List of Research Topics for Admission to PhD program, Spring Semester 2021-22

Note to Candidates: A list of research topics corresponding to the research areas of interest that you have mentioned in the application form is given below. Go through these topics and let the interview committee know your topic(s) of interest in the order of preference (if any) at the time of interview.

1. Physical volcanology of rhyolites of Saurashtra, north-western Deccan Traps
2. High-resolution seismic imaging to decipher the genesis of swarm sequences in Palghar, using low-cost seismographs
3. Imaging crustal and sub-crustal lithospheric structure beneath the Aravalli-Delhi fold belt
4. Insights from low-temperature thermochronology into the tectonic and landscape evolution
5. Mineral-microbe interactions towards element removal-exchange during alteration/weathering
7. Reservoir characterization with seismic full waveform modelling and inversion
8. Bioerosion of skeletal fossils and ethology of insect nests in the substrate
9. Nonlinear signal analysis of seismological data of global active tectonic zones
10. Near surface electromagnetic investigations and applications
11. Rock physics modelling of reservoirs from offshore basins
12. Petrophysical characterization of carbonate reservoirs from Mukta field, Bombay offshore region
13. Experimental and simulation studies of elastic parameters of reservoirs
14. Geomagnetic field modelling of Swarm data
15. Application of Machine learning tools for reservoir studies
16. Joint inversion of Electromagnetic and potential field data related to Mineral Exploration
17. Appraisal of Petrophysical Model via Joint Inversion of multi-geophysical attributes and measurements
18. Biomarker signature of Permian sediments, Central India

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