

Joint Scientific Assembly
IAGA-IASPEI 2021
21-27 August, 2021



ND
CIRCULAR

Emerging Trends in Geophysics for a Transforming World



CONTACT ADDRESS

IAGA-IASPEI 2021 – Chair, LOC

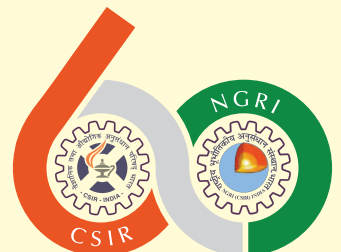
CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE

Uppal Road, Hyderabad-500007, Telangana, India.

Email: locjsa2021@ngri.res.in

F: +91 40 27171564 P: +91 40 23434600

www.iaga-iaspei-india2021.in



1961 - 2021



Second Circular: IAGA-IASPEI Joint Scientific Assembly (JSA) 2021

Dear Members of the IAGA and IASPEI Communities,

The First Circular of the IAGA-IASPEI Joint Scientific Assembly (JSA), 2021 was released more than five months ago. We have realized that adaptability should be our mainstay during this unprecedented global crisis to make this JSA a possibility.

The JSA will now be organized during 21-27 August 2021 on a fully virtual platform, to overcome the risks due the pandemic, associated with travel after deliberating with both the Associations and also with in the country. The JSA will be preceded by the IAGA and IASPEI Schools and GIFT Workshop. The 13th General Assembly of the Asian Seismological Commission (ASC) will be coterminous with the JSA, adding to the variety and diversity of the scientific program.

Though we personally wished your physical presence and make this JSA a memorable one, but the changed circumstances have led to the planning of a virtual JSA which shall provide you the comfort and enthused participation in larger numbers. The LOC in consultation with the two Associations has substantially reduced the registration fees which shall allow many young researchers to participate and present their scientific papers and join us in plenary lectures and other Joint Sessions.

The new normal of virtual conference will open up new vistas through interaction and could lead to fruitful collaborations to further science. We have initiated the processes for moving to a virtual conferencing and shall update you all regularly through the website (<http://iaga-iaspei-india2021.in/>).

As a Chair, LOC, I urge the scientific community to convert the current situation into an opportunity and make this Joint Scientific Assembly a grand success by your active participation.

Dr. Virendra M. Tiwari

Director, CSIR-National Geophysical
Research Institute, India
Chair, Local Organizing Committee
e-mail: locjsa2021@ngri.res.in





Revised Important Dates

15 January – 15 April 2021	Abstract Submission
15 January – 30 June 2021	Early Bird Registration
15 May 2021	Acceptance of Abstracts
1 July – 27 Aug 2021	Standard Registration
16 – 20 August 2021	IAGA, IASPEI Summer Schools
19 – 21 August 2021	GIFT Workshop, IAGA, IASPEI Business Meetings
21– 27 August 2021	Inaugural, Plenary Sessions, Scientific Sessions, Business Meetings, Exhibition, Closing Ceremony

Scientific Sessions

A total of 70 symposia on topical themes have been proposed including IAGA, IASPEI, ASC and Joint Sessions and a special symposium commemorating the Diamond Jubilee of CSIR-NGRI, as provided in following pages. Plenary Sessions are also being planned.

Depending on the number of abstracts submitted, the sessions will be spread over six days, with live Q&A options and extended Q&A sessions through chat. Recorded oral presentations would be available.

There will be e-poster sessions with chat Q&A options

The recorded presentations will be available for 7 days after the schedule of presentation with chat options for Q&A for registered delegates. Poster sessions will be available for 7 days after the schedule of presentation with chat options for Q&A for registered delegates for 2 days.

Business Meetings

Business Meetings of the Associations shall also be held virtually with extended options for live Q&A.

Session Timings

Timings of oral sessions will be optimized for all global time zones. Duration of each oral session will be 2 hours at one time.

E-Posters for each day's sessions would be available for viewing with assigned timings for author interaction.

Timing of Business Meetings will be scheduled during those times when the maximum number of delegates can participate live.



Abstract Submission and Registration

As first author, a participant may submit a maximum of 3 abstracts and shall attract an Abstract Submission Fee of US\$ 30 which shall be adjusted against the Registration Fee. The revised amounts for the virtual conference would be as below.

Regular delegates:	Early Bird US\$ 175	Standard US\$ 225
Students:	Early Bird US\$ 50	Standard US\$ 75
Retired:	Early Bird US\$ 100	Standard US\$ 150

IAGA & IASPEI Schools

The 5th IAGA School and IASPEI School are planned for August 16-20, 2021, just before the IAGA-IASPEI Joint Assembly, with the aim of providing excellent early career scientists with a good basic understanding of a wide range of the scientific topics covered by IAGA and IASPEI respectively. The Schools normally would also have taken place in Hyderabad, but due to the situation regarding the COVID-19 pandemic, they will be fully virtual. As participants also should get to know each other, in virtual rooms, the number of participants will still be limited to approximately 30 for each School.

For the IAGA School, the application process has been completed and the selected participants will be informed by the end of the year. Two lectures would be planned per day of 90 min duration as well as group projects.

The IASPEI School early career research scholars in the field of Seismology, Earthquake Engineering and Geophysics and of age 35 years or below on 1 January, 2021 are eligible. The calls for application will be announced through the conference website in the coming months. It will revolve around the theme: "Principles of Earthquake Location and its Correlation with Seismic Network Designs". Three lectures per day of one hour duration each, are planned.

GIFT Workshop

Geoscience Information for Teachers (GIFT) Workshops are outreach programs organized to provide first hand scientific information on various aspects of the planet Earth to science teachers of secondary schools to shorten time between discovery and textbook, making teachers aware of emerging scientific information and deliver materials and knowledge, which can be directly transported to classrooms.

The GIFT 2021 will be organized from 19-21 August 2021, on the topic 'Understanding the Changing Earth' and will explore topics like climate forcing, groundwater conditions, earthquake patterns, and geomagnetic field. The flyer is available on the conference website.



List of Proposed Symposia

The symposia proposed by IAGA, IASPEI and ASC are listed in the Table below. Descriptions of each symposium will be made available at the website by 15 Dec 2020.

<http://iaga-iaspei-india2021.in/>

Commemorating the sixty years of growth of CSIR-NGRI, a Diamond Jubilee Session is also planned on the topic 'Advancing Geophysical Sciences – 60 years of CSIR-NGRI, India'. Invited lectures by Eminent Personalities would showcase the Institute's achievements over the last six decades.

Joint Symposia

S. No.	Composition	Title
J1	IAGA-IASPEI	Earth and planetary core structure and evolution from observations and modelling
J2	IAGA-IASPEI	Application of Geophysical Studies for understanding Lithospheric Structure and Properties
J3	IAGA-IASPEI	Lithosphere-Atmosphere-Ionosphere coupling: Seismo Ionospheric and Electromagnetic Anomalies
J4	IAGA-IASPEI	Joint inversion methods and other Interpretation strategies to Integrate Multidisciplinary Geophysical data
J5	IAGA-IASPEI	Cratons & Mineral exploration
J6	IAGA-IASPEI	Marine Geophysics
J7	IASPEI-EMSEV	New knowledge of Intraplate Earthquakes using ground and Satellite Observations: marking two decades of the deadly 2001 Bhuj Earthquake
J8	IAGA-IASPEI	Geoscience data FAIR: Life cycle inside Repository, Licensing, data Publication, and Citation
J9	IAGA-IASPEI	Analogue data for future: Preservation and Present-day utilization of Instrumental Historical data in the Geosciences
J10	IAGA-IASPEI	Innovation in geoscience education and outreach



IAGA Symposia

S. No.	Section Code	Composition	Title
1	G1	Div V-Div I- Div II-Div III	Exploring Earth's magnetic field from space
2	G2	Div V-Div I	Planetary magnetic fields and geomagnetic secular variation
3	G3	Div II-ICDC- SCOSTEP	Coupling processes in the Atmosphere-Ionosphere System
4	G4	Div II-ICDC	Advances in mid, low latitude and Equatorial aeronomy
5	G5	Div II-Div III	Relativistic electrons: Their emergence and loss in geospace, their impact on the upper atmosphere and the role of the cold plasma background
6	G6	Div V-Div IV- ICSW	Geomagnetic observations for space science, space weather and space climate applications
7	G7	Div V-Div IV- ICH, ICSW	Remarkable geomagnetic events and indices: derivation, history, and applications for space weather
8	G8	ICSW-Div IV	Space weather services: new scientific research to address future needs
9	G9	Div VI-Div VI- ICSW	Geomagnetic disturbance (GMD) benchmarks, case studies and new results in geomagnetically induced currents and hazard assessments.
10	G1.1	Div I	Open session on paleo, rock, and environmental magnetism
11	G1.2	Div I	Magnetic record of tectonic, geologic and volcanic processes
12	G1.3	Div I	Paleo- and rock-magnetic mysteries – quest for solutions
13	G1.4	Div I	Earth's magnetic field and secular variation on all temporal and spatial scales
14	G1.5	Div I	The theory and applications of rock and environmental magnetism
15	G1.6	Div I	Paleo- and rock-magnetic data: archiving, mining, (re)use
16	G2.1	Div II	Electrodynamics of the ionosphere-atmosphere system and its coupling to the space environment

S. No.	Section Code	Composition	Title
17	G2.2	Div II	Solar Influence on the atmosphere and climate
18	G2.3	Div II	Stratosphere-Mesosphere-Thermosphere-Ionosphere System: long term Changes
19	G3.1	Div III	Reporter Review for Division III
20	G3.2	Div III	The expanding regimes of ULF wave research
21	G3.3	Div III	Recent advances in the system level understanding of solar wind – magnetosphere – ionosphere – thermosphere coupling
22	G3.4	Div III	Magnetic reconnection and its impact on geospace
23	G3.5	Div III	Magnetospheric boundary layers
24	G3.6	Div III	Magnetotail dynamic processes
25	G3.7	Div III	Current challenges and future directions of magnetospheric research
26	G3.8	Div III	Recent advances in observations and modeling of the ring current system
27	G3.9	Div III	Understanding the causes and consequences of space weather phenomena in the Earth magnetosphere
28	G3.10	Div III	Machine learning in space physics
29	G3.11	Div III	Magnetospheric processes
30	G4.1	Div IV	Advances and upcoming developments in Solar and Heliospheric Physics
31	G4.2	Div IV	Magnetic ejecta and flux ropes from the Sun to geospace
32	G4.3	Div IV	Space weather and climate throughout the Solar System: bringing data and models together
33	G4.4	Div IV	Waves and turbulence in the Solar corona and wind
34	G5.1	Div V	Current developments of Geomagnetic observatories and integration of ground and space-based measurements
35	G6.1	Div VI	Electromagnetic induction in Earth
36	G6.2	Div VI	EM & MT DATA: acquisition, processing, analysis and archiving



IASPEI Symposia

S. No.	IASPEI Commission(s)	Symposium Title
S1	Seismological Observation and Interpretation	Observational Seismology - Open session Seismology
S2	Seismological Observation and Interpretation - Earthquake Source Mechanics	Standardization and Automatic Procedures in Source Studies
S3	Seismological Observation and Interpretation - Earthquake Source Mechanics	Anthropogenic Seismicity
S4	Seismological Observation and Interpretation	Seismic scattering and absorption, Ambient noise, and monitoring Earth's structure
S5	Seismological Observation and Interpretation	Advancements in Observation, Processing and Interpretation of Seismological data
S6	Seismological Observation and Interpretation	Collection, Interpretation and Publication of Paleo and Historical Earthquake data
S7	Seismological Observation and Interpretation	National and Regional Earthquake Centers: Highlights and Challenges
S8	Seismological Observation and Interpretation	Advances in Geophysics, Atmospheric Science, and Signal Analysis for monitoring the CTBT
S9	Seismological Observation and Interpretation	Cryoseismology
S10	Seismic Hazard, Risk and Strong Ground Motion	Site and Source Modeling for Urban Seismic Microzonation Studies
S11	Earthquake Generation Process	Earthquake Generation Process & Forecasting models
S12	Earthquake Generation Process	Interdisciplinary Observations of Pre-earthquake processes: A new approach towards earthquake prediction studies

S. No.	IASPEI Commission(s)	Symposium Title
S13	Earth Structure and Geodynamics - SEDI	Seismic structures in the mantle
S14	Earthquake Source Mechanics - Seismological Observation and Interpretation	Earthquake Source Mechanics
S15	Tectonophysics and Crustal Structure	Fine structure of the Lithosphere
S16	Tectonophysics and Crustal Structure - ILP	More than 40 years of Seismological Research within ILP
S17	Tectonophysics and Crustal Structure	The Crust of Oceans, Margins and Continents - from Regional to Global context
S18	Tectonophysics and Crustal Structure	Seismic Anisotropy and the crust-mantle structure
S19	Tectonophysics and Crustal Structure	Intraplate seismicity: Distribution, Properties and causes
S20	Education and Outreach	Seismology Education, Citizen Science, and Global Resilience to Earthquakes
S21	Education and Outreach -Seismic Hazard, Risk and Strong Ground Motion	Role of Seismologists and Earthquake Engineers in Community development
S22	Asian Seismological Commission - Seismic Hazard, Risk and Strong Ground Motion	Neo-tectonics, Seismicity and Seismic Induced Hazards in Asia
S23	Asian Seismological Commission - Seismological Observation and Interpretation	New technology for Earthquake Observation and Data explanation in Asia
S24	International Heat Flow Commission	Towards 60 years of activity of the International Heat Flow Commission