

# INDIAN GEOPHYSICAL UNION

## 55<sup>th</sup> Annual Convention on



## Changing Water Cycle & Water Resources

December 5-7, 2018

at

Rabindranath Tagore University

Bhopal

Organized Jointly by

IGU &



RNTU



## ADVISORY COMMITTEE of 55<sup>TH</sup> IGU CONVENTION

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## LOCAL ORGANIZING CONVENER

### Dr. Suryanshu Choudhary

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## OBJECTIVES

The Earth's water cycle involves evaporation of surface water that rises into the atmosphere and condenses as clouds and falls again onto the Earth's surface through precipitation. The decrease in vapour content in atmosphere, increase in global temperature, melting of glaciers indicate the impact of changing global water cycle. During constant cycling through the land, ocean and atmosphere, water molecules pass repeatedly through the solid, liquid, and gaseous phases (ice, water and vapour), but the total supply remains fairly the same. A water molecule can travel to many parts of the globe through this cycle. The mass of water on the

Earth is quite stable, but on the basis of climatic variables and some other natural processes, the rain water goes to different reservoirs like the glaciers, fresh water bodies, surface water bodies, groundwater, salt water, and atmospheric water. Human amendment in the Earth's environment has created a crisis on our biodiversity and ecosystem. Inhibiting water flow by humans for several reasons like the increase in urbanization, excessive exploitation of ground water and increase of agricultural activities may be some other reasons for change in earth hydrological cycle. These interconnections create negative feedback loops that have the consequences for interruptions in the water cycle.

Rivers, lakes, and underground aquifers are potential sources of water for the mankind, while oceans provide habitat for a large species around the world. Water covers about three-quarters of the Earth's surface and it is a vital element for the existence of lives. Only 2.5% of water on the Earth is used for drinking purposes. Over two-third parts of water is frozen in glaciers and polar ice caps. In coming years many countries of the world demand more fresh water for drinking and other domestic purposes. This changing water cycle will have significant impacts on existing water resources. Simultaneously, unlimited extraction of fresh water from aquifers and other surface water bodies may also have significant consequences on the global water cycle. The strong correlation between the climate and hydrological elements can threaten to our biodiversity and ecosystem. Several topics on water cycle through the land, ocean and atmosphere will be deliberated during the 3-day Convention of Indian Geophysical Union (IGU) to be held at RNTU, Bhopal in the first week of December, 2018. Besides, issues related to water managements, problems faced and how to mitigate them will also be addressed during the convention.

## ABOUT RABINDRANATH TAGORE UNIVERSITY

Rabindranath Tagore University (RNTU), formerly known as AISECT University was established in the year 2010, it comes under section 2(f) of the Private Universities UGC Act. In 2013, the University is recognized as a Member of Association of Indian Universities. The University came under financial and administrative control of AISECT Group of Institutions. RNTU have strongly recognized by various regulatory bodies like UGC, AICTE, NCTE, BCI, MPPC, INC etc. RNTU strives to impart skill-based quality and promote research driven advancement of knowledge for creating successful professional. RNTU focus lies in the holistic learning and development of a student in order to ensure the effective application of knowledge for a secure future.



The University constitutes 14 department runs under 9 faculties and 7 Centre's of Excellence for benefitting nearly 5000 students all over the world. RNTU is situated in the heart of the country and fourth mineral prosperous state of the nation. The University campus spread over an area of 60 acres and covered by green forest and hills. RNTU campus is located at a distance of 12 km from Habibgunj railway station, 20 km from Bhopal station and 35 km from Raja Bhoj Bhopal airport. Bhopal is well connected by railway as well as air with major cities of the country like Delhi, Chennai, Mumbai and Kolkata.

## ABOUT CENTRE FOR EARTH & SPACE SCIENCES

The Centre for Earth & Space Sciences (CESS) at RNTU was established in 2015 for pursuing high quality research in various fields of Earth & Space Sciences. The hallmark of the Centre lies in using synergy between the Earth - Oceanic and Atmospheric realms, Space and Information Sciences to project the digital divide and promote knowledge-driven and job-led economic development of the country. The Centre is determined to impart knowledge & training and to promote the Earth and Space Science based research. In addition to the senior faculty, a group of research scholars and post graduate students have been included. The Centre is planning to introduce new teaching programmes in 2-year M.Sc. in Geophysics and short-term Hazard and Risk Mitigation program in the forthcoming academic session.

## ABSTRACT VOLUME

The 55<sup>th</sup> Annual Convention of IGU will bring out a volume containing abstracts, messages from luminaries, geo-scientific work of eminent scientists/researchers, and advertisements from Sponsors (Institutes, Industries and Instrument Manufacturers etc). The tariffs for publication of Advertisements are listed below:

Back Cover (Color)	: ₹ 75,000/-
Inside front Cover (Color)	: ₹ 50,000/-
Inside back Cover (Color)	: ₹ 40,000/-
Inside Full Page (Color)	: ₹ 30,000/-
Inside Full Page (BW)	: ₹ 20,000/-

Those who are interested in publishing their products/details of their organisations need to send necessary information to: [igu123@gmail.com](mailto:igu123@gmail.com) by 1<sup>st</sup> October, 2018. The tariff has to be paid in favour of Treasurer, Indian Geophysical Union, payable at Hyderabad.

The theme of the 55<sup>th</sup> IGU Convention is

## “Changing Water Cycle & Water Resources”

that contains following symposia:

### MAIN THEME

Global Distribution of Water Vapour Content  
Eco-hydrological Modelling  
Management of Water Resources  
Impacts of Changing Water Cycle  
Climate Change and hydrological impact  
River Evaporation Hot Spots

### SOLID EARTH GEOSCIENCES

Lithospheric Studies  
Earth System Processes & Disaster Management  
Energy and Mineral Resources  
Near Surface Investigations

### MARINE GEOSCIENCES

Marine Sedimentary Systems  
Plate Boundary Processes  
Coastal Research  
Exploration and Exploitation of Marine Resources

### ATMOSPHERIC, OCEAN & SPACE SCIENCES

Monsoons Prediction  
Drought & Floods  
Monsoon Dynamics, Climate and Glaciers  
Transformation of Aerosols  
Role of Ocean on Monsoon

In addition to the above, a half-day session will be devoted to “**Young Researcher Program**” by those who are pursuing quality research for Ph.D. in Earth Sciences, certified by their Supervisor. The “Best Oral Presenter Award” will be announced by a jury.

## IGU-ONGC BEST POSTER AWARDS

IGU-ONGC cash prizes will be awarded to two students and two research scholars below 30 years (as on 1<sup>st</sup> January of 2018) for best poster presentation in the field of Geosciences by a jury.

## IGU-PROF. JAGDEO SINGH & DR. S. BALAKRISHNA MEMORIAL GRANT

Meritorious students (1<sup>st</sup> & 2<sup>nd</sup> rank holders of pre-final year of PG in Geophysics or Applied Geophysics of recognized University) will be provided with the 2<sup>nd</sup> Sleeper train fare, accommodation and registration fee waiver to participate in the Annual Convention of IGU, and their names are to be forwarded to IGU by HoD.

## IGU-ANNI TALWANI MEMORIAL GRANT FOR WOMEN RESEARCHERS

Indian women researchers/students below 30 years (as on 1<sup>st</sup> January of 2018) are encouraged to participate in the Annual Convention through this grant. The 3<sup>rd</sup> AC train fare, accommodation and registration fee waiver will be provided to four grantees. Selection will be based on merit of the paper submitted by an applicant to Convention, certified by HoD or supervisor.

## JIGU-Prof. D. LAL BEST PAPER AWARD

A jury will scrutinize all papers published in the journal of IGU during the Calendar Year of Annual Convention for the Best Paper Award that will be conferred during the IGU Convention.

## IGU NATIONAL AWARDS

Nominations for Five Award/Prize/Medal of IGU are invited in prescribed proforma (available at [www.iguonline.in](http://www.iguonline.in)). IGU also honours distinguished Earth Scientists through some Memorial Lectures.

## ACCOMMODATION

Participants/delegates are requested to send their accommodation requisition (Guest Houses or City Hotels) on payment basis well in advance to the local organising convener ([iguconvention@gmail.com](mailto:iguconvention@gmail.com)) with a copy to [igu123@gmail.com](mailto:igu123@gmail.com) by 30<sup>th</sup> October, 2018.

## IGU MEMORIAL LECTURES

IGU invites eminent Earth Scientists to deliver special lectures on topics of scientific interests, and honours with IGU Memorial Lectures organized at different places round the year. 201

## EXHIBITION STALLS

An exhibition of geophysical and allied instruments will be arranged during the Annual Convention of IGU, which will enable the delegates / participants to gain a comprehensive overview of the products and services available as well as to discuss on the latest developments with the exhibitors. The exhibitors may be given a 5-minutes slot for oral presentation, on request basis, to showcase their products or explain the benefits to the delegates/participants. The stall dimension is 9'X9'.

**Exhibition Fees : INR 75000**

## REGISTRATION FEE

All delegates must register in advance for participation to this Annual Convention of IGU. The enclosed/attached registration form may be filled in and sent to Dr. Kalachand Sain, Hon. Secretary, IGU, CSIR-NGRI Campus, Uppal Road, Hyderabad-500007 along with fees given below category-wise:

IGU Non Member Delegate	: ₹ 4000/-
IGU Member Delegate	: ₹ 3000/-
IGU Member Delegate (Senior Citizen)	: ₹ 2000/-
Research Scholars	: ₹ 2000/-
Students	: ₹ 1000/-
Associated Members of IGU	: ₹ 1000/-
Spouse / Accompanying Person	: ₹ 1500/-

The registration fee covers participation to the 55<sup>th</sup> Annual Convention of IGU that includes seminar material, abstract volume, three lunches, two dinners and tea/snacks during the entire convention. The accompanying person(s) will not be entitled for the Convention material and abstract volume.

## REGISTRATION FORM 55<sup>th</sup> ANNUAL CONVENTION of IGU on Changing Water Cycle and Water Resources Rabindranath Tagore University, Bhopal, Dec 5-7,2018

Please submit filled-in (Capital Letters) registration form in following format in A4 size (also available at [www.igu.in](http://www.igu.in)) along with abstract to Dr. Kalachand Sain, Honorary Secretary, IGU, CSIR-NGRI Campus, Uppal Road, Hyderabad-7; Ph:040-27012734/ 2799; Email: [igu123@gmail.com](mailto:igu123@gmail.com). One form for one delegate

1. Name: (Prof/ Dr/ Mr/Mrs/Ms)
2. Age:
3. Designation / Affiliation:
4. Address for Correspondence:
5. Mobile No:
6. Email ID:
7. Title of Abstract (if submitted):

8. Preference of Presentation (please tick)  
[.....] Oral [.....] Poster

Please tick suitable topic only  
[.....] Solid Earth Geosciences  
[.....] Marine Geosciences  
[.....] Atmosphere, Space & Planetary Sciences  
[.....] Young Researchers Program

9. Mode of Payment for Registration:

10. Do you need accommodation? Yes [ ] No [ ]
11. Are you a Member of IGU? Yes [ ] No [ ]

Place:  
Date:

Signature

**\*Abstract (.doc format) with (i) Title, (ii) Name of Author(s), (iii) Affiliation, (iv) Presenting Author's email, and (v) Content of no more than 450 words should be sent to [igu123@gmail.com](mailto:igu123@gmail.com) by 1<sup>st</sup> October, 2018. Abstracts will be accepted based on the merit and contents, and the decision of the competent authority for the oral or poster presentation will be communicated by 8<sup>th</sup> October, 2018.**

## VISITING PLACES NEAR BHOPAL

Bhopal is one of India's greenest cities, located in the central Indian state of Madhya Pradesh. There are two main lakes, the Upper Lake and the Lower Lake. On the banks of the Upper Lake is Van Vihar National Park, home to tigers, lions and leopards. The State Museum has fossils, paintings and rare Jain sculptures. Taj-ul-Masjid is one of the Asia's largest mosques that has white domes, minarets and a huge courtyard.

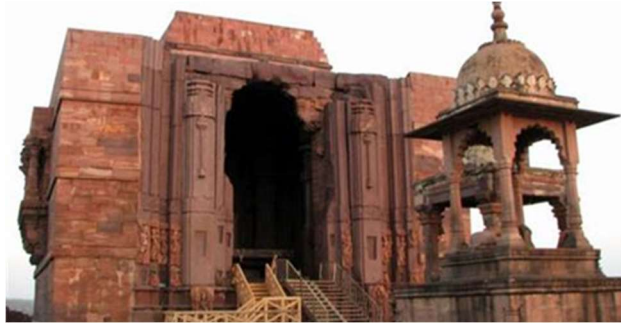
**Sanchi (60km from Bhopal)**



**Bhimbetika (44km from Bhopal)**



**Bhojpur Temple**



**Taj-UI Masajid**



**Bharat Bhavan**



**Indira Gandhi Rashtriya Manav Sangrahalaya**



**Tropic of Cancer**



**EXECUTIVE COUNCIL MEMBERS OF IGU FOR THE YEAR 2018-2020**

<b>Position</b>	<b>Names &amp; Designation</b>
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Vice Presidents	Dr. VM Tiwari, Director, CSIR-NGRI, Hyderabad Dr. Sunil K. Singh, Director, CSIR-NIO, Goa Prof. Talat Ahmad, VC, Jamia Millia Islamia, New Delhi Shri AK Dwivedi, Director (E & D), ONGC, New Delhi
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Joint Secretary	Dr. O. P. Mishra, MoES, New Delhi
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