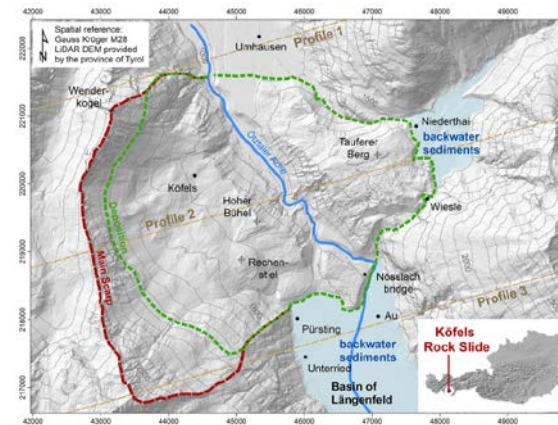
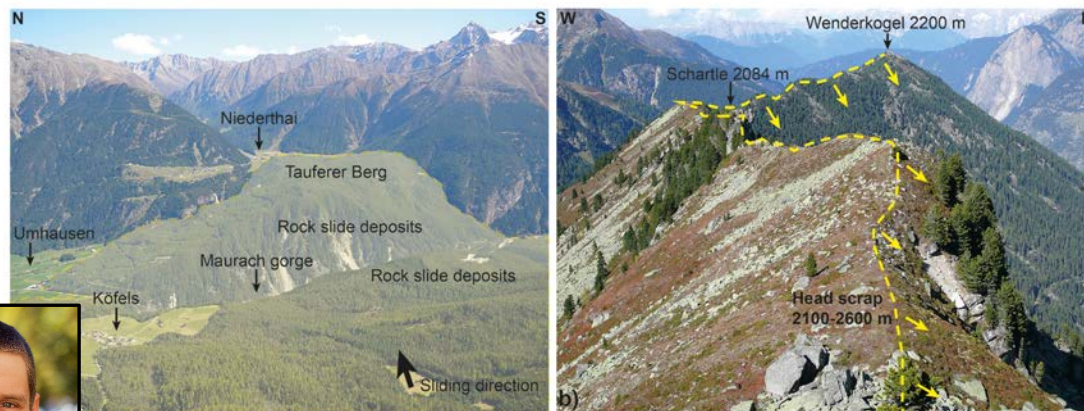
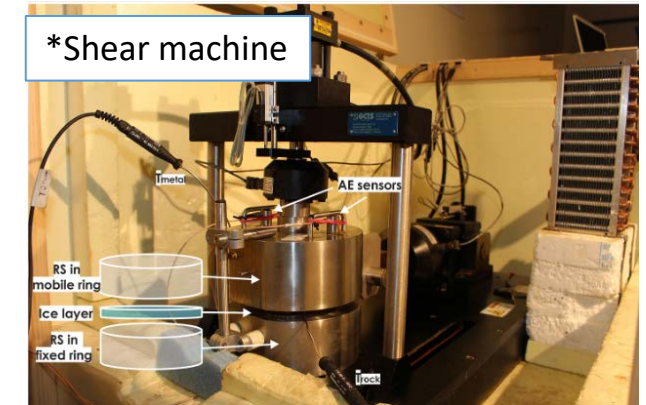


Cracking rock bridges – Revealing the mechanics leading to one of the most prominent historic rock slides - Köfels, Ötztal, AT 9500 BP

- **Köfels Bergsturz** with more than **3000 million m³** material displaced is the most prominent Bergsturzi n crystallin rock in the Alps
- Yet, it occurred at a timing of ~ **7000 years after glacier retreat**
- With this study, we aim to explore the **effect of permafrost on this giant rock slide**
- While a **rock-ice mechanical model** for ice-filled joints was first established by Krautblatter et al. (2013), we aim to advance and characterize the impact of **permafrost on intact rock bridges!**
- This will be done by **mechanical laboratory test** in our permafrost simulation lab*



From Zangerl et al. 2021

- Rock slide deposits
- Post-failure head scarp today
- DEM of 2017 showing the full dimensions of the Köfels rock slide. Note: River incision through the deposit for 9500 yrs.



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