NE&CM-2026 Conference on

NUCLEAR ENERGY AND CRITICAL MINERALS: EXPLORATION, MYTHS, AND SOCIETAL IMPACT

Venue: CUPB Auditorium,
Central University of Punjab, Bathinda
24-25, February 2026

About the Conference

This two-day scientific event brings together experts, researchers, and students to discuss the pivotal role of nuclear energy and critical minerals in India's sustainable future. Through a series of invited lectures and a dedicated panel discussion, the event aims to bridge the gap between scientific exploration and societal understanding, dispelling common myths surrounding nuclear technology.

Nuclear Energy in India

Nuclear energy in India is currently undergoing its most significant expansion in decades. As of 2026, the country has shifted its strategy from purely state-led projects to a "mission mode" that invites private participation and focuses on next-generation technologies like Small Modular Reactors (SMRs). India's nuclear sector is managed primarily by the Nuclear Power Corporation of India Limited (NPCIL) and BHAVINI. India's nuclear power programme is a cornerstone of the nation's energy security and clean energy goals. Built on a unique three-stage programme conceptualized by Dr. Homi J. Bhabha, it aims to utilize the country's vast thorium resources. As the nation moves towards "Net Zero," nuclear energy provides a reliable, base-load, carbon-free source of power.

Critical Minerals

Critical minerals are essential for economic development and national security. Scarcity of these minerals, or even the concentration, extraction, or processing in a few geographical locations, may lead to supply chain vulnerability and disruption. Critical minerals-such as Lithium, Beryllium, Niobium, Tantalum, and Rare Earth Elements (REEs) are essential for modern technology, necessary for electric vehicles, renewable energy storage and defence systems. As an emerging global economic powerhouse, it is crucial to understand and harness the potential of these minerals to drive the country's growth, competitiveness, and sustainable development. A comprehensive understanding of India's essential mineral resources empowers policymakers, researchers, and industry stakeholders to make informed decisions and drive the clean energy revolution.

Organised by

- Central University of Punjab, Bathinda
- Indian Nuclear Society (INS), Mumbai
- Atomic Minerals Directorate for Exploration and Research, Hyderabad

Co-Organised by

- Anusandhan National Research Foundation
  Partnerships for Accelerated Innovation and Research

Scope of the Conference

- Strategic Frontiers: Nuclear Energy and Public Perception
  Focus: National Nuclear Mission & Nett Zero Carbon Emissions
- Critical & Strategic Minerals
  Focus: Exploration, Mining and Processing Technology, Urban Mining
- Environmental Radioactivity
  Focus: Local Concerns, Water Quality, Health Impact, Environmental Impact
- Societal Benefits: Beyond Power Generation
  Focus: Nuclear Agriculture, Nuclear Medicine, Food Security, Food Irradiation, Clean Water Technologies
- Demystifying Myths: Radiation & Safety
  Focus: Radiation in Daily Life, Safety Standards, Science Communication, Careers in Nuclear Science & Geology

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Abstract Submission Guidelines

- Technical sessions are by invitation.
- Poster Presentations from registered delegates are welcome.
- Posters should align with the conference themes: Nuclear Energy, Critical Minerals, and Environmental Impacts.
- Abstract should be submitted to the Convener of the conference. Abstract in A4 size, Single spacing, Times New Roman, Font Size 12 should be submitted via email to the Convener for review.
- All abstracts will be peer-reviewed.
- Acceptance will be communicated to the authors by the specified deadline.

Registration Guidelines

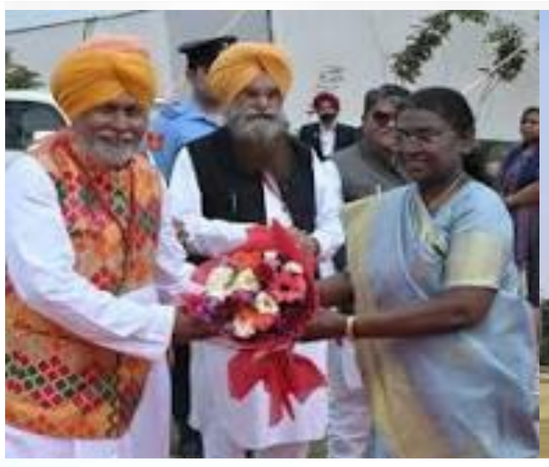
- Registration is mandatory for all participants to attend the conference.
- Registration for external candidates is on a First Come, First Served basis.
- There is No Registration Fee for this conference.
- For Registration Scan the QR code.
- Accommodation is not available in the University campus. Please indicate clearly if accommodation is required so arrangements at local hotels can be planned accordingly.

About the Organizers

Central University of Punjab (CUP) established in 2009 by an Act of Parliament and has rapidly emerged as a premier institution for higher learning and research in India. Located in Ghudda village, Bathinda, Punjab on a sprawling 500-acre eco-friendly campus, the university is credited with having one of the highest per capita research funding among new central universities in India.

CUP, Bathinda is accredited with an 'A+' grade by NAAC and has consistently ranked among the top 100 universities in the National Institutional Ranking Framework (NIRF). With state-of-the-art infrastructure, including the Aryabhata Academic Block and advanced Central Instrumentation Laboratories.

CUP offers research-oriented Master's and Ph.D. programs across diverse disciplines ranging from Sciences and Technology to Humanities. The university is dedicated to creating a future-ready workforce through its focus on innovation, skill development, and sustainable solutions for regional and global challenges.



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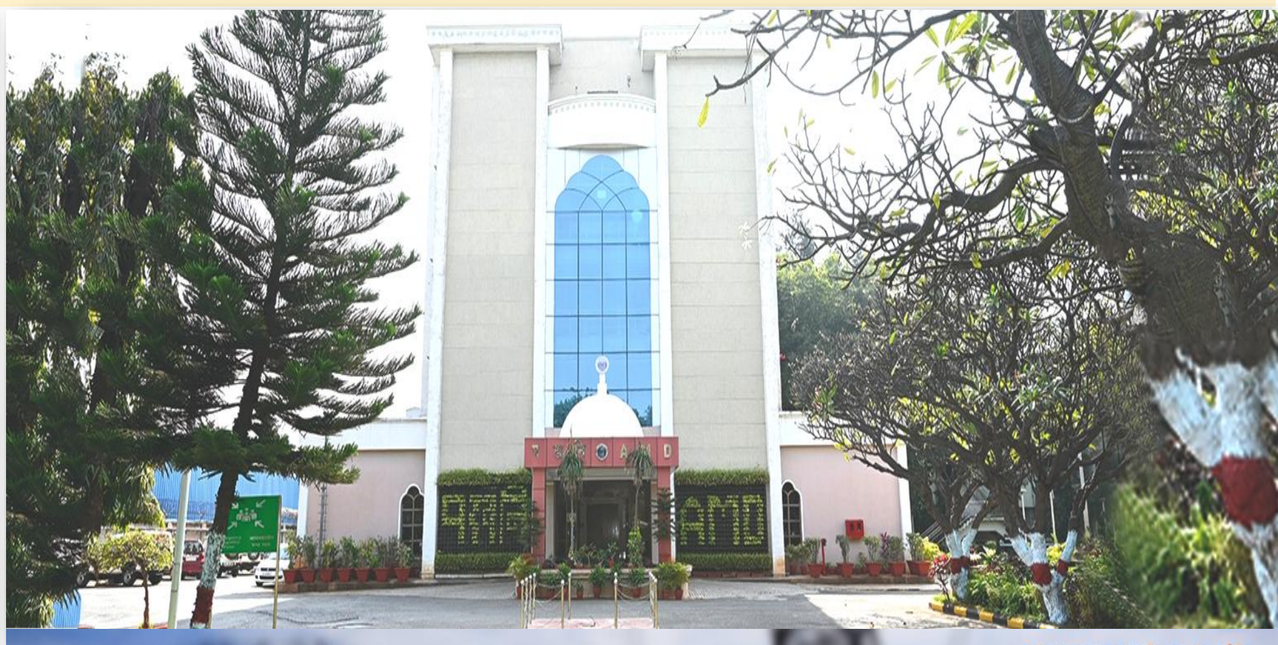
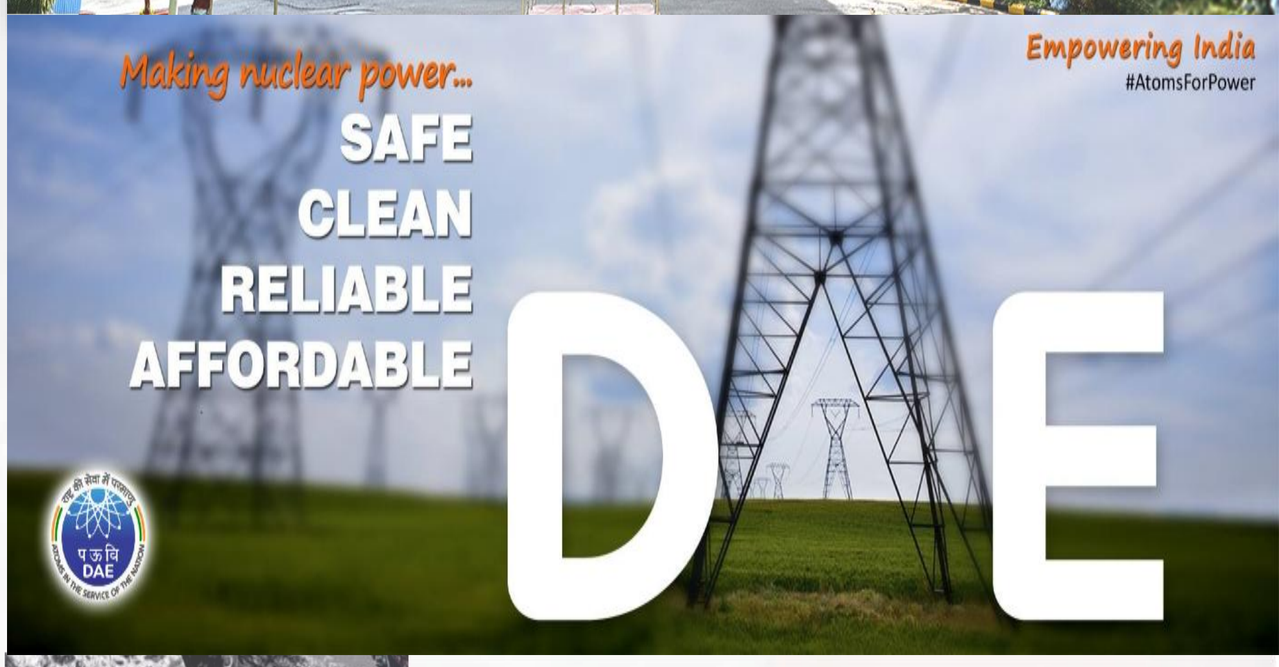
The Indian Nuclear Society (INS) is a non-profit registered professional body of nuclear scientists, engineers and technologists in India, with its headquarters at Mumbai and branches at Hyderabad, Kalpakkam, Rawatbhata, Mysore and Narora. It has more than 5,500 life members and 80 corporate members on its roll. The Society was inaugurated in January 1988 by late Shri J.R.D.Tata. The Society's mandate is to promote the advancement of nuclear science and technology and create awareness amongst general public about the benefits of atomic energy to mankind. Many Prime Ministers, Presidents and International dignitaries have graced the Annual Conferences of INS. Announcement of recent national nuclear mission by GOI, targeting about 12 times enhancement of nuclear power provides new challenges and opportunities to the fraternity of nuclear scientists and technologists in the country. Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act, 2025 fundamentally restructures India's nuclear power framework by allowing private participation in nuclear power plant operations and related activities. INS has planned range of training programs for industry as well as academic institutes to facilitate the achievement of target of 100 GWe nuclear power by 2047.

INS-Newsletter is published quarterly. Under INS-FTGS program for partial support to the young researchers to present their work in the areas of nuclear science and technology in international Conferences / Symposia about 12 young researchers have been benefitted during the last two years. INS outreach programs are held all over the country to spread the message "Nuclear Energy and Nuclear Radiations: A boon for the mankind". Four outreach programs were conducted during 26th-29th November, 2025 at Colleges / Universities and Schools in Lucknow, UP. You can visit INS website www.ins-india.org for further information.

Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), has a major mandate to identify, evaluate and augment mineral resources of uranium, thorium, niobium, tantalum, beryllium, lithium, zirconium, titanium and rare earths in the potential geological domains of the country for India's nuclear power programme. AMD utilizes diverse range of exploration techniques, including remote sensing, geological and radiometric surveys, geophysical techniques, advanced geochemical methods and drilling to investigate, evaluate and augment resources of uranium and thorium besides strategic/critical minerals of Nb, Ta, Be, Li, Ti and REEs. The Directorate's analytical laboratories are equipped with the state-of-the-art equipment, and hold the NABL accreditation.





Registration QR

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