial surface starting from spatial geodesic measurements will be covered, in particular GPS techniques. The features and calculation methods for the reference frameworks ITRF2000 and SIRGAS2000 will be presented, along with the correct use of their coordinates. This includes the consideration of change over time due to variations in the rotation of the Earth, plate tectonics and deformations in the crust of the earth. In this seminar workshop Hermann Drewes of the DGF in Germany and Lt.-Col. Rodrigo Maturana, Head of the Geodesic Department in the Military Geographic Institute will participate.

**3. S.H.O.A. (falta nombre).**

**4. Urbanism and Planning for the Modern City.**

**5. Education in Geography.**

The variations and similarities in education for geography at national and international levels are interesting for discussion and finding points of convergence and discrepancy. The modernization and globalization processes affecting geographic knowledge have obliged those working in the sciences to interpret world events and transmit them in conferences with the best methodologies possible in relation to the various realities of economic, social, and cultural development. In this seminar Ana Maria Wegman (PAIGH), Silvia Cortes (UMCE), Adela Fuentes (UMCE), Fabian Araya (ULS), Marcelo

Garrido (PUC), Rosser Bianchi, (UTEM), and Mireya Gonzalez (UTEM) will be participating.

**6. Geomorphological Dynamics and Diversity in Chile.**

The special, natural characteristics of the country, including its location along an edge of the continent which is active from a tectonic point of view, the great variety in climates from north to south, and a substantial altimetric variation from east to west, all provide suitable conditions for the development and evolution of a great variety of geographic landforms. In this seminar Jose Antonio Naranjo (Sernageomin), Francisco Ferrando (U.Ch.), Consuelo Castro (PUC), and Maria Victoria Soto (U.Ch.) will be participating as speakers.

**7. Bio-Diversity and Protected Areas.**

From institutional and academic viewpoints, it is intended to report on the current state of research into bio-diversity, with special emphasis on the areas now under protection in terms of ecosystems conservation. In this seminar Dr. Victor Quintanilla P. (USACH), Dr. Juan Armesto (PUC), Dr. Sergio Navarrete (ECIM - PUC) Mr. Jaime Rovira (CONAMA), Sr. Carlos Weber B. (CONAF), and Mr Leonardo Núñez M. (SERNAPESCA) will be participating.

**TECHNICAL VISIT**

The visit will be made to the Military Geographic Institute, and has as its objective making known the process of creating digital cartography at all its scales, also the creation of educational materials in multimedia products and thematic atlases. This event will take place on thursday the 21<sup>st</sup> of October, at 16:30, leaving from the Diego Portales building conference center.

**EXHIBITIONS**

These activities involve the presentation of panels, computing equipment, technical instrumentation and teaching materials related to the disciplines included in the topics of the Scientific Program, according to the following scheme :

- **Posters**

*The objective of the posters is to present the tasks, products and services of Chilean institutions involved with the Earth Sciences, through posters and/or permanent exhibition panels. In addition, the work with special features worth exhibiting which attendees to the Eighth Congress bring may be maintained on exhibition throughout the whole five days in which this event is held.*

- **Exhibition of Bibliography**

*Exhibition of technical and scientific texts of interest : collections of statistics, books, magazines, and both periodic and non-periodic journals.*

**2<sup>nd</sup> TECHNOLOGICAL AFTERNOON SESSION :  
"T-TEC 2004"**

The main suppliers of services and software (GIS, GPS and Remote Sensing) and technological equipment related to the tasks of Geo-Science work have been invited to exhibit their work in a room specially set up for this. The objective is to present state of the art technologies existing around the world.

**ACADEMIC EXCURSION**

It is planned to make a post-conference excursion, as per the following scheme :

**Place :** "La Campana" National Park - Biosphere Reserve in the Fifth Region of Chile.

**Date :** Saturday 23rd of October (duration 1 day)

**Start :** Santiago, 08:30

**Finish :** Santiago, about 19:00

**Cost :** US \$50

*This outing will be made on foot in one of the seven biosphere reserves present in Chile. Its importance lies in the special natural conditions for the evolution of the flora, which is evident in the great diversity and presence of species unique to this Mediterranean environment, in the Chilean coastal upland range, 112 km from the city of Santiago. This event will take place with a minimum of 20 participants and a maximum of 30, who should pay for taking part in the excursion at the location of the Eighth Congress, from the 18<sup>th</sup> to the 20<sup>th</sup> of October 2004. On*

*the day of the outing a litre of mineral water and a cold lunch will be issued to each participant.*

**RULES FOR THE PRESENTATION OF PAPERS**

A summary of the work should be delivered by the 20<sup>th</sup> of August 2004, for which the following aspects should be covered:

- The material should be previously unpublished.
- The abstract should be up to 300 words long.
- It should indicate the title of the research and the area covered, also including the name, address, telephone, fax and e-mail address of the author or authors.

By the 30<sup>th</sup> of August 2004 the authors will have been informed of the acceptance of their paper, which will be classified into one of the following categories :

- Presentation in Conference.
- Poster

All the articles accepted will be published, for this reason it is necessary for the authors to send by e-mail (to [cct2004@igm.cl](mailto:cct2004@igm.cl)) or on a CD-ROM the texts of their presentations. These must be received by the 10<sup>th</sup> of September 2004. The rules for presenting the text are as follows:

- It should contain an abstract of 300 words in both Spanish and English, which are the official languages at the event.
- It should contain a maximum of ten pages, including illustrations, graphs, diagrams, maps and/or photographs.
- The bibliographical references should be appropriately indicated.
- The author should include on a separate sheet his name, mail and e-mail addresses, fax and phone numbers and his curriculum.

The model for the article format can be obtained by Internet at [www.igm.cl/cct2004/cct2004.htm](http://www.igm.cl/cct2004/cct2004.htm)

The time for the presentation will not exceed 30 Minutes, including questions. For the poster sessions, a suitably set up room will be made available for the exhibition.

## GENERAL INFORMATION

### CONGRESS LOCATION

The Eighth International Earth Sciences Congress will be held between the 18th and 22nd of October, 2004, in the Conference Center of the Diego Portales Building in the city of Santiago.

### LANGUAGES

The official languages for the Eighth Congress are Spanish and English. While the sessions are under way there will be simultaneous translation available.

### REGISTRATIONS

The registration fees can be paid in Chilean pesos or in U.S. dollars, cash, or with cheques made out to the Instituto Geografico Militar. There are four modes of registering as a participant in the VII Congress:

Attendee	US\$ 200
Speaker	US\$ 200
Poster	US\$ 200
Student	US\$ 20
Stands	US\$ 500

Formal confirmation of the registrations for the participants may be made by e-mail, sending the "Formulario de Inscripcion" (registration form) which is available on the web page for the Eighth Congress. Alternatively, registration can be finalized on arrival at the congress location in the conference center of the Diego Portales building, on Monday 18<sup>th</sup> of October, from 9:00 onwards.

Registration in the VII International Congress of Earth Sciences gives participants (attendees, speakers, poster sessions) the right to the identification card, the abstracts, other conference materials, participation in the commission sessions and seminars, certificate of attendance, tourist information, the technical visit to the

IGM, services of coffee and the inauguration and closing cocktail events.

### AUDIOVISUAL RESOURCES

Each exhibitor will have, when presenting his speech, a projector of transparencies, slide projector, and a multimedia projector. It is necessary to request these resources in advance, through the registration form.

### SOCIAL EVENTS

**Reception Cocktail:** This will be held on Monday 18th of October, in the "Salon Azul" (blue room) of the conference center of the Diego Portales building.

**Friendship Dinner:** (to be paid for). This will be held on Thursday the 21st of October, at 20:30, as an opportunity for meeting and establishing friendship among the participants of the Eighth International Earth Sciences Congress.

**Closing Cocktail :** This will take place on Friday 22nd of October in the "Salon Azul" (blue room) of the conference center of the Diego Portales building.

### ACCOMMODATION

The "Rapa Nui" travel agency is the agency officially entrusted with making reservations for accommodation.

**IT IS REQUESTED THAT THIS  
INFORMATION BE DISTRIBUTED**

For further information visit

**[www.igm.cl/cct2004/cct2004.htm](http://www.igm.cl/cct2004/cct2004.htm)**

or contact us at

**[cct2004@iam.cl](mailto:cct2004@iam.cl)**