

National Geo-Research Scholars Meet

RISE: Resilient Innovations for Sustainable Earth
(Come, Connect and Collaborate at the heart of Himalayan Geology)

12-14 November 2025



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

Wadia Institute of Himalayan Geology

(An Autonomous Institute of Department of Science & Technology (DST), Govt. of India)

Dehradun

9th National Geo-Research Scholars Meet -2025

e - Posters

S. No.	Name	Title
Theme 1: Geodynamic processes and deep Earth study		
1	Aman Sharma	Numerical Investigation of Convection in Heterogeneous Porous Media: Implications for Geothermal Reservoirs
2	Arpita Kundu	Petrological and geochemical studies of Granitoid rock around Champua area of Singhbhum craton, eastern India
3	Debopam Ghosh	Shell-to-Shell Energy Transfer and Turbulent Cascade formation in Planetary Core
4	Partha Pratim Jana	Investigating the Mechanism of the Geodynamo in Earth's Primitive Core During Proterozoic Geomagnetic Superchrons
5	Rajat Dhiman	Geochemical Alterations in River Solute Chemistry Triggered by Landslides in the Northwestern Himalayas
6	Sanjana	Geomagnetic Spatio-Temporal Data Analysis Using Spherical Harmonics
7	Shoaib Khan	Geochemical studies of High-Grade Orthopyroxene Granitoids of Sandmata Complex, Rajasthan: Implications for crustal evolution
8	Shubham Yadav	Understanding anisotropy and delay time in Bhutan Himalayas region by splitting of SKS wave phase
9	Soumya Ranjan Jena	Petrography And Bulk-Rock Geochemistry Of Mafic-Ultramafic Rocks From Thakurmunda Area Of Simlipal Volcanics, Singhbhum Craton, Eastern India
10	Suraj Kumar	Thermal and Velocity Measurements in Laboratory Set-up for Earth's Outer Core

Theme 2: Quaternary Geology: Climate and Tectonics		
11	Ahmad Shafi	Geochemical characterization of flood plain sediment deposits in parts of central Indo-Gangetic Plain, Ganga River Basin: Insight into sediment generation and provenance attributes
12	Borusu Satya David Raju	Chemical weathering dynamics during the Cenozoic hothouse to icehouse climate transitions: insights from geochemical studies of Cenozoic sediments from the western India
13	Ravi Shankar Maurya	Four Centuries long Hydroclimatic Variability from Tree Rings in the Kullu, Western Himalaya and its Socioeconomic Implications
14	Roopa Maurya	Morphometric Analysis and Neotectonic Study of the Upper Sutlej River Basin, Himachal Pradesh, Using Remote Sensing and GIS Approaches
Theme 3: Sedimentary Horizons and Past Life		
15	Mohammad Javed	Paleoenvironmental and REE-enrichment Study using REE-Geochemistry of Paleoproterozoic Phosphorites of Bijawar Group in M.P., India
Theme 4: Environmental Geology, Natural Resources, Hazard and Mitigation		
16	Mazia Darakhshan	Interplay Between Landslide Hazards and Out-of-Sequence Thrust Fault Zones: insights from the Ramgarh Thrust Sheet, Darjeeling Himalaya
17	Vikash Kumar	Paleo-Redox Implications of Phosphate Deposition in the Krol–Tal Sequence, Tehri Garhwal, Uttarakhand
18	Anjanay Kumar	A Geospatial Framework for Identifying Erosion Hotspots in the Gopad River Watershed
19	Anup Upadhyaya	Changing climate and Glacial Lake Outburst Flood Susceptibility in the Koshi River Basin
20	Bapi Barman	Subsurface Complexity Analysis of the New River Geothermal Reservoir, California, Using Magnetotelluric Dimensionality Parameters
21	Deepak Dattatray Atpadkar	Fractal Analysis of The Dauki Fault
22	Dinesh Munda	Application of Gradient Boosting Models for Probabilistic Mineral Mapping of Base Metal and Gold Mineral Deposits in Southwestern Rajasthan, India.

23	Khaman singh	Mineralogy and Ionic Leaching Behavior of Khetri Copper Mine Tailings
24	Md Ashraf	A Machine Learning Approach to Earthquake Declustering: Application to New Zealand Earthquake Catalogue
25	Mohammad Sajid	Application of sentinel-1 SAR data for flood monitoring in the lower Ganges Basin: A time-series analysis of 2021 flood in Bihar
26	Neelu Yadav	Seasonal Variation of Soil Fertility and Heavy Metal Distribution in Agricultural Fields Along the Ganga River, Varanasi District, India
27	Neeraj Kumar Upadhayay	Petro-Geochemical Characteristics of Gondwana Coals from Tatapani–Ramkola Coalfield, India: Insights for Paleodepositional and Paleoclimatic Conditions.
28	Pranshu Mishra	Scientific Insights of Catastrophe Happened in DHARALI on August 05, 2025
29	Radha Dixit	Hydrogeochemical Signatures and Controlling Factors of Groundwater Quality in the Central Ganga Alluvial Aquifer System
30	Satendra Kumar Gupta	Conventional and Unconventional Hydrocarbon Source Characteristics of Jalipa Organic-Rich Sediments from Barmer Basin, Rajasthan.
31	Sudheer Kumar Yadav	Cloudburst-Induced Landslide Dynamics and Infrastructure Stress: The Ramban Event of April 2025
Theme 5: Advances in Seismo-Tectonics, Sub-Surface Imaging and Crustal Deformation		
32	Anurag Basu	Predictive Modelling of Landslide Hotspots in Nainital Region using Multi-Temporal InSAR and Machine Learning
33	Avishek Ghosh	3D Crustal Velocity Across Central Nepal for Local Earthquake Tomography
Theme 6: Cryosphere, Geohydrology and Geoengineering		
34	Abdul Ahad Ansari	Remote Sensing-Based Time-Series Assessment of Haiderpur Wetland Hydrology: Implications for Climate and Water Sustainability

35	Atif Ahamad	Integrated Assessment of Slope Stability using Slope Mass Rating and its Derivatives along Engineered Slopes Around Bageshwar City
36	Dibyajeet Mohapatra	Thermal Fatigue and Fracture Evolution in Sandstone under Repeated Liquid Nitrogen Cooling: Implications for High-Altitude Sub-Zero Environments
37	Gaurav Kushwaha	Assessment of Coherence Between Technical Hazard Models and Community Perception of Landslides in Aizawl, Mizoram
38	Ningombam Prikash Meetei	Influence of Hydro- Climatic Variability on Snow Cover Extent in the Pindar River Basin: Insight from Remote Sensing and Statistical Analysis
39	Prateek Sharma	An In-Depth Evaluation of Rock Cut Slope Instability Based on Q-Slope and Numerical Simulation
40	Rakesh Joshi	An InSAR–Optical Framework for Automated Mapping of Debris-Covered Glaciers: A Case Study of Bara Shigri Glacier, Western Himalayas
41	Saisiddhant Moharana	AHP-Based Landslide Susceptibility Mapping for Slope–Tunnel Interaction: An Assessment in the Tehri Himalaya
42	Sonalika Jena	Integrating Multisource Geospatial Layers with Machine Learning for Groundwater Recharge Zones
43	Sumit	Hydrogeochemical characterization and isotopic insights for the rejuvenation and conservation of springs in the Bhagirathi Valley, Uttarakhand, India
Theme 7: Analytical tools and techniques in Geosciences		
44	Alka Sonkar	Effect of land use expansion on the natural environment of the Sai River basin (SRB) in Jaampur District
45	Aman Kumar Dubey	Quantum-Inspired Particle Swarm Optimisation for Gravity Data Inversion Over Sedimentary Basins
46	Anchal Jaiswal	Estimation of Gas Hydrate Saturation Using Machine Learning
47	Duttatreya Sahoo	Predicting REE Targets in the Rairakhol Alkaline Complex: A Machine Learning and Geostatistical Synthesis of NGCM Stream Sediment DataREE

48	Karthik H S	Deep Learning Approaches for Automatic 3D Fault Extraction: A Comparative Study of U-shaped encoder-decoder network architecture (UNet) and DeepLabV3 architecture
49	Kundan Kumar Sahu	Evolutionary and Computational Approaches for Sustainable Geoscientific Systems: A Framework for Resilient Water Resource Optimization
50	Lijitha C P	Morphotectonic Assessment of the Kuppam and Tejaswini River Basins (KRB & TRB) in the Western Ghats of Kerala Using Geospatial Data Science
51	Nivetha S	Influence of Mineralogical Composition on Carbon Dioxide Adsorption in Shales from Major Indian Hydrocarbon Basins
52	Pareekshit G Hegde	Capturing Phase Behaviour with Anisotropic Distribution in Deep-Seated Hydrocarbon Reservoirs
53	Sampriti Dutta	An Integrated Study of Phosphorite Deposits from Indian Basins, Implication for Depositional Environment and Phosphogenesis
54	Shashwat Raj Mishra	Integrated AVA analysis and Seismic Inversion methods for fluid identification
55	Shubham Mishra	Significance of India's SBAS (GAGAN) for Enhanced GNSS Accuracy- A Case Study at IIT Kanpur
56	Sukanya Ghosh	Assessment of Land Degradation Using Satellite-Based GIS Model- Insights from Hilly Terrain
57	Sumita Rout	Remote Mapping of Iron and Gold Mineralisation with Landsat 9 and Stream Sediment Geochemistry in the Singhbhum Craton, India
58	Surender Pal	An Open-Source Geoscience Toolkit for Himalayan Field Campaigns: From Robust GNSS Logging to Landslide Mapping Surender Pal
59	Tignangshu Das	Hybrid ML & DL Approaches for Estimating Petrophysical Properties from Inverted Volumes and Seismic Attributes