

**Kolloquium:**

**The subduction plate interface: rock record and mechanical coupling (from long- to short-term timescales)**

**Date:** Monday, 01 April 2019, 16:15  
**Location:** Institut für Geologie, Baltzerstrasse 3, 3012 Bern, Studer Auditorium, 2.OG  
**Speaker:** **Prof. Philippe Agard**  
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Short- and long-term processes at or close to the subduction plate interface (e.g., mineral transformations, fluid release, seismicity and more generally deformation) might be more closely related than previously thought. Increasing evidence from the fossil rock record suggests that some episodes of their long geological evolution indeed match or are close to timescales of the seismic cycle.

Based on a number of critical observations and an exhaustive compilation of worldwide subducted oceanic rocks (episodically recovered from subduction zones), together with insights from thermomechanical modeling, I herein attempt to provide a new dynamic vision of the nature, structure and properties of the plate interface — and to bridge the gap between the mechanical behavior of active subduction zones (e.g., coupling inferred from geophysical monitoring) and fossil ones (e.g., coupling required to detach and recover subducted slab fragments).

