

Program

AlpArray & SPP 4D-MB Scientific Meeting 2019

Senckenberg Institut, Grüner Hörsaal, Arthur-von-Weinberg-Haus, Robert-Mayer-Str. 2, 60325 Frankfurt am Main
Nov 13th - 15th

- Check for program updates on the [4DMB Website](#) -

Wednesday, 13th

9:00 - 9:30 Registration, Poster setup
9:30 - 9:45 Introduction (E. D. Kästle & M. R. Handy)
9:45 - 10:00 Information on AlpArray seismic network

Session 1: Capturing deformation of the crust and mantle

10:00 - 10:15 H. Pedersen: *Seismic noise in Europe and impact on data quality and imaging.*
10:15 - 10:30 A. Paul: *New information on the structure of the deep crust in the Greater Alps from ambient noise wave equation tomography.*
10:30 - 10:45 M. Paffrath: *Teleseismic P-wave travel time tomography of the Alpine mantle using AlpArray SeismicNetwork data.*
10:45 - 11:00 R. Kind: *LAB beneath the Alps from P- and S-Receiver Functions.*
11:00 - 11:30 **Coffee break**
11:30 - 11:45 S. Pondrelli: *Mantle flow below the Central Alpine region: insights from SKS anisotropy analysis at AlpArray and permanent stations.*
11:45 - 12:00 F. Link: *Isolating the Anisotropy in Crust and Mantle below the European Alps based on differential Ps - XKS Splitting - A Sequential Approach.*
12:00 - 12:15 C. Alder: *3D radially anisotropic model of Europe from ambient noise tomography.*
12:15 - 12:30 P. Kolínský: *How the AlpArray helps us to better understand surface wave propagation.*

12:30 - 14:00 Lunch

14:00 - 14:30 Invited talk: Sergei Lebedev (DIAS, Dublin): *Capturing the deformation of the crust and mantle.*
14:30 - 14:45 S. Schippkus: *On the crustal structure and stress field in the wider Vienna Basin region.*
14:45 - 15:00 C. Spooner: *The thermal field across the Alpine orogeny and its forelands.*
15:00 - 15:15 A. Borghi: *Gravimetric estimate of the Moho surface in the Italian area.*
15:15 - 15:30 H. Götze: *AlpArray initiative for a homogeneous Alpine Bouguer gravity anomaly map.*

15:30 - 18:00 Poster session

18:00 - 19:00 AA Steering Committee Meeting (only SC members, **location: main meeting room**)

19:30 Dinner for Early Career Scientists

Thursday, 14th

Session 2: Surface response to changes in deep structure

- 9:00 – 9:30 Invited Talk: Taylor Schildgen (Univ. of Potsdam): *Geomorphic, geologic, and geophysical clues to the origins of the Central Taurides, Turkey.*
- 9:30 – 9:45 K. Stüwe: *Young Uplift of the Eastern Alps: A Progress report.*
- 9:45 – 10:00 P. Eizenhöfer: *Exhumation history along TransAlp: new insights from low-temperature thermochronology and thermo-kinematic models.*
- 10:00 – 10:15 E. Luijendijk: *Using thermal springs to quantify deep fluid flow and its thermal footprint in the Alps.*
- 10:15 – 10:30 A. Mulch: *Recovering the long-term surface elevation history of the Alps.*
- 10:30 – 11:00 **Coffee break**

Session 3: Probing re-organizations of the lithosphere

- 11:00 – 11:30 Invited talk: Thorsten Becker (Univ. of Texas, Austin): *Topographic Fingerprints of Mantle Dynamics.*
- 11:30 – 11:45 B. Kaus: *Modeling slab reversals and the dynamics of the present day Alps.*
- 11:45 – 12:00 M. Malusà: *Geologic insights from the integration of AlpArray and CIFALPS data, Western Alps.*
- 12:00 – 12:30 Plenary session: *AA data repository* (L. Cristiano, E. D. Kästle, **location: main meeting room**).

12:30 – 14:00 Lunch break

- 14:00 – 14:15 H. Žlebčíková: *Tomography image of double high-velocity heterogeneity beneath the Eastern Alpine root from the AlpArray data.*
- 14:15 – 14:30 S. Mroczek: *Crustal structure of the eastern Alps from SWATH-D Receiver Function Migration.*
- 14:30 – 14:45 A. Jozi-Najafabadi: *Crustal structure in the Giudicarie region based on Local Earthquake Tomography with SWATH-D data.*
- 14:45 – 15:00 A. Sadeghi-Bagherabadi: *Ambient noise study using SWATH-D network.*
- 15:00 – 15:30 **Coffee break**
- 15:30 – 15:45 A. Dannowski: *Investigations of the crust and upper mantle in the Ligurian Basin using refraction seismic data and ambient noise- LOBSTER.*
- 15:45 – 16:00 P. Groß: *Variations in the 3D temperature field in a fossil subduction zone resolved by RSCM thermometry (Tauern Window).*
- 16:00 – 16:15 M. R. Handy: *Pro- and retro-wedges in the Eastern Alps and its peripheral basins - clues to a switch in subduction polarity?*
- 16:15 – 16:30 N. Froitzheim: *Subduction in the Western Alps.*
- 16:45 – 17:45 Plenary session: *What comes after AlpArray?* (Presentations: T. Meier on Adria Array, P. Kolinsky on Adria Array, J. Plomerova on PACASE; Moderation: I. Molinari, M. R. Handy)
- 18:00 – 19:00 AlpArray Seismic Anisotropy Group Meeting (open to everyone interested, **location: main meeting room**)
- 18:00 – 18:30 Tutorial: *4D-MB data repository* (**cancelled** – please contact L. Cristiano (luigia@gfz-potsdam.de) or Emanuel Kästle (emanuel.kaestle@fu-berlin.de) if you have questions.)
- 18:00 – 19:00 4D-MB Steering Committee Meeting (only SC members, **location: breakout room 1**)

Friday, 15th

Session 4: Tracking motion and seismicity

- 9:00 – 9:30 Invited Talk: Nicola d'Àgostino (INGV, Rome): *The contribution of dense GNSS networks to the study of lithospheric dynamics and hydrological external forcing: examples from the Apennines.*
- 9:30 – 9:45 C. Grützner: *Distributed deformation in Slovenia - lessons from large earthquakes.*
- 9:45 – 10:00 M. Kazmer: *Closing a seismic gap with archaeoseismology - the Upper Rhine Graben.*
- 10:00 – 10:15 F. Fuchs: *Widespread infrasound detection by AlpArray after explosion near Ingolstadt.*
- 10:15 – 10:30 G. Rossi: *OGS activities on AlpArray seismic network and related research.*
- 10:30 – 11:00 **Coffee break**
- 11:00 – 11:15 H. Hausmann: *Routine Earthquake Location in Austria: Accuracy and Improvements from the AlpArray Seismic Network (first results).*
- 11:15 – 11:30 S. Mader: *First Results from the Stress Transfer Project.*
- 11:30 – 11:45 R. Hofman: *Microseismic event detection in the Eastern Alps (Swath-D).*
- 11:45 – 12:00 G. Pedersen: *Moment Tensor inversion of local seismicity.*
- 12:00 – 12:15 M. Mathey: *Seismic crustal deformation in the Western Alps : new insights from high spatial resolution data (Sismalp database).*
- 12:15 – 12:45 Final remarks

Poster presentations

Authors	Title	Contact
Ashruf, T. N., Morelli, A.	The Moho reflectivity of the subduction beneath the southwestern Alps from ambient seismic noise autocorrelations	tahira.ashruf@ingv.it
Baccheschi, P.	Anisotropic structure beneath the Western Alps as inferred by the analysis of anomalously deep earthquakes	paola.baccheschi@ingv.it
Bianchi, I., Ruigrok, E., Obermann, A., Kissling E. & AlpArray-EASI Working Group	Moho topography beneath EASI profile by earthquake interferometry	irene.bianchi@univie.ac.at
Ehlers, T. A., Mutz, S. G., Methner, K., Krsnik, E., Mulch, A.	Opportunities and challenges for paleoaltimetry in the European Alps	svetlana.botsyun@uni-tuebingen.de
Braitenberg, C.	Gravity modeling of the Alpine lithosphere affected by magmatism based on seismic tomography	berg@units.it
El-Sharkawy, A., Meier, T., Lebedev, S.	Surface wave tomography across the Alpine region	amr.elsharkawy@ifg.uni-kiel.de
Fuchs, F., Hibert, C., Lenhardt, W., Bokelmann, G., AlpArray Working Group	Resolving temporal evolution of rockslide sequences using AlpArray	florian.fuchs@univie.ac.at
Glotzbach, C.	Structural thermochronology along geophysical transects through the Alps	christoph.glotzbach@uni-tuebingen.de
All members of the AlpineArray Gravity Research Group	AlpArray initiative for a homogeneous Alpine Bouguer gravity anomaly map.	hajo.goetze@ifg.uni-kiel.de
Hein, G., Bokelmann, G.	Extracting robust splitting measurements from the splitting intensity method	gerrit.hein@univie.ac.at
Heit, B., Weber, M., Tilmann, F., Haberland, C., Cristiano, L., Handy, M. R., Jia, Y., Pesaresi, D.	The SwathD deployment in the Eastern Alps: overview and preliminary results	heit@gfz-potsdam.de
Kalmár, D., Hetényi, Gy., Bondár, I.	P receiver function analysis in the Pannonian Basin	kalmardani222@gmail.com
Kaus, B.	Towards 4D geodynamic models of Alpine mountain building	kaus@uni-mainz.de
Klotz, T., Sieberer, A., Pomella, H., Fügenschuh, B.	Constraints on the continental indentation process: High-resolution thermo-tectonic analysis of the Dolomites Indenter (eastern Southern Alps)	thomas.klotz@student.uibk.ac.at
Kovács, I. J.	Shear wave velocity structure of the transition zone between the Eastern Alps and the Pannonian Basin from ambient noise tomography	kovacs.istvan.janos@csfk.mta.hu
Kovács, I. J.	Seismic anisotropy beneath western Hungary	kovacs.istvan.janos@csfk.mta.hu
Kruse, J. Ph., Froitzheim, N., Schmelting, H.	Double subduction: Insights from 2D thermo-mechanical models and application to the Alps	jp.kruse@gmail.com
Ling, A., Stähler, S. C., Giardini, D., Hosseini, K., and the AlpArray Working Group	Core phases observed with AlpArray	angel.ling@erdw.ethz.ch
Louis S., Luijendijk E., von Hagke C.	Low-temperature thermochronology and vitrinite reflectance data reveal longwavelength uplift in the Alpine foreland basin	sarah.louis@uni-goettingen.de
Lowe, M., Ebbing, J., Spooner, C., Szwilius, W., El-Sharkawy, A., Meier, T.	Testing the Alpine slab hypotheses with gravity.	maximilian.lowe@gmx.de
Monna S., Montuori C., Piromallo C., Frugoni F., Vinnik L. and the AlpArray Working Group	Lithosphere and upper mantle structure below the Ivrea body from P and S receiver functions: preliminary results	stephen.monna@ingv.it
Plomerová, J., Hetényi, G., Žlebčíková, H., Bianchi, I., Vecsey, L., Babuška, V., Bokelmann, G., Handy, M. R., AlpArray-EASI and AlpArray WGs	Lithosphere around the European/Adriatic Plate Contact	jpl@ig.cas.cz
Pondrelli, S., Petrescu, L., Salimbeni, S., Faccenda, M. and AlpArray Working Group	Mantle flow below the Central Alpine region: insights from SKS anisotropy analysis at AlpArray and permanent stations	silvia.pondrelli@ingv.it
Reuber, G.		reuber@uni-mainz.de
Mader, S., Reicherter, K., Ritter, J. and the AlpArray Working Group	New insights into the nature of the Albstadt Shear Zone, Germany	joachim.ritter@kit.edu
Salimbeni S., Prevolinik, S., Pondrelli, S., Molinari, I., Stipčević, J., Dasović, I., Šipka, V., Herak, M., Kissling, E. and the ALPARRAY-CASE working group	Seismic anisotropy distribution in Southern Italy and Dinaric region: new results from "Central Adriatic Seismic Experiment" (CASE) project.	simone.salimbeni@ingv.it
Schlömer, A., DSEBRA Core-Group	DSEBRA - the German Seismological Broadband Array	aschloemer@geophysik.uni-muenchen.de
Schmid, S.M., Fügenschuh, B., Kounov.A., Matenco L.,Nievergelt, P., Oberhänsli, R., Pleuger, J., Schefer, S., Schuster, R., Tomljenovic, B., Ustaszewski, K., van Hinsbergen, D.	Schmid, S.M., Fügenschuh, B., Kounov.A., Matenco L.,Nievergelt, P., Oberhänsli, R., Pleuger, J., Schefer, S., Schuster, R., Tomljenovic, B., Ustaszewski, K., van Hinsbergen, D.	stefan.schmid@unibas.ch
Sebera, J., Götze, H.-J., Braitenberg, C., Hetényi, G., Papčo, J., Paštka, R., Zahorec, P., Bielik, M., Ebbing, J., Meurers, B., Mrlina, J., Bonvalot, S., Seoane, L., Gabriel, G., Skiba, P., Szűcs, E., Gosar, A., Marti, U., Scarponi M. & AAGRG	Towards Alpine Bouguer gravity anomaly map	josef.sebera@ifg.uni-kiel.de
Semenova, Y.	Effect of a soil with nonlinear properties on seismic hazard parameters	ulaska@ukr.net
Soergel, D.	Insights in the coda of noise cross-correlations	soergeld@univ-grenoble-alpes.fr
Stampa, J., Tesch, M., Timko, M., Olbert, K.,	Body Wave Tomography of the Alpine Region Using AlpArray Data	johannes.stampa@ifg.uni-kiel.de

Christiano, L., Meier, T., and the AlpArray Working Group	— Automated Picking of P- and S-Phases	
Stroncik, N.		stroncik@gfz-potsdam.de
Tanner, D.		DavidColin.Tanner@leibniz-liag.de
Tesch, M., Meier, T., AlpArray Working Group	Fundamental Mode Surface Wave Phase and Amplitude Distributions within AlpArray	marcel.tesch@ifg.uni-kiel.de
Thorwart, M.	Seismicity in the Ligurian Sea	martin.thorwart@ifg.uni-kiel.de
Timkó, M., Wiesenberg, L., El-Sharkawy, A., Wéber, Z., Meier, T.	Ambient noise tomography in the Pannonian Basin - Preliminary results	timko.mate@csfk.mta.hu
Tsukamoto, S.		sumiko.tsukamoto@leibniz-liag.de
Vecsey L., Plomerová J., Babuška V., and the AlpArray working group	Mantle Anisotropy from Shear-wave Splitting in the Alpine Area	vecsey@ig.cas.cz
Verwater, V. F., Handy, M. R., Le Breton, E., Picotti, V., Jozi-Najafabadi, A., Haberland, C.	Structures and kinematics of Neogene deformation from the Southern Alpine orogenic front to the Northern Giudicarie Belt, (eastern Southern Alps, Northern Italy)	vincent.verwater@fu-berlin.de
Wolf, F. N., Lange, D., Dannowski, A., Kopp, H., Crawford, W., Paul, A., Wiesenberg, L., Grevemeyer, I., Froitzheim, N. and the AlpArray Working Group	Ambient Noise Tomography of the Ligurian Sea from Ocean Bottom Seismometer Data	fnwolf@geomar.de

Oral presentations

Authors	Title	Contact
Alder, C., Bodin, T., Debayle, E., Paul, A., Stehly, L., Pedersen, H., AlpArray Working Group	3D radially anisotropic model of Europe from ambient noise tomography	chloe.alder@ens-lyon.fr
Borghi, A., Barzaghi, R.	Gravimetric estimate of the Moho surface in the Italian area	alessandra.borghi@ingv.it
Dannowski, A., Wolf, F., Kopp, H., Grevemeyer, I., Lange, D., Thorwart, M., Crawford, W., Caielli, G., de Franco, R., Paul, A., Petersen, F., Schramm, B., MSM71 cruise participants, and the AlpArray Offshore Working Group	Investigations of the crust and upper mantle in the Ligurian Basin using seismic data - LOBSTER	adannowski@geomar.de
Eizenhöfer, P.	Exhumation history along TransAlp: new insights from low-temperature thermochronology and thermo-kinematic models	paul-reinhold.eizenhoefer@uni-tuebingen.de
Froitzheim, N., Hauke, M.	Subduction in the Western Alps: new insight from Lu-Hf dating of eclogites	niko.froitzheim@uni-bonn.de
Schneider, F. M., Kolínský, P., Serafin, S., Bokelmann, G., AlpArray Working Group	Widespread infrasound detection by AlpArray after explosion near Ingolstadt	florian.fuchs@univie.ac.at
Götze, H.-J.	AlpArray initiative for a homogeneous Alpine Bouguer gravity anomaly map	hajo.goetze@ifg.uni-kiel.de
Groß, P., Pleuger, J., Handy, M.R. and John, T.	Variations in the 3D temperature field in a fossil subduction zone resolved by RSCM thermometry (Tauern Window)	philip.gross@fu-berlin.de
Grützner, C., Reicherter, K., Jamšek Rupnik, P., Ustaszewski, K., Vičić, B., Vrabec, M.	Distributed deformation in Slovenia - lessons from large earthquakes	christoph.gruetzner@uni-jena.de
Jozi-Najafabadi, A., Haberland, C., Verwater, V., Handy, M., Le Breton, E., Weber, M.	Crustal structure in the Giudicarie region based on Local Earthquake Tomography with SWATH-D data	azam@gfz-potsdam.de
Hausmann, H., Swath-D and AlpArray Working Group	Routine Earthquake Location in Austria: Accuracy and Improvements from the AlpArray Seismic Network (first results)	helmut.hausmann@zamg.ac.at
Hofman, R., Kummerow, J., Cesca, S., Wassermann, J., Plenefisch, T., AlpArray Working Group	Microseismic event detection in the Eastern Alps (Swath-D)	rens@geophysik.fu-berlin.de
Kaus, B.	Modeling slab reversals and the dynamics of the present day Alps	kaus@uni-mainz.de
Kazmer, M., Reicherter, K.	Closing a seismic gap with archaeoseismology - the Upper Rhine Graben	mkazmer@gmail.com
Yuan, X., AlpArray Working Group	LAB beneath the Alps from P- and S-Receiver Function	kind@gfz-potsdam.de
Bokelmann, G., AlpArray Working Group	How the AlpArray helps us to better understand surface wave propagation	petr.kolinsky@univie.ac.at

Rümpker, G., AlpArray Working Group	Isolating the Anisotropy in Crust and Mantle below the European Alps based on differential Ps - XKS Splitting - A Sequential Approach	link@geophysik.uni-frankfurt.de
Luijendijk, E.	Using thermal springs to quantify deep fluid flow and its thermal footprint in the Alps	elco.luijendijk@geo.uni-goettingen.de
Mader, S., Hürtgen, J., Reicherter, K., Ritter, J. and the AlpArray Working Group	First Results from the Stress Transfer Project	sarah.mader@kit.edu
Malusà M., Guillot S., Paul, A., Yuan H., Zhao L., the Cifalps team and the AlpArray Working Group	Geologic insights from the integration of AlpArray and CIFALPS data, Western Alps	marco.malusa@unimib.it
Mathey, M., Sue, C., Hannouz, E., Baize, S., Potin, B., Walpersdorf, A.	Seismic crustal deformation in the Western Alps : new insights from high spatial resolution data (Sismalp database)	marguerite.mathey@univ-grenoble-alpes.fr
Mroczek, S., Tilmann, F., Yuan, X., and Heit, B.	Crustal structure of the eastern Alps from SWATH-D Receiver Function Migration	mroczek@gfz-potsdam.de
Mulch, A.	Recovering the long-term surface elevation history of the Alps	andreas.mulch@senckenberg.de
Paffrath, M., Friederich W.	Teleseismic P-wave travel time tomography of the Alpine mantle using AlpArray Seismic Network data	marcel.paffrath@rub.de
Paul, A., Lu, Y., Stehly, L., Guillot, S., Malusà, M., Brossier, R., Zhao, L., Yuan, H., the Cifalps team and the AlpArray Working Group	New information on the structure of the deep crust in the Greater Alps from ambient noise wave equation tomography	anne.paul@univ-grenoble-alpes.fr
Lu Y., Pedersen H., Stehly, L., Paul, A. & the AlpArray Working Group	Seismic noise in Europe and impact on data quality and imaging	helle.pedersen@univ-grenoble-alpes.fr
Petersen, G., Cesca, S., Heimann, S., Plenefisch, T., Niemz, T., Dahm, T.	MT inversion of local seismicity	gesap@gfz-potsdam.de
Žlebčiková, Plomerová, J., Hetényi, G., Vecsey, L., AlpArray-EASI and AlpArray WGs	Tomography image of double high-velocity heterogeneity beneath the Eastern Alpine root from the AlpArray data (preliminary results)	jpl@ig.cas.cz
Pondrelli, S.	Mantle flow below the Central Alpine region: insights from SKS anisotropy analysis at AlpArray and permanent stations	silvia.pondrelli@ingv.it
Rossi, G., Bertoni, M., Durì, G., Fabris, P., Garbin, M., Magrin, A., Parolai, S., Pesaresi, D., Plasencia Linares, M., Vuan, A., Aoudia, A., Sadeghi-Bagherabadi, A.	OGS activities on AlpArray seismic network and related research	grossi@inogs.it
Sadeghi-Bagherabadi, A., Aoudia, A., Vuan, A. and Parolai, S.	Ambient noise study using SWATH-D network	asadeghi@ictp.it
Schippkus, S.	On the crustal structure and stress field in the wider Vienna Basin region	sven.schippkus@univie.ac.at
Spooner, C., Scheck-Wenderoth, M., Cacace, M., Bott, J. and Götze, H.-J.	The thermal field across the Alpine orogeny and its forelands	spooner@gfz-potsdam.de
Stüwe, K.	Young Uplift of the Eastern Alps: A Progress report	kurt.stuewe@uni-graz.at