

Association of Exploration Geophysicists

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42nd Annual Convention, Seminar and Exhibition on Exploration Geophysics

1-3 December 2021

Special Theme

Himalayan Geology, Natural Hazards Minerals
and Hydrocarbon Exploration

WORKSHOP (virtual mode) 1st December, 2021
WEBINAR SESSIONS 2-3rd December, 2021
EXHIBITION (virtual mode) 2-3rd December, 2021

WORKSHOPS ON:

- Artificial Intelligence for Advanced Interpretation of 3D Seismic Data
- New frontiers in Hydrocarbon Explorations

IMPORTANT DATES:

Last date for submission of Abstract 30th October, 2021
Last date for submission of Full Paper 15th November, 2021
Last date for seminar registration 20th November, 2021

Abstract and full papers may be sent to
aegindiageophysicists@gmail.com

REGISTRATION

There is no registration fee. However, all participants need to register for participation in the workshop and webinars.

Link for Registration:

<https://forms.office.com/r/qkxm36VNDM>

For further details, please contact:

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and Hydrocarbon Exploration

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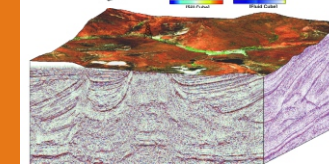
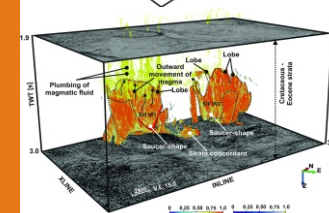
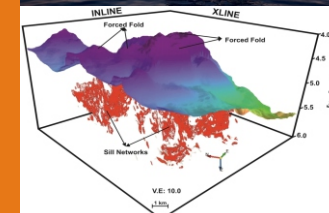
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Former Chief Scientist
CSIR-NGRI, Hyderabad



1-3 December 2021

Wadia Institute of Himalayan Geology
33 GMS Road, Dehradun, India



The **Association of Exploration Geophysicists (AEG)**, a registered non-profit organization established in 1974, is one of the oldest scientific organizations in India. Starting with a modest beginning of 30 members in 1974. AEG presently has a membership of 2500 members from various fields viz., higher education, industry, basic research, applied geosciences, governmental institutions, universities, Oil & Gas, Mineral and Groundwater exploration organizations apart from private sector companies. The main goal of the association is to strengthen geoscientific awareness in the country by effective co-ordination of research and investigation in exploration geophysics and allied disciplines. The association serves actively to build the bridge between the academic experts, practitioners and R&D needs of the industry by conducting seminars and workshops. The association has completed 46 fruitful and glorious years of service to the cause of Geophysics exploration in the country.

Seminar on Exploration Geophysics

AEG has successfully conducted 41 thematic conferences, seminars and exhibitions of academic interests and industry orientation of the nation. The Association has centered its annual conventions and seminars in different organizations to build larger umbrella of enthused scientists, scholars, students, teaching faculties and has formed an interface with industry across the country.

AEG, this year will organize its 42nd Annual Convention and Seminar at Wadia Institute of Himalayan Geology, Dehradun. The convention will have a special theme of "Himalayan Geology and Exploration Geophysics" with special reference to Natural Hazards, Minerals and Hydrocarbon Exploration. The host institute, pioneers in all aspects of Geosciences of the Himalaya and its surrounding region, is the institution of National importance of the Department of Science & Technology, Government of India with fifty years of excellence. It is located in a picturesque valley of Dehradun in the foothills of the Garhwal Himalaya with folded Siwaliks in the south and hills of Mussoorie syncline in the north. The Himalayan Frontal Thrust and the Main Boundary Thrust bound the valley from south and the north respectively.

The collision/convergence of Indian plate with the Eurasian plate is responsible for the evolution of the mighty Himalaya, which has been the centre stage of flourishing civilization due to sediment-water transmit impacting the agro-economy. The subduction, uplift, exhumation and erosion processes of the Himalaya are still continuing. The complex interaction of subducting Indian plate and the Himalayan wedge governs magnitude of earthquakes; controls the damage patterns during floods, landslides; levers the riverine landscapes; drives the climate-tectonic interaction; and pedals the continental scale crustal and lithospheric growth that might have played important role on the surface manifestation in different forms. Locale of geothermal springs, minerals and hydrocarbons and ore bodies are unique natural resources that are formed in the specific P-T regime of the Himalaya. Since the surface and subsurface processes are linked, probing subsurface using geophysical tools is crucial in understanding the hazards-related surface phenomena, observed by geological tools and vice versa. Thus, the spectrum of sciences at the host institute and other participating organizations will provide a common platform for comprehending Himalayan Sciences related to Geodynamics, Seismogenesis, Geo-hazards and Natural Resources with societal relevance from a wide disciplines of Earth Sciences.

Understanding seismogenesis and earthquake cycles in the Himalaya has significant scientific and societal importance. Therefore, variety of geophysical observations on seismicity of this thrust belt will help not only in delineating deep structures of the earth but will also provide insights on disaster risk reduction. The formation of the Himalaya is associated with the crustal shortening and rising elevation, which has led to the formation of high-altitudes glaciers, springs, and rivers system. It has also led to the exhumation of deep seated rocks and fluids that have resulted into the genesis of precious and semi-precious minerals and ore bodies, and formation of thermal springs allowing earth's heat reservoir transmitting energy to the surface. The sedimentary



basins in the thrust fold of the Himalaya can be important locales for the accumulation of hydrocarbons. Thus, the Himalayan belt acts as a laboratory for understanding the glacial, rivers, springs, thermal springs, mineral forming processes. The modern tools of Geology, Geophysics and Geochemistry have vast scope with regard to the development of new evolutionary models and exploration of natural resources of this mountain belt.

Seminar Themes:

- Spatial and depth distribution of Seismicity in the Himalayan region
- Earthquake cycle and precursory signatures
- Modelling of earthquake sources, source parameters, and tectonic linkage
- Site Characterization and site response investigations in Himalayan region
- Glacier Dynamics - Geophysical approaches
- Modelling of Glacier, river Hydrology, lakes and hazards like GLOFs
- Thermal springs as reservoir of green energy
- Mineral Exploration and Ore body Modeling
- Hydrocarbon and Other Energy Resources exploration towards self-reliant India

Call for Abstracts/ Full Papers

Papers are invited from participating scientists as per the guidelines of Journal of Geophysics. Authors are requested to indicate the most suitable theme under which their paper should be evaluated by the conveners/referees. The number of papers for the seminar is restricted to 12 Oral presentation and 30 Poster presentations. One full page abstract (Microsoft Word) is required to be submitted by the participants who would like to present their research work in the form of poster and/or oral presentations. The last date for submission of the abstract is on or before October 30, 2021. The authors requested to submit full papers before November 30, 2021. Authors are requested to submit only original scientific contributions. Review articles are discouraged. Authors need to send the paper in MS Word version by email.

All delegates are required to register for the seminar well in advance. Communication regarding acceptance of the papers for oral/poster presentation will be sent to the authors before 20th November, 2021.

Authors are requested to send technical papers which follow one of the seminar themes.

The papers should include

- Full title of the paper
- Name and affiliation of all authors and full mailing address with contact no. and email ID of the corresponding author.

AEG Awards

- **AEG Best Thesis Award-2020** : Association of Exploration Geophysicists(AEG), with an aim of encouraging and promoting research in geophysics, is sponsoring an award since 2015, known as "AEG Best Thesis Award". Researchers /Professionals, engaged in research in Geophysics, who have been awarded doctoral degrees in the period between July 2018 - June 2020 by an Indian University are eligible for this award.

Nomination can be submitted to AEG (aegindiageophysics@gmail.com) by 30th October 2021. Details can be obtained from the AEG office or AEG website.

- **AEG -Sriram Srinivasan Award-2020**: Association of Exploration Geophysicists(AEG) and M/s Data Code, Nagpur with aim of encouraging and promoting scientists and professionals in field geophysics/geology, is



sponsoring an award from 2016, known as "AEG -Sriram Srinivasan Award". Geophysicists/Geologists for professional excellence, outstanding work and significant contributions in Exploration Geophysics/Geology and related geosciences are eligible for this award.

Nomination can be submitted to AEG (aegindiageophysics@gmail.com) by 30th October 2021. Details can be obtained from the AEG office or AEG website.

Invitation to Exhibitors and Sponsors

AEG extends invitation to Exhibitors and sponsors to the 42nd Annual convention and Seminar on Exploration Geophysics where they will have unique access to marketing and publicity opportunities. The conference will bring together national and international delegates from government, industry and education with interest in application of geophysics from mineral, petroleum, coal, ground water, engineering and environmental studies.

Exhibition (Virtual mode)

An exposition highlighting the state of the art techniques, geophysical and allied instruments, service and products of national and international vendors and geoscience software will be planned during the seminar. The exhibition will enable the delegates to gain a comprehensive overview of the products and services available, as well as an opportunity to discuss the latest developments with representatives from the major companies serving the needs of the exploration industry. The exhibition will be in virtual mode. Further details can be obtained from the AEG office.

Exhibition charges (Online): Rs. 20,000/-

Details of bank account of AEG for sending the amount directly through electronic transfer

Account Holder Name: Association of Exploration Geophysicists
State Bank of India, Osmania University Branch, Hyderabad
A/C No. : 52198268342 IFSC Code: SBIN0020071

About the Host Institute

Wadia Institute of Himalayan Geology (WIHG), Dehradun is a premier Geological institute involved in both basic and applied research to unravel the Geodynamics of the Mighty Himalaya, which covers a wide spectrum of Geoscientific disciplines: petrology, geochemistry, structural geology, geophysics, sedimentology, biostratigraphy, earthquake geology, geomorphology, environment & engineering geology, quaternary geology, hydrology, glaciology, etc. The state-of-the-art sophisticated analytical laboratories strongly substantiate the field data for understanding the geodynamic evolution of the Himalaya, seismogenesis of the region, studying landslides and avalanches, characterization and mitigation of geohazards related to earthquakes, landslides, snow/ice avalanche, glacier/landslide lakes outbursts, exploration of natural resources (minerals/ore bodies, hydrocarbons, springs, geothermal etc.), comprehending glacier dynamics and fluvial systems etc. Additionally, sub-surface features such as crustal heterogeneities, accumulation of elastic strain and convergence rate, crust-mantle interaction, mantle anisotropy, and shallow/deep earth processes are also being probed continuously by geophysical instrumentation and modern analytical techniques. Besides adding significantly to the knowledge base on the surface and subsurface orogenic processes, the Institute provides geoscience support to other government agencies/bodies in understanding and mitigating several hazards-related programs like landslides, earthquakes, and floods in the Himalaya. It also serves as a National reference center for Himalayan Geology, and provides consultancy services to geoengineering projects, groundwater surveys, hydrocarbon exploration, and natural hazards. The Institute houses a beautiful geological museum within its campus.