

## **Uplift and exhumation of the Alpine foreland**

von Hagke, Christoph<sup>1</sup>; Frings, Kevin<sup>2</sup>

1 Department of Environment & Biodiversity, University of Salzburg, Hellbrunnerstraße 34, A-5020 Salzburg, Austria; 2 Geological Institute, RWTH Aachen University, Wüllnerstraße 2, D-52062 Aachen, Germany.

The foreland basin of the Alps is among the best-studied foreland basins in the world. Its stratigraphy, as well as the structure of the adjacent foreland fold-thrust belt are well established. However, the basin has experienced a late-stage phase of exhumation, of which timing, spatial extent and magnitude are still poorly resolved. Understanding this youngest phase of basin evolution is required to infer the underlying driver of exhumation. In particular, it may help gaining insights on the late-stage tectonic evolution of the Alpine mountain belt in the light of a potential change in slab dynamics in the Western and Eastern Alps. In this contribution we will show new low-temperature thermochronological data from the foreland basin, as well as the fold-thrust belt, in combination with previously published data. Interestingly, interpreting the low-temperature thermochronological data is not straightforward and may be partly influenced by fluid flow. Nevertheless, a distinct exhumation pattern can be deduced, showing a different signal in the Western and the Eastern Alps, respectively. We infer that while the foreland fold-thrust belt shows a signal of plate convergence, exhumation of the basin itself is largely triggered by mantle dynamics that are variable along strike of the orogen.