

AlpArray & 4D-MB Scientific Meeting

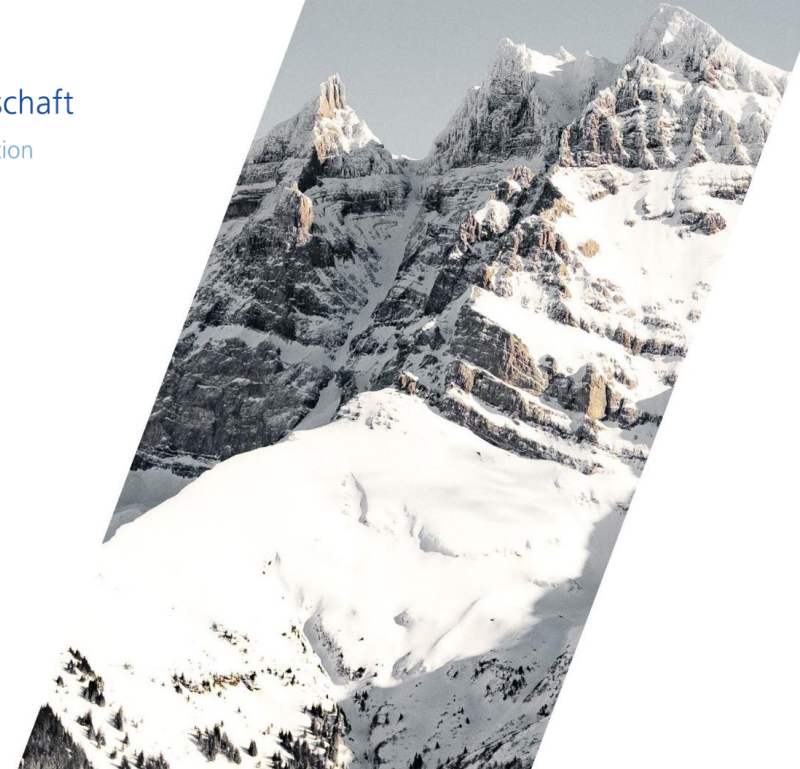
Prague 2021



INSTITUTE OF GEOPHYSICS
OF THE CZECH ACADEMY OF SCIENCES



DFG Deutsche
Forschungsgemeinschaft
German Research Foundation



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Tuesday, 9th of November 2021

Early-Career Scientists' Afternoon

13:00 Geophysical Model Generator Tutorial

16:00 Break

16:15 Dragonfly Mental Health Talk

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Wednesday, 10th of November 2021

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| 09:00 Opening Remarks | M. R. Handy, J. Plomerova (and P. McPhee) |
| 09:30 Keynote Speaker | Pierre Valla (University Grenoble Alpes): How Climate, Uplift and Erosion Shaped the Alpine Topography |
| 10:00 László Fodor | Neotectonic uplift and incision of the Transdanubian Range (Pannonian Basin): a progress report on timing, rate and mechanism |
| 10:20 Ajay Kumar | Present-day physical state of the Alps and its correlation with surface deformation |
| 10:40 Coffee Break | |
| 11:10 Mark R. Handy | Slab detachment in the Alps – implications for magmatism and basin evolution |
| 11:30 Armelle Ballian | Reconstructing Eastward Propagation of Surface Uplift in the Alps: Integrating Stable Isotope Paleoaltimetry and Paleoclimate Modelling (REAL) |
| 11:50 Daniel Boateng | How did the eastward propagation of surface uplift in the Alps affect climate and the isotopic composition of precipitation? |
| 12:10 Lunch | |
| 13:10 Eline Le Breton | Early Miocene slab break-off event beneath the Eastern Alps? Insights from subsidence analysis of the eastern North Alpine Molasse Basin |
| 13:30 Stefan M. Schmid | Arc formation in the Western Alps |
| 13:50 Poster Session | |
| 15:20 Breakout: Geophysical Model Generators (Organisers: Marcel Thielmann, Boris Kaus) | |
| 16:20 Breakout: Eastern Alps (Organiser: Paul Eizenhöfer) | |

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Prague 2021



Thursday, 11th of November 2021

09:00 Keynote Speaker	Heidrun Kopp (University of Kiel): Deep structure of the Ligurian Basin from a suite of geophysical studies
09:30 Louisa Murray-Bergquis	3D Travel Time Tomography of the Ligurian Sea and Coastal Western Alps--First Results
09:50 Rainer Kind	Moho and uppermost mantle structure in the Alpine area from S-to-P converted waves
10:10 Stefan Mrozcek	Establishing the Eastern Alpine-Dinaric Transition with Teleseismic Receiver Functions
10:30 Coffee Break	
11:00 Matteo Scarponi	The mantle in the crust: recent images and models of the Ivrea Geophysical Body based on seismological and gravity data
11:20 Götz Bokelmann	Shear-wave splitting in the Alpine region
11:40 Emanuel Kästle	Azimuthally anisotropic structure of the Alpine crust
12:00 Lunch	
13:30 Marcel Paffrath	Imaging structure and geometry of slabs in the greater Alpine area – A P-wave travel-time tomography using AlpArray Seismic Network data
13:50 Rens Hoffman	Seismicity in the Eastern Alps from Swath-D
14:10 Pier Luigi Bragato	Statistical evidence of the modulation of strong seismicity by the climate in the southeastern Alps
14:30 Poster Session	
16:00 Breakout: AdriaArray/ORFEUS (Organiser: Petr Kolinsky)	

AlpArray & 4D-MB Scientific Meeting

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Friday, 12th of November 2021

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| 09:00 Keynote Speaker | Enrico Serpelloni (INGV): Horizontal and Vertical Kinematics of the Great Alpine Area From GNSS Data |
| 09:30 Sabrina Metzger | Recent kinematics of the SE-Alps, observed by InSAR/GNSS |
| 09:50 Miklós Kázmér | Medieval seismicity in the Upper Rhine Graben |
| 10:10 Lorenzo Gemignani | Response of drainage pattern and basin evolution to tectonic and climatic change at the Dinarides-Hellenides junction |
| 10:30 Coffee Break | |
| 11:00 Thomas Chen | Deep learning and remote sensing for deep structure: challenges and opportunities |
| 11:20 Sofia Brisson | Implicit modelling of triangle zones for uncertainty estimation |
| 11:40 Closing Remarks | |
| 12:00 Breakout: Alps-Pannonian-Dinarides Junction (Organiser: Christoph Grützner) | |
| 14:00 4DMB Steering Committee meeting | |
| 15:30 AlpArray Steering Committee meeting | |

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Poster sessions – Wednesday 10th

Lucas Eskens	The development of non-cylindrical foreland basins; a case study of the Northern Alpine Foreland Basin
Sarah Falkowski	Erosion and drainage evolution of the Alps derived from detrital thermochronology
Marcel Thielmann	Ductile weakening controls on slab breakoff depth
Dominika Godova	Lithospheric models along the profiles across the Carpathians
Chiara Amadori	High geothermal gradient in the Alps-Apennine tectonic junction induced by mantle upwelling
Francesca Di Luccio	Active tectonics of the central Adriatic region: new insights from the recent March 2021 seismic sequence
Christian Haberland	Jozi-Najafabadi et al: Local Earthquake tomography using SWATH-D data
Sunjay Sunjay	Lithosphere geophysical SubSurface imaging
Daniel Kalmar	The Structure of the Pannonian Basin Region Revealed by P-to-S Receiver Function
Máté Timkó	3D lithospheric structure of the Pannonian Basin from the joint inversion of earthquake and ambient noise surface wave tomography
Saikiran Tharimena	Structure of the Alpine Mantle Transition Zone from P-to-S receiver functions
Johannes Stampa	Automatic Picking of Teleseismic P- and S-Phases Using an Autoregressive Prediction Approach
Benedikt Braszus	Towards a comprehensive high resolution 3D P- and S-wave velocity model for the Alpine mountain chain using local earthquake data
Irene Menichelli	First steps toward the definition of the deep structure and dynamic of the circum-Mediterranean orogens

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Poster session – Thursday 11th

Paul Eizenhöfer	Thermo-kinematic evolution of the Eastern Alps along TRANSALP: Exploring the transient tectonic state towards slab reversal
Zoltán Wéber	Earthquake focal mechanisms and recent stress field in the Pannonian basin
Valentina Argante	LUNAR project: preliminary fieldwork data from Brenner Fault and Salzachtal Fault
Yongki Andita Aiman	Stress-field orientation inferred from ambient seismic noise in the Northern Alpine foreland
Amr El-Sharkawy	Lithospheric structure of the Eastern Alps from joint inversion of surface waves and Receiver Functions: Preliminary results
Anna-Katharina Sieberer	Internal deformation of the Dolomites Indenter, eastern Southern Alps: Insights from crustal scale analogue modelling
Christian Schuler	Geodynamic modelling scenarios of the Alpine Mediterranean area
Jaroslava Plomerová (et al.)	Two subduction-related heterogeneities and upper mantle anisotropy along the Bohemian Massif-Eastern Alps north-south transect
Pier Luigi Bragato	Systematic Triggering of Large Earthquakes by Karst Water Recharge: Statistical Evidence in Northeastern Italy
Jiri Kvapil (et al.)	Quality assessment of surface wave (Group & Phase) velocity dispersions obtained from ambient noise in Central and Eastern Europe.
Elena Bersan	Microstructural variations of the Innsbruck Quartz Phyllite and the Bündnerschifer north of Tauern Window (Tyrol, Austria)
Anke Dannowski	Lithospheric architecture of the Ligurian Basin from seismic data
Julia Rudmann	Constructing a new cross-section along the BBT Tunnel through the eastern Alps: Modelling constraints and methods
Ahmed Nouibat	A 3-D shear-wave velocity model of the Liguro-Provençal basin from ambient-noise tomography: implications on the oceanic/continental nature of the crust