Freie Universität Berlin

Geowissenschaftliches Kolloquium

Present-day stress field analysis: case studies from scientific drilling projects

Thursday, December 3, 2020, Discussion from 17:00 h

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Knowledge of the in situ stress state of the Earth's crust plays a key role in understanding geological processes including plate tectonics, earthquakes, slope failure, and igneous emplacement. Here I present three case studies using breakout data from deep boreholes addressing the whole range of stress scales from global to local: local gravitational effects on Mauna Loa and Mauna Kea (Hawai´i), regional time-dependent deformation at Outokumpu (Finland) and global tectonics driven orientation of the present-day stress field in Italy.

Simona Pierdominici received her PhD in Geophysics from Bologna University and is since 2011 researcher at the GFZ. In 2015 Simona became member of the Operational Support Group of the ICDP. Her research focuses on the present-day stress field in the upper part of the Earth‘s crust and physical properties of rocks derived from borehole data and drill core.

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