1. Nonlinear Signal Analysis of Geophysical Data (Specialization: Geophysical Signal Processing)
2. AI/ML/DL algorithms in Energy sector (Specialization: Geophysical Signal Processing)
3. Magnetotelluric investigations of active tectonic zones in India (Specialization: Electromagnetism)
4. Genesis of gold mineralization in Gadag greenstone belt, western Dharwar craton, southern India
5. Genesis of Kalyadi Cu-Co deposit, western Dharwar craton, southern India.
6. Assessment of geomechanical risks in CO2 enhanced oil recovery in Naharkatiya field, Assam (Open to Geology/Geophysics)
7. Assessment of geomechanical risks in CO2 enhanced oil recovery in Gandhar field, Gujarat (Open to Geology/Geophysics)
8. Reservoir characterization and flow-deformation attributes of coal for CO2-enhanced coalbed methane recovery.
10. Integrated Petrophysical and Rock physics modelling of carbonate reservoirs from B-126 structure of Mukta field, Western Offshore region
11. Application of machine learning algorithms for modelling of geophysical data
12. Magnetic field modelling of Swarm satellite data
13. Mineral exploration using integrated geophysical imaging
14. Deep learning-based model prediction algorithms for different geophysical data
15. High-resolution seismic imaging method development for a mineral exploration using DAS data
16. Landslide monitoring and temporal imaging using seismic data
17. 3D crustal modelling of the Indian plate using Bayesian inversion
18. Global-scale tomography using a very long period seismic data
19. Trans-dimensional joint inversion of seismological and electromagnetic data for lithospheric studies
20. Crustal and upper mantle structure beneath the Aravalli-Delhi fold belt
21. Determination of ice thickness of Satopanth glacier with active and passive seismic method.
22. Late Precambrian stratigraphy in Dehradun-Mussoorie area