

# First Announcement and Call for papers



**International Symposium  
On**



**"Geospatial Databases for Sustainable Development"**

**Goa, India. September 27-30, 2006**

**Organised by  
ISPRS Technical Commission IV  
and  
Indian Society of Remote Sensing  
Dehradun, India**

**Sponsored by:  
Indian Space Research Organisation  
Bangalore  
and  
Hosted by  
Space Applications Centre (ISRO)  
Ahmedabad, India**

## BACKGROUND

The International Society for Photogrammetry and Remote Sensing (ISPRS), is devoted to promoting international co-operation, co-ordination and advancement of photogrammetry, remote sensing and spatial information sciences and their applications for global development. All the scientific and technical activities of ISPRS are being conducted through its eight technical commissions, covering various aspects such as remote sensing, photogrammetry, geospatial science and applications, sensors and education.

The Indian Society of Remote Sensing (ISRS) was established in 1969 with the main objective of advancement and dissemination of remote sensing technology in the fields of mapping, planning and management of natural resources and environment by organising seminars/symposia and by publishing a quarterly journal (JISRS), bulletins, proceedings, etc. Currently, ISRS is a member of the International Society of Photogrammetry and Remote Sensing (ISPRS).

The ISPRS Technical Commission IV (TC IV) on Geodatabases and Digital mapping addresses Spatial Databases and Digital Mapping, Digital Landscape Modelling, Global Databases, Extra-terrestrial Geo-information System, Industries interface and Web-based GIS. ISPRS TC IV is organising an International Symposium on 'GEOSPATIAL DATABASES FOR SUSTAINABLE DEVELOPMENT' during September 27-30, 2006. Two parallel workshops/tutorials on 'Geospatial databases for Urban Planning' and 'Data Integration for Emergency Planning', during September 25-26, 2006, are also being planned.

## INTRODUCTION

Since the beginning of civilisation, spatial information in the form of maps has been the most effective means of depicting events over space and time. The transition from historical artistic drawing to complex digital cartography has been due to the development of computerised cartographic techniques which have been made it possible to represent data and information in digital formats for processing in the computer using specialised software. With the advent of orbital remote sensing data and the organisation of spatial databases, within Geographic Information System (GIS), combined with location information from

Global Positioning System (GPS), the process of systematic spatial information management has now become much easier. Over the last two decades, the combination of computer technology, communication technology, database technology, digital cartography, etc., has seen the emergence of concepts like Geo-databases, Digital Mapping and Distributed Access Systems.

The need for timely and accurate geo-spatial information is steadily increasing due to changing requirements of the society world over. It is necessary to improve technology related to the acquisition, processing, storing, retrieving, analysis, dissemination and presentation of geo-data and geo-information for effective use for sustainable economic development and protection of the environment. The advancement in the availability of multi-sensor, multi-spectral, multi-resolution data from varied sensors and the development of pattern recognition and image processing techniques for extraction of thematic information have provided unique spatial information about natural resources and the environment. The availability of such information has catalyzed the development of databases, analytical and predictive modelling through GIS and Decision Support System (DSS). Such models are also being developed based on neural networks, fuzzy logic and hybrid soft computing techniques. The advances in geo-grid computing for facilitating analysis of large databases along with Web-GIS are crucial.

## SYMPOSIUM TOPICS

The topics of the ISPRS Commission IV Symposium will focus on, the terms of reference of commission IV and on the scientific and technical activities of ISPRS Commission IV Working Groups. Please visit [www.commission4.isprs.org](http://www.commission4.isprs.org) for more details on WG Chairs/Co chairs and their terms of reference. Inter-Commission sessions with ISPRS TC II and TC VII have also been planned. We have planned two sessions of working groups of TC VIII.

### Terms of Reference TC IV – Geo databases and Digital Mapping

- Development, access and management of spatio-temporal databases
- Spatial data infrastructures
- Image-based geospatial databases
- Data libraries, data clearinghouses, data warehouses, distributed archives and access to remote data sources, including metadata and digital data standards

- Web based access, retrieval and dissemination of spatial data, including web-based location-based services
- Integration of spatial information systems and image analysis for database-driven change detection, data capture and updating
- Dynamic spatial information systems, spatial data revision and versioning
- Interfacing 3D models with facility management systems
- Database generation for digital topographic and thematic mapping (including ortho-images and digital terrain models)
- Digital landscape modelling and visualization, and large scale urban models
- Global environmental databases and mapping
- Extraterrestrial mapping and spatial information systems
- Analysis of systems and their components for automated and semi-automated digital mapping and geo-information systems
- Analysis of industry needs and design of systems for production and update of Geo-information.

### The Working Groups of TC IV are

- WG IV/1 : Spatial Data Infrastructure  
*Chair: Jie Jiang* *Co-chair: Gabor Remetey-Fülöpp*
- WG IV/2 : Image Database and Spatial Information Management  
*Chair: Peggy Agouris* *Co-chair: Matt Duckham*
- WG IV/3 : Automated Geospatial data acquisition and mapping  
*Chair: Christian Heipke* *Co-chair: Peter Woodsford*
- WG IV/4 : Landscape Modelling and Visualisation  
*Chair: Jochen Schiewe* *Co-chair: Marguerite Madden*
- WG IV/5 : Web based geo information services and applications  
*Chair: Mukund Rao* *Co-chair: Songnian Li*
- WG IV/6 : Location based services  
*Chair: Michael Hahn* *Co-chair: Stephan Nebiker*
- WG IV/7 : Extraterrestrial mapping  
*Chair: Jürgen Oberst* *Co-chair: Paul Schenk*
- WG IV/8 : Spatial data integration for emergency services  
*Chair: Sisi Zlatanova* *Co-chair: Jonathan Li*
- WG IV/9 : Mapping from high resolution data  
*Chair: David Holland* *Co-chair: Pradeep Srivastava*
- Inter Commission WG II/IV : Dynamic and multi-dimensional systems and applications  
*Chair: Christopher Gold* *Co-chair: Li Zhilin*

- Inter Commission WG VII/IV: Derivation of global data, environmental change and sustainability indicators.  
*Chair: Chris Schmullius      Co-chair: Hiromichi Fukui*
- WG VIII/2 : Hazards, Disasters and Public Health  
*Chair: Piero Boccardo      Co-chair: Veerubhotla Bhanumurthy*
- WG VIII/9 : Arid lands, Land degradation and Desertification  
*Chair: Dan Blumberg      Co-chairs: Michael Ramsey and Ravoori Nagaraja*

## CALL FOR PAPERS

Papers are invited for presentation (either oral or poster) at the Symposium. Please send an extended abstract of about 1000 words, to the Symposium Secretariat for evaluation and consideration for presentation at the Symposium. Instructions for authors for preparing manuscript will be mailed and can also be accessed through ISPRS web site: [www.isprs.org/documents/orangebook/app5.html](http://www.isprs.org/documents/orangebook/app5.html). The proceedings of the Symposium will be published as "Volume XXXVI Part-4 of the ISPRS International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences". The important dates are as follows.

- Submission of Abstracts      January 31, 2006
- Acceptance of Abstracts      February 28, 2006
- Submission of Full Papers      June 30, 2006
- Payment of early registration fees      June 30, 2006

**Language:** The operating language of the Symposium will be English. Translation services can not be provided.

**Technical Sessions:** Technical sessions, both oral as well as poster. If necessary, sessions will be held in parallel.

## TUTORIAL/Workshop

The following tutorial will be organised during September 25-26, 2006.

- Geo databases for urban planning
- Data Integration for emergency management

## REGISTRATION FEE

The registration fee includes admission to all sessions and exhibition, a copy of proceedings on CD, a conference dinner and working lunches. The registration fee for accompanying person includes admission to opening and closing sessions, exhibition and a conference dinner. A suitable programme for accompanying persons will be arranged on payment. A registration form is enclosed. Those who desire to participate in the symposium and/or tutorial/workshop should fill the registration form it and mail to the Symposium Secretariat.

	Symposium		Tutorial/Workshop	
	Before June 30, 2006	After July 1, 2006	Before June 30, 2006	After July 1, 2006
Participants:	US \$ 350	US \$ 450	US \$ 150	US \$ 200
Full time students & seniors*	US \$ 175	US \$ 225	US \$ 75	US \$100
Accompanying persons	US \$ 125	US \$ 150	-	-
ISRS Members	Rs. 3000	Rs. 3500	Rs. 1500	Rs. 1750
Non-ISRS Indian participants	Rs. 4000	Rs. 4500	Rs. 2000	Rs. 2500
Full time students & seniors (Indian)*	Rs. 2000	Rs. 2500	Rs. 1000	Rs. 1250

\* Age more than 65 years      Student : Below 30 years

## VENUE

The Hotel Marriot, Goa will be the venue of the symposium.

## INSURANCE

The participants are advised to cover themselves with appropriate insurance coverage. The Host or ISPRS shall not be responsible for any injury or damage caused to participants, as a result of attending the Symposium. The Host and ISPRS are completely free from liability for any damages resulting from any claims or judgement in favour of third parties, government or other entities, for any acts or omissions occurring during the symposium and its related events.

## EXHIBITION

Well-known manufacturers/suppliers of equipment and systems for Remote Sensing, GIS, GPS and Photogrammetric applications are invited to participate in the exhibition. The companies, who are

interested, should get in touch with the Symposium Secretariat for further details.

## **ACCOMMODATION**

Accommodation for participants is being negotiated in specific hotels at special prices. The Symposium secretariat will assist in arranging hotel accommodation for participants. The accommodation request form will be mailed in September, 2005.

## **ABOUT ISRO**

The prime objective of Indian Space Research Organisation (ISRO), Department of Space (DOS), Government of India, has been to develop space technology and its application to various national tasks. Since 1969, when it was set up, ISRO has established space systems like the INSAT for telecommunication, television broadcasting, disaster warning and meteorological services, and the Indian Remote Sensing Satellites (IRS) for resources monitoring and management. Geosynchronous satellite Launch Vehicle (GSLV) and Polar Satellite Launch vehicle (PSLV) are used to launch INSAT and IRS class of satellites, respectively.

ISRO is driven by the requirements of the nation's development needs, is the nodal agency for implementation of the Indian Space Programme through its establishments located in different places in India. The programme includes development of satellites, launch vehicles, associated ground systems and remote sensing applications, through the institutional frame work of the National Natural Resources management System (NNRMS). The NNRMS is being supported by Natural Resources Databases (NRDB) created by various projects such as National Urban Information System (NUIS), Natural Resources Census, etc., to cater the needs of various agencies at different hierarchical levels of planning, viz. National, Regional, District, Block and Watershed.

ISRO has co-operative arrangements with several countries, space agencies and UN organisation. ISRO also provides training in remote sensing and geospatial technology to personnel from other countries.

## **ABOUT SAC (ISRO), AHMEDABAD**

Space Applications Centre (SAC), a major constituent of Indian Space Research Organisation (ISRO) spearheads the development of technology for thrust application areas of satellite communications and satellite-based remote sensing for earth resources and meteorological applications. The centre is involved in i) conducting space applications research and development in satellite communication, ii) Design and build communication, remote sensing and meteorological satellite payloads and satellite communication earth station equipment, iii) Facilities include mechanical fabrication, electronic fabrication, payload fabrication, MIC fabrication and environmental tests. The centre has developed world's most advanced cameras and data product software for Indian Remote Sensing satellites. The data from these satellites (IRS Series of 1A, 1B, 1C, 1D, P4 and P6) are being received world wide through ground receiving stations in different continents. The centre has carried out major national remote sensing and GIS projects pertaining to natural resources and environment in India in collaboration with different user ministries of the Government of India.

## **ABOUT GOA**

Goa is snugly sheltered between the hills of the Western Ghats on the East and the Arabian Sea to the West. It covers an area of about 3500 sq km. It provides spectacular views with bottle green hills wooded with jackfruit, mango, and cashew groves, cut across by rivers and edged by several kilometers of sun-drenched beaches. It possesses warm, languorous climates, and a gentle unspoilt people to complete this compelling kaleidoscope. It also offers glistening sands, swaying coconut palms, and ultra fresh seafood, along with its rich cultural and historical heritage.

## **PLACES OF IMPORTANCE**

**Basilica of Bom Jesus:** Where lies the casket with the Secred Relics of St. Francis Xavier.

**Calangute Beach:** Ochre sands at Calangute contrast pleasingly with the cerulean seas.

**Sunset at Palolem Beach:** People strolling on this beach get a rare glimpse of the sight of the sunset in between the two hillocks.





**Mahavir Wildlife Sanctuary:** The Mahavir Wildlife Sanctuary covers 240 sq km of which forest-clad slopes of Western ghats and its valleys, the biggest of the three sanctuaries of Goa. It is rich in wildlife and is a paradise for bird watchers. Besides flora and fauna there are many important geological and historical features in this sanctuary.

**Anjuna Beach:** The calm and pleasant Anjuna beach in North Goa never ceases to charm the tourists and locals alike. It's a fine blend of rock, sand, palms, grasses and hills that draws visitors to this picturesque beach.

**Shri Shantadurga Temple:** The divine temple of Shri Shantadurga at Kavlam is of historical importance.

## PRE-REGISTRATION FORM

### Personal Details

First Name.....  
Last Name.....  
Designation/Profession.....  
Name of the Organisation.....  
Address.....  
City..... Postal Code.....  
State..... Country.....  
Telephone (O).....<sup>®</sup>.....  
FAX:..... Website.....  
E-mail.....

I would like to register for

Tutorial/Workshop ☐ ... Present a paper ☐ ....

I plan to exhibit ..... ☐ No of booths required ..... ☐

### Payment Details:

Enclosed please find a cheque/Demand draft numbered.....  
Dated: ..... Drawn on.....  
For Rs. ....  
In favour of "ISPRS-ISRS payable at Ahmedabad.

Date \_\_\_\_\_ Signature \_\_\_\_\_

### For use in secretariat

Reg.No: \_\_\_\_\_  
Received draft No: \_\_\_\_\_  
Dated \_\_\_\_\_ for US\$ \_\_\_\_\_  
Drawn on \_\_\_\_\_ Bank.

Treasurer

Organising Secretary

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Web-site : [www.commission4.isprs.org](http://www.commission4.isprs.org)  
[isprs@icenet.net](mailto:isprs@icenet.net)

The form should be sent to the following address.