

# Understanding the Earth's Interior and Dynamics : Interdisciplinary Approach

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The interior of the Earth remains a mystery. It is some 6400 km to the center of the Earth, but we have only drilled 12 km deep and not yet reached the mantle. Seismologists have imaged Earth's interior and defined its first order physical structures (e.g. core, lower and upper mantle, and Moho). The compositions of these structures are unknown, at some level, and must be interpreted as we do not have techniques to measure their chemistry. To achieve new and unimagined insights into the Earth, we need to broaden our perspective and work across different disciplinary boundaries. New 21<sup>st</sup> century technologies are providing transformative insights into deep Earth processes and chemistry. We started to construct interdisciplinary community to bring together scientists from physics, engineering and geoscience with a shared goal of understanding the Earth's interior and resolving the mysteries.

Various images of the Earth's interior are based on each investigating method, such as geoneutrinos, scientific drilling, seismology, simulation, isotope study etc. Integrating the information enable us to create new knowledge and insights into the nature and processes occurring inside the Earth. This presentation will introduce current situation and future prospects of the interdisciplinary approach.

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