

AlpArray & 4DMB Scientific Meeting

Bad Hofgastein 2023



DFG Deutsche
Forschungsgemeinschaft
German Research Foundation



AlpArray & 4DMB Scientific Meeting

Bad Hofgastein 2023

Wednesday, 4th of October 2023



08:45 Registration (Name Badges)

09:15 Opening: Mark Handy

09:30 Keynote

Emanuel Kästle & Marcel Paffrath: Advances in imaging of the Alpine lithosphere

10:00 Christian Haberland

Local earthquake tomography in the Eastern and eastern Southern Alps using SWATH-D data

10:15 Georg Rümpker

Layered anisotropy and mantle flow beneath AlpArray from shear-wave splitting

10:45 Coffee Break

11:15 Keynote

Nevena Andrić-Tomašević & Eline Le Breton: The Alpine foreland basins – what we have learned from 4D-MB

11:45 Christoph von Hagke

Foreland dynamics as a measure of mountain building processes

12:00 László Fodor

Connections of the Alps-Carpathians-Dinarides-Pannonian basin: from mantle processes to crustal structures

12:15 Leni-Scheck-Wenderoth

INTEGRATE - Integrated 3D structural, thermal, gravity and rheological modeling of the Alps and their forelands

12:30 Lunch

14:00 Poster presentations

15:00 Poster session

16:30 Session wrap-up

Dinner 18:30 Appetisers and Drinks – 19:00 Dinner

AlpArray & 4DMB Scientific Meeting

Bad Hofgastein 2023

Thursday, 5th of October 2023



09:00 Keynote

Marcel Thielmann: Processes and repercussions of slab detachment

09:30 Thorsten Becker

Subduction, continental collision, and mantle dynamics in the Mediterranean - Tethyan realm: impact on oceanic circulation, climate, and the biosphere

09:45 Ajay Kumar

Role of lithospheric-scale geological heterogeneity in the continental lithosphere dynamics

10:00 Boris Kaus

3D geodynamic modelling of the present day and long term deformation of the Alps and Adria

10:15 Nikolaus Froitzheim

Eclogite dating and subduction zones in the Alps

10:30 Coffee Break

11:00 Keynote

Christoph Grützner: Active Tectonics of the Alps-Dinarides junction – what have we learned?

11:30 Miklos Kazmer

Pustertal-Mölltal-Gailtal-Drautal – Periadriatic Fault activity revealed by ruined buildings

11:45 Valentina Argante

Dating the youngest deformation in the Alps with ESR thermochronometry

12:00 Klaus Reicherter

Paleoseismicity of the foreland: the Upper Rhine Graben

12:15 Götz Bokelmann

What AlpArray tells us about stress and water resources under the Alpine Region

12:30 Lunch

14:00 Poster presentations

15:00 Poster session

16:30 Session wrap-up

Dinner 18:30 Appetisers and Drinks – 19:00 Dinner

AlpArray & 4DMB Scientific Meeting

Bad Hofgastein 2023

Friday, 6th of October 2023



09:00	Keynote	Matthew Fox: Imaging mountain belt geomorphic processes with inverse methods and diverse datasets
09:30	Christoph Glotzbach	Deriving the exhumation history of the Alps with thermochronological data
09:45	Keynote	Maud Meijers & Sebastian Mutz: Reconstructing Neogene surface uplift of the Alps: Integrating stable isotope paleoaltimetry and paleoclimate modelling
10:15	Daniel Boateng	Synergistic effects of diachronous surface uplift and global climate change on the isotopic composition of meteoric waters: implications on paleoelevation estimates across the European Alps
10:30	Coffee Break	
11:00	Thomas Meier	Slabs in the Alpine region: inferences down to 300 km depth from surface wave tomography and receiver functions
11:15	Nicolas Bellahsen	Deep crustal structure of the collisional wedge, Western Alps
11:30	Anna-Katharina Sieberer	Control of inherited structures and mechanical heterogeneities on the internal deformation of the Dolomites Indenter, eastern Southern Alps: a multi-scale analogue modelling study
11:45	Peter McPhee	Investigating the post-collisional reorganisation of the Eastern Alps using a 4D reconstruction
12:00	Mark Handy	How AlpArray & 4D-MB are guiding us to a new model of Alpine orogenesis
12:15	Lunch	
13:30	Poster presentations	
14:30	Poster session	
16:15	Session wrap-up	
16:45	Quo Vadis? & Thanks!	Mark Handy
Dinner	18:30 Appetisers and Drinks – 19:00 Dinner	