LIGHTHOUSE
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PhD OPPORTUNITY SEISMIC

"Innovative marine seismic and bathy-morphological data processing for the study of submarine landslides and shallow gas release" at the University of Ferrara in collaboration with Lighthouse SpA.

Post Content

The Department of Physics and Earth Sciences (University of Ferrara) in collaboration with Lighthouse SpA, are seeking an exceptional doctoral candidate to join our project focusing on the advanced processing and analysis of marine seismic and bathymorphological data. The research aims to significantly improve our understanding of submarine geohazards and the release of superficial gas in sedimentary layers, using advanced analytical techniques and innovative processing algorithms.

The work involves.

- Detailed analysis of high-resolution 2DUHR (Ultra High Resolution) and 2DHR (High Resolution) seismic data.
- Developing novel algorithms for efficient data processing and interpretation.
- Combining seismic data with bathymetric data from MBES (MultiBeam Echo Sounder), and morphological data from SSS (Side Scan Sonar) and SBP (Sub Bottom Profiler).
- Creating a comprehensive "big data" database for classifying anomalies related to the presence of superficial gas.
- Examining the correlation between bathyal morphological elements linked to gas emissions and potential natural habitats of ecological relevance.

The ideal candidate will possess:

- **Strong Geophysical and Geological Skills:** expertise in seismic data analysis, bathymetric data interpretation, and a solid foundation in geophysics and/or geology.
- **Algorithm Development Expertise:** strong interest in developing algorithms for geographic and shallow hazard analysis of geophysical survey data.
- **Adaptability and Flexibility:** Availability and willingness to work across University and Company teams, to travel extensively, including on oceanographic ships, and to adhere to project timelines and mandates.
- **Commitment to Research and Collaboration:** willingness to work within diverse teams, adhere to project timelines, and participate in fieldwork as necessary.
- **Punctuality and Precision:** candidates must exhibit strong commitment to delivering tasks on schedule, respecting timelines and providing accurate data handling and algorithm development. In addition, readiness to travel frequently, including travel on oceanographic vessels, is a key requirement.

Please apply here: **https://www.fe.infn.it/radioactivity/join_us_form.html** or alternatively send your CV to
radioactivity@fe.infn.it