# **ISG-ISRS National Symposium**

GeoDiscover: Unravelling India's Spatial Frontier















28th-30th November 2023



Symbiosis International (Deemed University), Lavale Campus, Pune. MH, India



Event website: www.isgns2023.com

## **About Symposium**

The Indian Society of Geomatics (ISG) and the Indian Society of Remote Sensing (ISRS) have joined together to orchestrate a national symposium with a central theme of "Exploring the Geospatial Ecosystem, Trends, and Innovations". This symposium's main objective is to explore, examine and highlight the rapid advancements in the field of Geospatial sciences and their numerous applications in areas of human needs, technological development, space exploration, Earth monitoring, and their practical uses.

In recent times, there has been a notable surge in the development, evolution and application of Earth observation technology and Geoinformatics. This rapid advancement has significantly broadened their purview and applicability, exerting a substantial influence across virtually all facets of human life and activities.

The primary objective of this symposium revolves around establishing a collaborative platform for professionals, educators, researchers, and students actively engaged in the domains of Remote Sensing, Geographic Information Systems (GIS), Artificial Intelligence (AI), and Deep Learning algorithms, along with their practical implementations. This platform is envisioned to foster the exchange of knowledge, sharing of ideas, and sharing of experiences pertaining to the latest breakthroughs and challenges encountered in various domains. The symposium will facilitate comprehensive discussions, deliberations, and presentations that encompass emerging concerns, state-of-the-art technologies, inventive methodologies, and the tangible implications associated with Earth observation and Geospatial sciences

# **Exploring Geospatial Ecosystem, Trends and Innovations**

- Indian Space Policy & Startups
- Spatial Economics & Sustainability
- Emergency & Disaster Management
- Geospatial Framework & Infrastructure
- Green Economy, Crop Insurance & DSS
- Blue Economy, Ocean Resources
- Geospatial Governance
- Renewable & Non-renewable Energy
- Rural & Urban Infrastructure
  - GEOSPATIAL ECOSYSTEM

- Digital Agro Ecosystem
- HPC, Machine Learning and GeoAl
- Big Data Analytics
- Cloud Computing
- UAV Applications
- Open Geoinformatics (data & tools)
- Digital Twin
- Forensic GIS & Law Enforcement
- Time-series Data Applications
- Health GIS & Environmental Pollution
  - **EMERGING TRENDS**

- Super Resolution Image & Mapping
- AR & VR, Geo-vis, 3D & Interactive Mapping
- GNSS & Real Time Geoinformatics
- Astronomy & Planetary Remote Sensing
- Microwave, Hyperspectral, LiDAR, Thermal & Fluorescence Sensing
- Ocean, Atmosphere & Weather Watch
- Biosphere, Cryosphere & Hydrosphere Applications
- Agriculture & Natural Resource Accounting

**INNOVATIONS** 



## **About ISG**

Indian Society of Geomatics (ISG), established in 1993, is a premier society of professionals and institutions involved in promoting and popularizing Geomatics in India. It was formed by a group of professionals from government, academia, and industry with the main objective of promoting the technology and applications of Geomatics so that it becomes an important part of the information management and decision making processes. It has 27 very active Regional Chapters located at Ahmedabad, Ajmer, Bhagalpur, Bhopal, Chennai, Dehradun, Delhi, Hisar, Hyderabad, Jaipur, Jammu and Kashmir, Kharagpur, Lucknow, Ludhiana, Mangalore, Mumbai, Mysore, Nagpur, Pondicherry, Pune, Ranchi, Surat, Shillong, Trichy, Trivandrum, Vadodara and Visakhapatnam.





Indian Society of Remote Sensing (ISRS) was established in 1969 as Indian Society of Photo- interpretation, with not for profit scientific society having the main objective of advancement and dissemination of remote sensing technology and education by conjunctive use of remote sensing with conventional methods in the fields of survey, planning and management of natural resources and environment by organizing seminars/ symposia and by publishing journal, bulletins, proceedings etc. The Society has been organising annual conventions and national symposia regularly since 1981, giving opportunities to the remote sensing community in the country to present their papers and discuss the problems and methods of applications of remote sensing in development and management of resources. The Journal of the Society, JISRS, monthly publication, is the only journal in the country exclusively dealing with remote sensing technology and its applications.



### **Partner Institution**

Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas. The setting up of C-DAC in 1988 was to build and has been undertaking building of multiple generations of Supercomputer starting from PARAM with 1 GF in 1988. Different areas of C-DAC, had originated at different times, many of which came out as a result of identification of opportunities towards building a technologically advanced country (www.cdac.in).

# **Host Institution**



#### **About Symbiosis**

Symbiosis International (Deemed University), founded in 1971 by Prof. Dr. S.B. Mujumdar, is a multidisciplinary institution with a focus on a multicultural and innovative learning environment. Based on the Vedic thought of "World is One Family"; the university fosters a mutually beneficial relationship with international students, representing over 85 countries. With campuses in four Indian states and six cities, Symbiosis upholds its vision of promoting global understanding through quality education.

Symbiosis Institute of Geoinformatics (SIG) was established in 2004 and is a constituent of Symbiosis International (Deemed University). SIG has been imparting education and research in the area of Spatial Science, Geo-intelligence and data analytics in India and offers master courses in these areas of technologies.

#### **Mentor**

Prof. (Dr.) S. B. Mujumdar, Chancellor - Symbiosis International (Deemed University)

#### Patron

Dr. Vidya Yeravdekar, Pro Chancellor - Symbiosis International (Deemed University)

## **National Advisory Committee- ISGNS 2023**

Chairman: Shri S. Somanath, Chairman, Indian Space Research Organisation, Secretary and Department of Space, Bengaluru

- Dr. Shailesh Nayak, Director, NIAS, Bengaluru
- Dr. Rajesh S. Gokhale, Secretary, Ministry of Science and Technology, New Delhi
- Shri. Manoj Ahuja, Secretary, Ministry of Agriculture & Farmers Welfare, New Delhi
- Dr. Himanshu Pathak, Director General, Indian Council of Agriculture Research (ICAR) & Secretary, Department of Agricultural Research, New Delhi
- Shri S. Krishnan, Secretary, Ministry of Electronics & Information Technology, New Delhi
- Shri. Pankaj Kumar, Secretary, Department of Water Resources, RD & GR, Ministry of Jal Shakti, New Delhi
- Shri. Shantanu Bhatawdekar, Scientific Secretary, ISRO, Bengaluru
- Shri. Nilesh Desai, Director, SAC, ISRO, Ahmedabad
- Prof. Anil Bhardwaj, Director, PRL, Ahmedabad
- **Dr. M. Ravichandran,** Secretary, Ministry of Earth Sciences (MoES), New Delhi

- Shri. Shailesh Kumar Singh, Secretary, Department of Rural Development, New Delhi
- Shri. Bhupinder Singh Bhalla, Secretary, MNRE, New Delhi
- Prof. M. Jagadesh Kumar, Chairman-UGC, Ministry of Education
- Shri. Ajay Tirkey, Secretary, Department of Land Resources, New Delhi
- Shri. Jatindra Nath Swain, Secretary,
  Department of Animal Husbandry, New Delhi
- Shri. Manoj Joshi, Secretary, Ministry of Housing & Urban Affairs, New Delhi
- Shri. Amrit Lal Meena, Secretary, Ministry of Coal, New Delhi
- Shri. V. L. Kantha Rao, Secretary, Ministry of Mines, New Delhi
- Smt. Anita Praveen, Secretary, Ministry of Food Processing Industries, New Delhi
- Ms. Leena Nandan, Secretary, Ministry of Environment Forest and Climate Change (MoEFCC), New Delhi

- Shri. T K Ramachandran, Secretary, Ministry of Ports Shipping & Waterway, New Delhi
- Shri. Pankaj Jain, Secretary, Ministry of Petroleum & Natural Gas, New Delhi
- Shri. Rajiv Bansal, Secretary, Ministry of Civil Aviation, New Delhi
- Shri. K Rajaraman, Secretary, Department of Telecommunications, New Delhi
- Shri. Ethirajan Magesh, Director General, C-DAC. Pune
- Shri. Anoop Singh, Director General, FSI, Dehradun
- Shri. Sunil Kumar, Surveyor General of India (SOI), Dehradun
- Shri. Radhakrishnan Durairaj, Chairman and Managing Director, New Space India Ltd. (NSIL), Bengaluru
- Dr. V. Narayanan, Director, LPSC, ISRO, Thiruvananthapuram
- Shri. Lok Ranjan, Secretary, Ministry of Development of North Eastern Region, New Delhi

Convener: Dr. Prakash Chauhan, President, ISG, Director NRSC, Hyderabad

# **Steering Committee ISGNS 2023**

Chairman: Dr. Prakash Chauhan, President, ISG, Director NRSC, Hyderabad

- Shri. Pramod Kale, Eminent Scientist, Former Director, SAC, Ahmedabad & VSSC, Thiruvananthapuram
- **Dr. Rajani Gupte,** Vice Chancellor, Symbiosis International (Deemed University), Pune
- **Dr. Suresh Gosavi,** Vice Chancellor, SPPU, Pune
- Dr. S. Chokalingam, DG, YASHADA, Pune
- **Dr. N. K Sudhanshu,** Commissioner Land Record, Govt. of Maharashtra, Pune
- **Dr. Suhas Diwase,** Commissioner Sports, Govt. of Maharashtra, Pune
- Col A. K. Nath (Retd.), Executive Director, C-DAC, Pune
- Dr. T. N. Singh, Director, IIT, Patna
- Dr. R. Krishnan, Director, IITM, Pune
- **Dr. T. Srinivasa Kumar,** Director, INCOIS, Hyderabad

- Dr. R. P. Singh, Director, IIRS, Dehradun
- Dr. Amit Kumar Patra, Director, NARL, Gadanki
- Dr. K. Rajeev, Director, SPL, VSSC, Thiruvananthapuram
- Dr. S. P. Aggarwal, Director, NESAC, Shillong
- Dr. C. S. Murthy, Director, MNCFC, New Delhi
- **Dr. Thamban Meloth,** Director, NCPOR, Goa
- Dr. Raj Kumar, Ex. President, ISG, Ahmedabad
- Dr. S Unnikrishnan Nair, Director, IIST, Thiruvananthapuram
- Shri. Sanjay Kumar, CEO, Geospatial World, New Delhi
- Dr. Sunil S Bhagwat. Director, IISER. Pune

- **Dr. B. S. Dwivedi,** Director, ICAR NBSS & LUP, Nagpur
- Dr. P. K. Satyawali, Director, DGRE, Chandigarh
- Dr. D. Dutta, Assoc. Head NGP, Head SEED NRDMS & NSDI, DST, New Delhi
- **Dr. Rajendra Jagdale,** DG & CEO, Science and Technology Park, Pune
- Col. Sunil S. Fatehpur, Director, SOI, Pune
- Dr. Pramod Kaushik, President, Hexagon Geospatial, Gurugram
- Shri. Agendra Kumar, President, ESRI India, New Delhi
- Shri. Ch. Raghu Babu, Vice President, RMSI Pvt. Ltd, Hyderabad
- Shri. Prateep Basu, CEO, SatSure, Bengaluru

Convener: Dr. T. P. Singh, Chairman ISG - Pune Chapter, Director SIG.

## **Organizing Committee ISGNS 2023**

Chairman: Dr. T. P. Singh, Chairman ISG - Pune Chapter, Director SIG.

- Dr. C. P. Singh, Secretary, ISG, Scientist SF, SAC. Ahmedabad
- Dr. Praveen Thakur, Secretary, ISRS, Scientist SG IIRS, Dehradun
- Mr. Sajeevan G., Chairman, ISRS Pune Chapter, Sr. Director, C-DAC, Pune
- Dr. Manoj Khare, Vice Chairman, ISG Pune Chapter, Sr. Director, C-DAC, Pune
- Mr. Biju C., Vice Chairman, ISRS, Pune Chapter, Jt. Director, C-DAC, Pune
- Ms. Upasana Dutta, Jt. Secretary, ISG Pune Chapter, Jt. Director, C-DAC, Pune
- Dr. Jatinder Kumar Saini, Jt. Secretary, ISRS Pune Chapter, Director, SICSR, Pune
- Dr. Nikhil Lele, Treasurer, ISG, Scientist-SF SAC, Ahmedabad
- Dr. Poonam Tiwari, Treasurer, ISRS, IIRS, Debradun
- Mr. T. S. Murugesh Prabhu, Treasurer, ISG Pune Chapter, Sr. Project Engineer, C-DAC, Pune
- Mr. Jitendra Mhatre, Treasurer, ISRS Pune Chapter, Jt. Director, C-DAC, Pune
- Mr. Bishwarup Banerjee, ISG Pune Chapter, Director, LTI Mindtree
- Ms. Asima Mishra, ISRS Pune Chapter, Assoc. Director, C-DAC, Pune
- Dr. Vidya Kumbhar, Member ISRS, Symbiosis, Pune

- **Dr. Navendu Chaudhary,** ISG Pune Chapter, Symbiosis, Pune
- Dr. Manoj Chavan, ISRS & ISG Pune Chapter, Sr. Project Engineer, C-DAC,
- Mr. Satish Pardeshi, ISRS & ISG Pune Chapter, Sr. Project Engineer, C-DAC, Pune
- Dr. P. K. Joshi, Jawaharlal Nehru University, New Delhi
- Shri Jayaprasad P, Scientist SG, SAC, ISRO, Ahmedabad
- Shri Shashikant A Sharma, Group Director, Scientist - SG, SAC, ISRO, Ahmedabad
- Dr. Mehul Pandya, Group Director, Scientist - SG, SAC, ISRO, Ahmedabad
- Shri M. Arulraj, Group Head, Scientist - SG, NRSC, ISRO, Hyderabad
- Dr. Stutee Gupta, Scientist, NRSC, Hvderabad
- Dr. C. Jeganathan, BIT, Mesra, Ranchi
- Dr. Sameer Saran, DGM, RRSSC North, New Delhi
- Dr. Mukunda Behera, IIT Kharagpur
- **Dr. Shamita Kumar,** ISRS Pune Chapter, Professor, Bharati Vidyapeeth, Pune
- **Dr. Shirish Ravan,** ISRS Pune Chapter, Earthsight Foundation, Pune

- Dr. Harnam Singh, Science, Dehradun
- Dr. Gautam Talukdar, WII, Dehradun
- Dr. Chandrashekhar Biradar, CIFOR- ICRAF, New Delhi
- Dr. Sanjay Patil, MRSAC, Pune
- **Dr. Raymond Duraiswami,** ISRS Pune Chapter, HOD of Environmental Science SPPU, Pune
- Dr. Manish Kale, ISG Pune Chapter, Jt. Director C-DAC, Pune
- Prof. Benidhar Deshmukh, School of Sciences, (IGNOU), New Delhi
- Dr. Rabindra Panigrahy, Scientist E, DST, New Delhi
- Dr. Suddhasheel Ghosh, MGM University, Aurangabad
- **Dr. Dharmaveer Singh,** ISRS Pune Chapter, Symbiosis, Pune
- Dr. Sandipan Das, ISRS Pune Chapter, Symbiosis, Pune
- Dr. Rajesh Dhumal, Symbiosis, Pune
- Dr. Yogesh Rajput, Symbiosis, Pune
- Mr. Sahil Shah, Symbiosis, Pune
- Mr. A. B. Singh, Symbiosis, Pune
- Ms. Sonal Rawal, Symbiosis, Pune

Convener: Dr. Yogesh Kumar Singh, Secretary, ISG Pune Chapter, Associate Director, C-DAC, Pune

## ISG-ISRS National Symposium (28th-30th November 2023) - Registration

Registration Fees	Early Bird	After 25 <sup>th</sup> October, 2023
ISG / ISRS Member	Rs. 3500/-	Rs. 4500/-
ISG / ISRS Student	Rs. 2500/-	Rs. 3500/-
Student / Senior member	Rs. 3000/-	Rs. 4000/-
Non ISG / ISRS Member	Rs. 4500/-	Rs. 5500/-
Industry	Rs. 5500/-	Rs. 6500/-
On spot	Rs. 7000/-	

<sup>\*</sup>For registration and pre conference tutorial, visit www.isgns2023.com/events/

#### Pavment

Payment gateway will be available on the symposium website. For other modes of payment, the required information will be provided on the symposium website. The organizing secretary may also be contacted, if required.

#### **Online Registration**

Interested participants may register online at the symposium website www.isgns2023.com on or before Oct 25<sup>th</sup>, 2023 (early bird registration). Details regarding the online links for various sessions will be made available soon on the symposium website.

<sup>\*</sup>It is mandatory for students to produce their valid ID card at the registration desk, else they will have to register with Rs. 7000/-

## **CALL FOR ABSTRACT**

We welcome abstracts from Researchers, academicians, technology users, policy makers and other stakeholders for the ISG-ISRS National Symposium (28th-30th November 2023) - Pune.

Both oral and poster presentation options are available for researchers. We invite you to send your original research abstracts according to given format in the Abstract submission guidelines. Authors of accepted abstracts must register online according to the registration guidelines.

Abstracts of papers (300 words) written only in English on the above session themes of the conference are invited latest by 10th October 2023 and acceptance will be notified by 25th October 2023. It should be original and not submitted or published anywhere else.

Abstract should be written in Times New Roman (font size: 12pt) with single spacing. A running title (bold) with 3-5 keywords and author's name and affiliation should be included. All the selected abstracts will be published in the proceedings of the conference.

The authors of the accepted abstracts are requested to submit the full-length papers latest by 5th November 2023. The selected full length papers (after rigorous blind peer review) will be published in SCI/Scopus/UGC-Care listed Indexed Journals. The format for submission of full-length paper will be notified on the website.

#### **IMPORTANT DATES FOR ABSTRACT SUBMISSION**

Last date of submission of ABSTRACT: 10th Oct 2023 ABSTRACT Acceptance communication: 25th Oct 2023

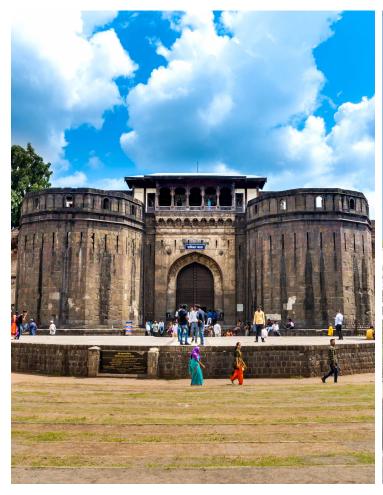
## **Call for Sponsorship**

Unlock unparalleled online exposure by becoming a sponsor or exhibitor at our event, where you'll connect with influential delegates and key decision-makers in the expansive realm of remote sensing and geo-spatial science. To explore sponsorship and exhibition possibilities further, please don't hesitate to reach out to us at isgns2023@gmail.com.

## The city of Pune

Pune, a vibrant city nestled in western Maharashtra, India, holds a unique place in the country's cultural and historical tapestry. Known for its rich heritage, Pune boasts a legacy that dates back to ancient times, with remnants of its historical significance evident in its architecture and landmarks. Often referred to as the "Oxford of the East," Pune is a hub of education and learning, housing prestigious universities and research institutions that draw students from across India.

For accomodation details please visit Symposium website: www.isgns2023.com





For any queries, please reach us on



