



# First AlpArray Science Meeting

Meeting program

ETH Zurich, Sonneggstrasse 5, Room C 60, 8092 Zurich

## Wednesday 29.08

Open questions on the Alpine orogeny

9:30 – 9:45

*Kissling E.:* **Welcome and status of the AlpArray project.**

9:45 – 10:00

*Handy M.:* **Why AlpArray? Motivation and unanswered questions on the Alpine Orogen.**

10:00 – 10:30

*Hetényi G., Molinari I., Clinton J.:* **News and discussion on the duration of the AlpArray Seismic Network.**

10:30 – 10:45

*A. Dannowski, H. Kopp, I. Grevemeyer, D. Lange, M. Thorwart, W. Crawford, G. Caielli, R. de Franco, A. Paul, F. Petersen, F. Wolf, B. Schramm, and cruise participant:* **Ligurian Ocean Bottom Seismology and Tectonics Research – LOBSTER.**

10:45 – 11:15

*coffee break*

Lithospheric structure

11:15 – 11:30

*R. Kind:* **The Mid-Lithospheric Discontinuity—an artefact of data processing?**

11:30 – 11:45

*Cammarano F., Diaferia G., Magrini F.:* **LiSard: lithosphere of Sardinia.**

11:45 – 12:00

*Y. Lu, L. Stehly, A. Paul, R. Brossier:* **Tomography of the alpine arc using ambient seismic noise correlation & waveform modelling.**

12:00 – 12:15

*Meier, T., El-Sharkawy, A., Tesch, M.:* **Surface Wave Analysis in the Alpine Region.**

12:15 – 12:30

*Molinari I., Obermann A., Kissling E., Hetenyi G., Boschi L.:* **Crustal model of the Eastern Alps from Ambient Noise tomography.**

12:30 – 14:00

*Lunch*

Lithospheric structure and seismicity session

14:00 – 14:15

*H. Munzarova, J. Plomerova, E. Kissling and L. Vecsey:* **Novel anisotropic teleseismic body-wave tomography code AniTomo to illuminate heterogeneous anisotropic upper mantle.**

14:15 – 14:30

*F. Link, G. Rumpker:* **Crustal thickness and anisotropy inferred from a multiple phase splitting analysis of receiver functions a tool for temporary seismic stations.**

14:30 – 14:45

*Stipcevic J.:* **Lithospheric thickness beneath the Dinarides.**

14:45 – 15:00

*A. J. Najafabadi, C. Haberland:* **Automatic detection of local earthquake in Central Alps.**

15:00 – 15:15 *A. Renouard, M.Grunberg, C.Doubre, A.Maggi: **AlpArray seismic stations' contribution to the renewal of the Northeastern french seismic catalog.***

Data, Data format and products

15:15 – 15:30 *F. Schneider, F. Fuchs, P. Kolinsky, E. Caffagni, S. Serafin, M. Dorninger, G. Bokelmann and AlpArray Working Group: **Seismo-acoustic detection of the Baumgarten (Austria) gas explosion with the AlpArray.***

15:30 – 15:45 *L. Vecsey: **Experience with the AASN data downloading, implementation of additional data quality control and application of a new arrival-time picker.***

15:45 – 16:00 *G. Petersen, S. Cesca, M. Kriegerowski, T. Plenefisch: **Automated station quality control of the AlpArray network.***

16:00 – 16:15 *E. Kästle: **Data repository in the SPP project.***

16:15 – 16:45 **Discussion on data format/repository and exchange.**

16:45 -18:45 **Poster session** (drinks/beers and snack served)

## Thursday 30.08

Geodynamics, geology and tectonics session

8:30 – 8:45 *S. Cesca: **Seismicity, Motion Patterns and Stress Distribution in the Alpine Crust: project overview and preliminary results.***

8:45 – 9:00 *Sternai P., C. Sue, L. Husson, E. Serpelloni, C. Faccenna, T. Becker, A. Walpersdorf: **Present-day uplift of the European Alps: mechanisms and relative contributions.***

9:00 – 9:15 *Dal Zilio L.: **Modeling mountain building across time scales.***

9:15 – 9:30 *G. Reuber, B. Kaus: **3D geodynamic modelling of the Alps - numerical advances.***

9:30 – 9:50 *Handy M., M. Weber: **The SPP project.***

9:50 – 10:30 **Open discussion on AlpArray research. Chair: Kissling, Hetenyi.**

10:30 – 11:00 *Coffee break*

*Future Plan and Vision: Ideas and proposal for the next projects (other contributions are welcome)*

11:00 – 11:15 *Giardini D.: **Aim of the call***

11:15 – 11:30 *J. Diaz: **Mobile seismic pools in Europe within the EPOS mainframe***

11:30 – 11:45 *T. Meier: **“AdriaArray” - a shift of the deployment from the Alps towards southeastern Europe.***

11:45 – 13:00 **Discussion. Chair D. Giardini**

13:00 – 14:00 *Lunch*

14:00 – **Free discussion / Posters / Possibility for Research group meetings**

## Posters session

- Eric Löberich: **Preliminary shear-wave splitting results for the EASI profile.**
- Andrea Manconi, Alessandro Mondini , Tobias Diehl , Velio Coviello , John Clinton , Florian Amann : **Integrating Ground-Based Seismic Data and Spaceborne Radar to Identify, Locate and Assess Rock Slope Failure in Alpine Areas.**
- Sarah Mader, Joachim Ritter and Klaus Reicherter: **The stress transfer project within 4D-MB and AlpArray.**
- Antje Schlömer: **DSEBRA - the German Seismological Broadband Array.**
- Diehl, T., Lee, T., Kissling, E.: **New 3D seismic velocity models for improved hypocenter location of shallow seismicity in the Swiss Alps and its foreland.**
- Timkó M, Szanyi Gy, Kalmár D, Grácz Z, Bondár I, Süle B, Balázs B, Wesztergom V, Wéber Z: **AlpArray in Hungary: Preliminary results.**
- Verena Simon, Toni Kraft, Thessa Tormann, Tobias Diehl, Marcus Herrmann, and Stefan Wiemer: **High precision analysis of seismicity patterns in earthquake sequences in Switzerland**
- H.-J. Götze, J. Ebbing, L. Scheck-Wenderoth, J. Seber, J. Sippel, C. Spooner: **3D integrated model of the Alps and their forelands.**
- J. Plomerova, J. Kvapil, H. Kampfova-Exnerova and AA Working Group: **Progress report on incorporating data of the AASN into the Bohemian Massif lithosphere studies.**
- M. van Ede, I. Molinari, W. Imperatori, J. Baron, A. Morelli and E. Kissling: **Hybrid broadband seismograms for seismic shaking scenarios: an application to the Po Plain sedimentary basin (Northern Italy).**
- M. Thorwart, J. Ridderbusch, D. Lange: **Local Seismicity in the Ligurean Sea: First Examples.**
- Wolf, Dannowski, Lange, Kopp, Crawford, Paul, Grevenmeyer: **Approaching ambient noise studies in the Ligurian Sea - a first glimpse on data quality and crosscorrelations.**
- I. Molinari, M. Bagagli, T. Diehl, E. Kissling, J. Clinton, D. Giardini, S. Wiemer, and The AlpArray Working Group: **A consistent and uniform research earthquake catalog for the AlpArray region.**
- H. Munzarova, J. Plomerova, L. Vecsey, V. Babuska, G. Hetényi, I. Bianchi, AlpArray Working Groups: **Tomography and anisotropy of the upper mantle beneath the Eastern Alps.**

- Heit B., M. Weber, C. Haberland, F. Tilmann, S. Hemmleb, M. Handy (FU-Berlin), Y. Jia (ZAMG) and D. Pesaresi (OGS): **News from the AlpArray SWATH-D experiment - A dense seismic array in the Central, Eastern and Southern Alps.**
- Stefan Mroczek, Frederik Tilmann, Xiaohui Yuan, Christoph Sens-Schönfelder: **Mapping the Moho along a N-S Alpine Transect from ambient noise autocorrelations.**
- Dorian Soergel, Helle Pedersen, Laurent Stehly, Ludovic Margerin, Pierre Boué and AlpArray Working Group: **Estimation of the coda Quality factor at long period in the Alps using the coda of correlations.**