

GEOSPATIAL ACADEMY

&

VIKRAM SODHI CENTRE OF EXCELLENCE FOR AI-ENABLED GEOLOGICAL & MINING SYSTEMS

International Conference on (Geo-/Geologic-/Earth) AI FOR VIKSIT BHARAT

📍 IIT KHARAGPUR | 19-22 JANUARY 2027 | A PLATINUM JUBILEE EVENT

Patron: Prof. Suman Chakraborty, Director, IIT Kharagpur

ABOUT THE CONFERENCE

As IIT Kharagpur celebrates its Platinum Jubilee, this conference serves as a global platform for advancing innovation, sustainability, and future-ready solutions through the Geospatial Academy and the Vikram Sodhi Centre of Excellence for AI-Enabled Geological & Mining Systems. Bringing together researchers, academicians, industry leaders, and policymakers from around the world, the conference aims to foster collaboration and drive transformative developments in Geospatial, Geology and Mining systems.

Participants are invited to present their latest research findings, technological innovations, and case studies across diverse domains. Selected contributions will be considered for publication in reputed journals and a conference proceeding.

The conference offers a unique opportunity to engage with leading experts, showcase cutting-edge research, and participate in high-impact discussions shaping the future of geospatial science. It also provides an ideal environment for building collaborations among academia, industry, and government while exploring emerging trends.

We welcome participants from across the globe to join us in shaping Viksit Bharat with next-generation AI technologies.

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GLOBAL NETWORKING Connect with researchers, industry leaders & policymakers	PUBLICATION Selected papers to be considered in reputed journals	FIELD EXCURSION (Simlipal Biosphere Reserve) & Hands-on Exposure	Platinum Jubilee Celebration: Be part of IIT Kgp's milestone
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The conference (AI-VB) will focus on AI as an interdisciplinary technology for Viksit Bharat, with a strong emphasis on real-world deployment. The conference will explore the convergence of AI, Geospatial Science, Earth Observation, Geological and Mining Sciences, and ecological climatology to address complex real-world challenges. It will highlight advances in GeoAI, foundation models, agentic AI, digital twins, multimodal and multi-sensor data fusion, and AI-enabled decision-support systems for the Earth and natural-resource domains. A major focus will be on AI-driven solutions for critical minerals, exploration, orebody intelligence, mine planning, mineral processing, predictive maintenance, mine safety, environmental monitoring, and climate-resilient infrastructure. The conference will examine how large-scale geospatial and geological datasets can be transformed into reliable, secure, interoperable, and actionable intelligence through AI, cloud/edge computing, and advanced analytics.

It aims at bringing together academia, industry, government, practitioners, and policymakers to discuss responsible AI, data governance, standards, technology validation, technology transfer, and scalable deployment. The conference will ultimately foster interdisciplinary research, innovation, capacity building, and industry–academia collaboration toward AI-enabled systems that contribute to sustainable development, resource security, and environmental stewardship.

CONFERENCE THEMES		
Track	Theme	Focus Areas
T1	Geo-AI and Spatial Intelligence	AI/ML/DL, Foundation Models, Big Data, Spatial AI
T2	Earth Observation and Data Fusion	Optical, SAR, Hyperspectral, LiDAR, Thermal, UAV, GNSS
T3	3D/4D Modelling, GeoBIM and Digital Twins	3D and 4D GIS, GeoBIM, Digital Twins, Photogrammetry
T4	Biodiversity and Climate Change	Forests, Carbon, Ecosystems, Water, Agriculture and climate
T5	Disaster Risk and Resilience	Multi-Hazard, Early Warning, DRR, Real-Time Analytics
T6	Geology, Minerals and Intelligent Mining	Exploration, Critical Minerals, Mining 5.0, Mine Digital Twins
T7	Smart Infrastructure & National Development	Urban/Rural Infrastructure, Asset Management, Governance

GEOSPATIAL ACADEMY An interdisciplinary academic unit established 08 th January 2026, dedicated to advancing geospatial science, earth observation, and geo-informatics for applications of national importance - aligned with the National Geospatial Policy 2022 and National Geospatial Mission. Focus areas include: ▶ AI/ML integration and high-resolution data processing ▶ Multi-sensor fusion (optical, SAR, thermal) ▶ Digital Twin applications and Foundation Models ▶ Cloud & Edge Computing for Space-based Systems ▶ Capacity Building and National Outreach	VIKRAM SODHI CENTRE OF EXCELLENCE Established on 17 th April 2026 at IIT Kharagpur through the endowment of Shri Vikram Sodhi (Vice Chairman, Mineros SA; Managing Partner, Sun Valley Investments) - an interdisciplinary centre aims in advancing AI applications for the geological and mining sectors. Core focus areas: ▶ Orebody Intelligence and Grade Control ▶ Mine Planning and Mineral Processing Optimization ▶ Predictive Maintenance and Mine Safety ▶ Critical minerals: Lithium, Antimony, Copper, REE ▶ ESG and Sustainability in Mining operations
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USEFUL TIMELINE		PROGRAMME AT A GLANCE		Accommodation
Abstract Submission	21 Sep - 30 Oct 2026	19 Jan 2027	Kick-off Dinner	
Acceptance Notification	25 Sep- 05 Nov 2026	20 Jan 2027	Inaugural & Technical Sessions	
Registration Window	01 Nov– 31 Dec 2026	21 Jan 2027	Technical Sessions & Valedictory	
Conference Dates	19 January – 22 January 2027	22 Jan 2027	Field Excursion	
REGISTRATION FEES (INR)				CONTACT & CORRESPONDENCE office.gp@iitkgp.ac.in office.so@iitkgp.ac.in Prof. Mukunda Dev Behera, Convener Prof. BH Aithal, Secretary Prof. G. Singh, Jt. Secretary
Category (INR)	by 01 Dec	by 31 Dec	by 15 Jan	
Student / Researcher	4,500	5,000	5,500	
Faculty / Scientist	6,000	6,500	7,000	
Industry	7,000	7,500	8,000	