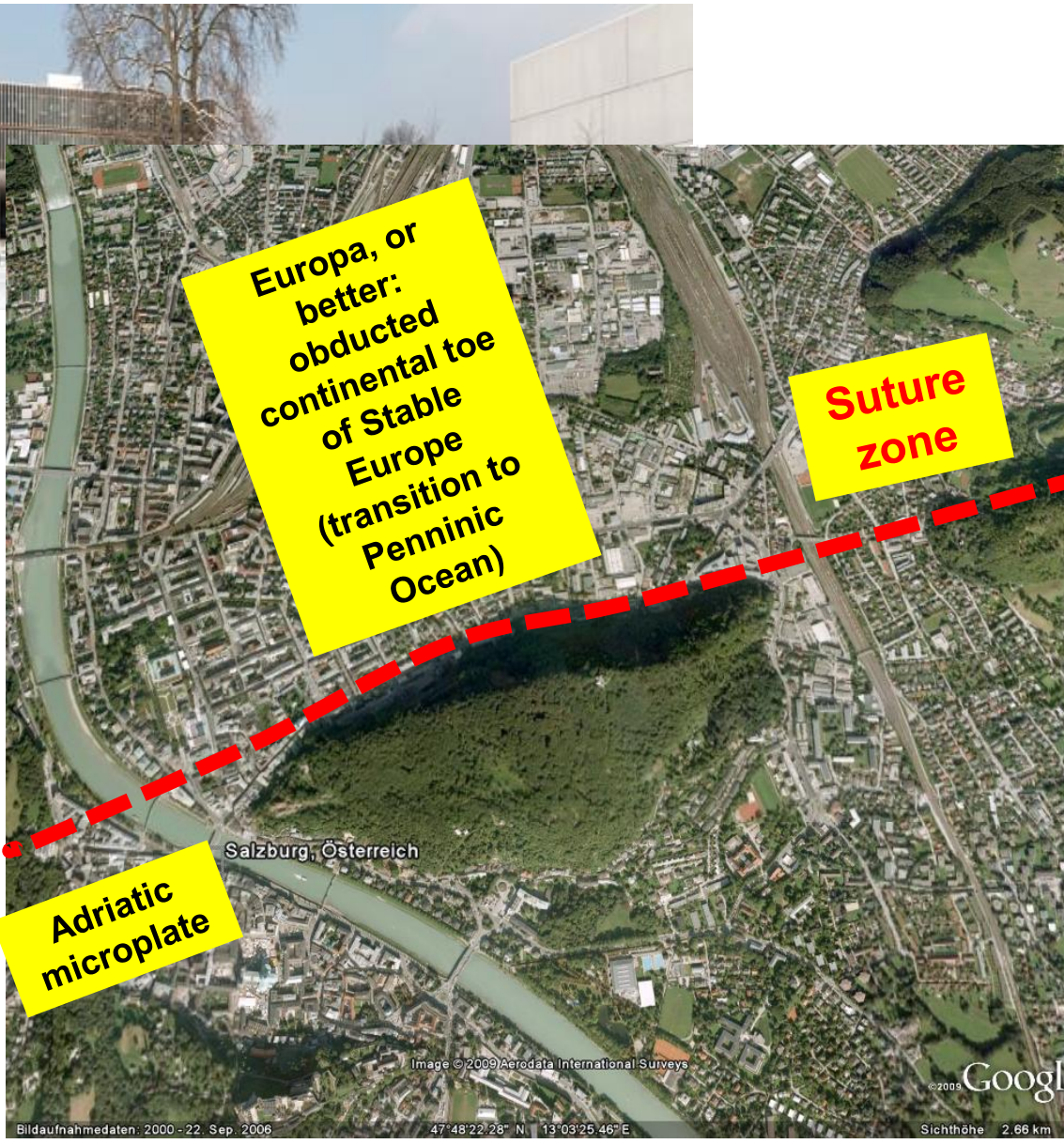




Geological Suture zone in Salzburg



Academic staff and research postdocs



Sylke Hilberg
Hydrogeology



Bernhard Salcher
Engineering Geology
Sedimentology



Joerg Robl
Numerical modeling



Hans Steyrer
Analog modelling



Hans Genser
Ar-Ar dating

Manfred Bernroider
Electron microprobe



Gertrude Friedl
Electron microscopy



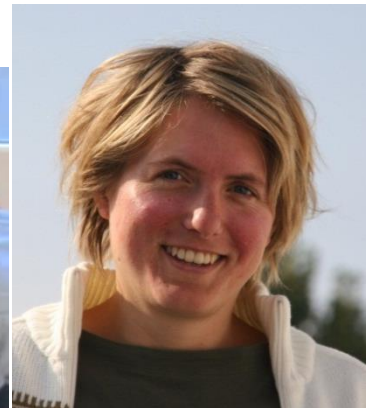
Christian Uhlir
Archaeometry



Shuyun Cao
Structural Geology

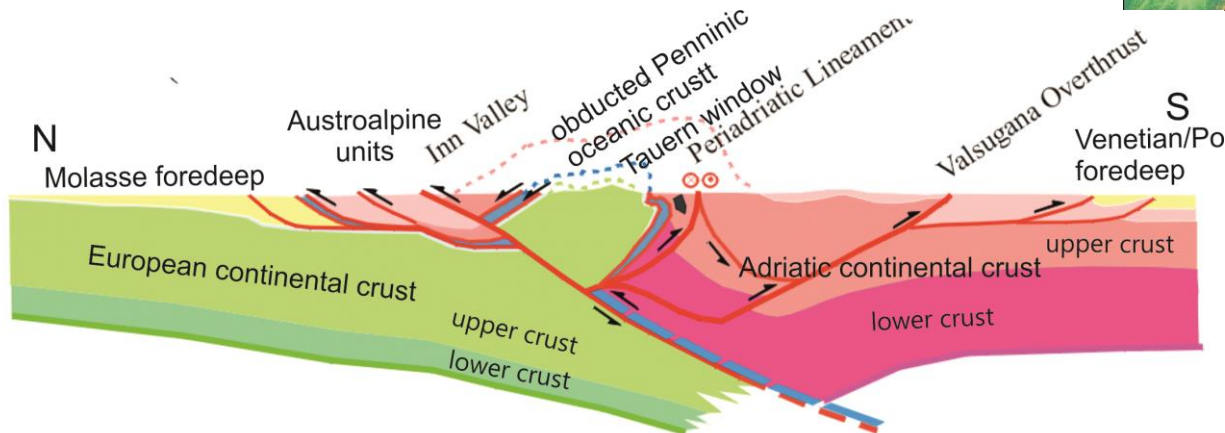
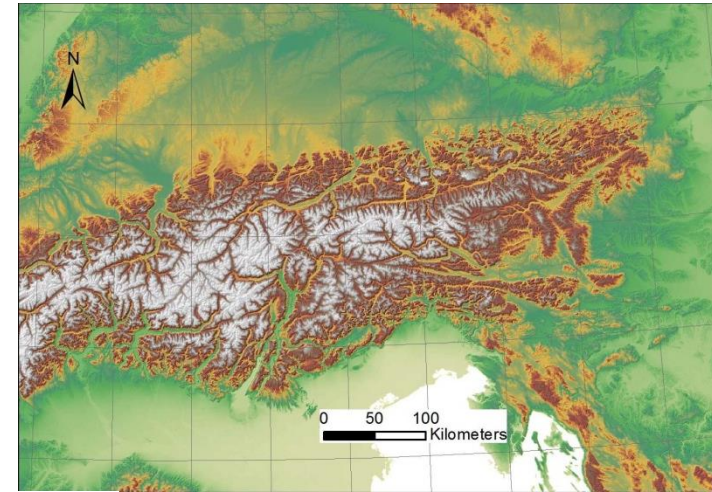


Bianca Heberer
Low-T
geochronology



Research Focus: Mountains and Basins: Origin – Processes – Depth to Surface – Natural Hazards – Ressources (Water, Geothermy)

- *Tectonic processes: nature, timing and physical conditions of tectonic processes*
- *Dating (Ar-Ar, fission track) and P-T conditions of tectonic processes*
- *Analysis of mountain-related sedimentary basins*
- *Metamorphic core complexes*
- *Structural geology of evaporites*
- *Earth's surface processes*
- *Modelling of geological processes*
- *Groundwater and its pollution*
- *Deep geothermy*



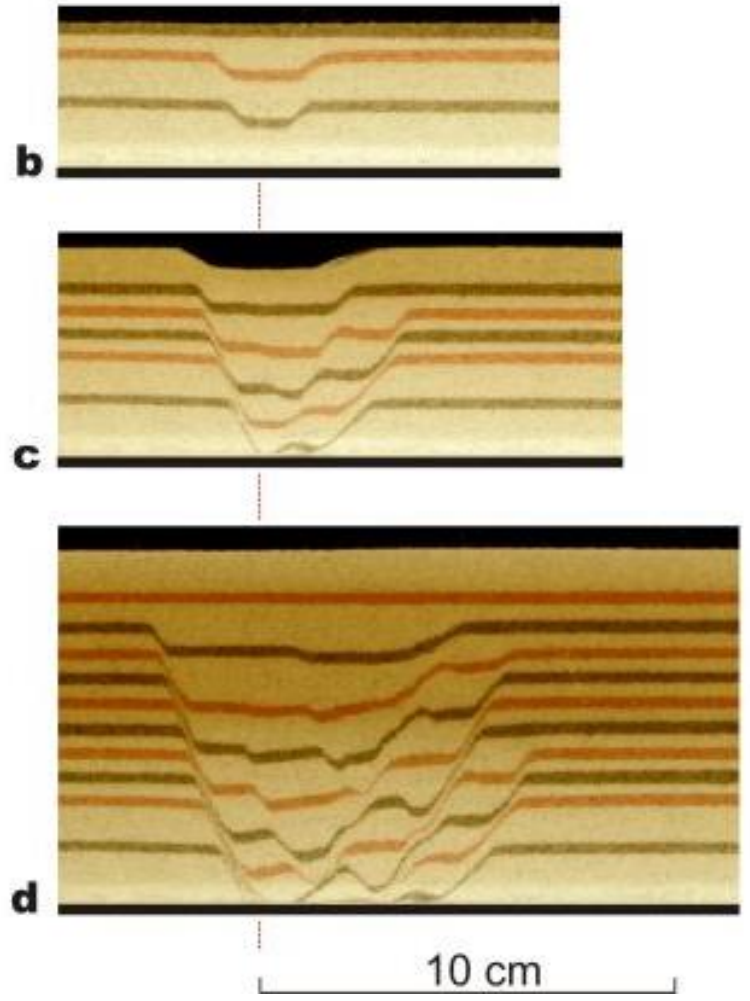
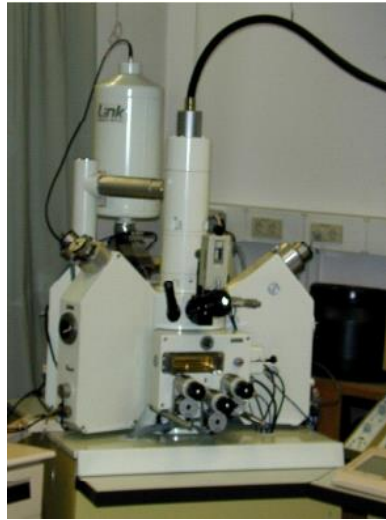
Major methods

- **Structural Geology: field, laboratory, numerical modelling**
- **Electron microprobe analysis**
- **Fission track dating**
- **Ar-Ar-Age dating laboratory ARGONAUT**
- **Petrel software for sedimentary basin analysis**
- **Scanning electron microscopy**
- **Rock and mineral separation labs**
- **Engineering geophysics**
- **Numerical modeling of near-surface processes**
- **Analog modeling**

Electron Microprobe:

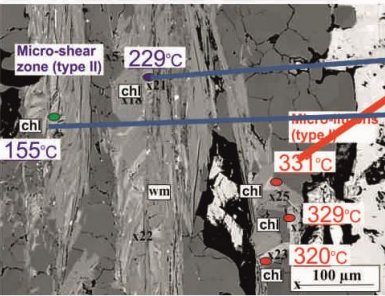
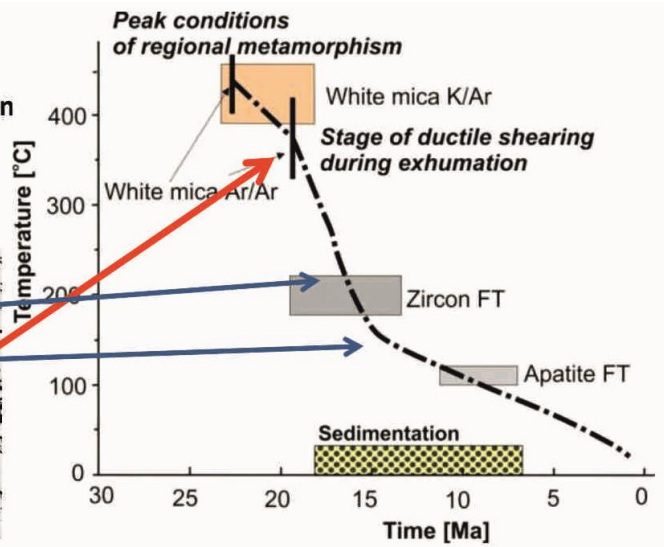
Mineral Chemistry: Silicates, Sulphates, Ores
 Scanning Electron Microscopy

Analog modelling of structures



Cooling path of the Rechnitz MCC

Peak greenschist facies condition
 390 - 430°C, ca. 3 kb
 (Koller, 1985)



Geomorphology and Geochronology

Techniques:

Field

Landform analyses

GIS modelling and analysis

Shallow geophysical sounding
(Electric resistivity, ground penetrating radar, refraction seismics)

Laser scanning, terrestrial & airborne photogrammetry,

Coring, sampling

Lab

Luminescence Dating

Luminescence Thermometry &
Thermochronometry

Sediment analysis (physical and chemical parameters)



Impact of climate change on high-mountain geomorphic systems

- FUTURELAKES
 - Modelling of future glacial lakes in Austria
Implications on sediment budgets, hydrology, natural hazards
- Moreexpert II
 - Monitoring of mountain permafrost and slope stability
Implications on rock fall processes, infrastructure management, natural hazards, risk assessment
- CirqueMonHT
 - Long-term monitoring of climate sensitive cirque walls
Implications on rock fall processes, slope stability and natural hazards

Geoarchaeology:

Human impact on landscapes during historic and prehistoric times

Luminescence Geochronology and Thermometry

- Neotectonics
- Dynamics of slope and river systems



Collisional Orogens – Interaction of Tectonics and Climate

Dr. Jörg Christian Robl (joerg.robl@sbg.ac.at)

