

PUBLIKATIONEN

KONFERENZBEITRÄGE

PRÄSENTATIONEN

Alle Publikationen, sowie die meisten Konferenzbeiträge, Vorträge und Poster sind online verfügbar unter www.marcelrehner.ch.

PUBLIKATIONSSTATISTIK

Referierte Publikationen

43	Referierte Publikationen insgesamt, davon	(18 als Erstautor)
37	Publikationen in Web of Science Core Collection	(14 als Erstautor)

Zitierungsstatistik

Web of Science:	Total Zitate: 688	H-Index: 15
Google Scholar:	Total Zitate: 1349	H-Index: 18

Konferenzbeiträge

135	Konferenzbeiträge insgesamt, davon	(59 als Erstautor)
26	Erweiterte Konferenzbeiträge	(8 als Erstautor)
109	Kurze Konferenzbeiträge	(51 als Erstautor)
68	Vorträge	(35 als Erstautor)
67	Posterpräsentationen	(24 als Erstautor)

WISSENSCHAFTLICHE MONOGRAPHIEN

- 2022: Masterarbeit an der Abteilung Sekundarstufe I, Pädagogische Hochschule Zürich
Frehner: **Selbst-Lern-Atelier: Ein Balanceakt? – Steuerung durch die Lehrperson oder Wahlfreiheit der Schüler:innen – oder beides?**
- 2016 Habilitationsschrift am Departement Erdwissenschaften, ETH Zürich
Frehner M.: **Computational structural geology and rock physics**
- 2009 Doktorarbeit am Geologisches Institut, ETH Zürich
Frehner M.: **Numerical modeling of multiscale wave propagation phenomena in fluid-rock systems**
- 2005 Diplomarbeit am Departement Erdwissenschaften, ETH Zürich
Frehner M.: **Strain distribution of buckled multilayer systems and its influence on the development of asymmetric parasitic folds**

REFERIERTE WISSENSCHAFTLICHE PUBLIKATIONEN

- 2021 Amschwand D., Ivy-Ochs S., Frehner M., Steinemann O., Christl M. & Vockenhuber C., 2021: **Deciphering the evolution of the Bleis Marscha rock glacier (Val d'Err, eastern Switzerland) with cosmogenic nuclide exposure dating, aerial image correlation, and finite-element modelling**, *The Cryosphere* 15, 2057–2081
- 2020 Adam L., Frehner M., Sauer K., Toy V. & Guerin-Marthe S., 2020: **Seismic anisotropy and its impact on imaging the shallow Alpine Fault: an experimental and modeling perspective**, *Journal of Geophysical Research* 125, e2019JB019029
- Nabavi S.T., Alavi S.A., Díaz-Azpiroz M., Mohammadi S., Ghassemi M.R., Fernández C., Barcos L. & Frehner M., 2020: **Deformation mechanics in inclined, brittle-ductile transpression zones: Insights from 3D finite element modelling**, *Journal of Structural Geology* 137, 104082
- 2019 Frehner M., 2019: **Self- and peer-evaluation of individual project work: An innovative course assessment method to increase student motivation**, Kapitel 2 in *Teaching Methodologies in Structural Geology and Tectonics* (Ed: Mukherjee S.), Springer Geology Serie, Springer Verlag, ISBN 978-981-13-2780-3, 5–41
- 2018 Barnhoorn A., Verheij J., Frehner M., Zhubayev A. & Houben M., 2018: **Experimental identification of the transition from elasticity to inelasticity from ultrasonic attenuation analyses**, *Geophysics* 83, MR221–MR229
- Zhong X. & Frehner M., 2018: **E-Wave software: EBSD-based dynamic wave propagation model for studying seismic anisotropy**, *Computers and Geosciences* 118, 100–108
- 2017 Lupi M., Frehner M., Weis P., Skelton A., Saenger E.H., Tisato N., Geiger S., Chiodini G. & Driesner T., 2017: **Regional earthquakes followed by delayed ground uplifts at Campi Flegrei Caldera, Italy: Arguments for a causal link**, *Earth and Planetary Science Letters* 474, 436–446
- Nabavi S.T., Alavi S.A., Mohammadi S., Ghassemi M.R. & Frehner M., 2017: **Analysis of transpression within contractional fault steps using finite-element method**, *Journal of Structural Geology* 96, 1–20
- von Däniken P.A. & Frehner M., 2017: **3D structural model and kinematic interpretation of the Panixer Pass Transverse Zone (Infrahelvetic Complex, eastern Switzerland)**, *Swiss Journal of Geosciences* 110, 653–675
- 2016 Bakker R.R., Frehner M. & Lupi M., 2016: **How temperature-dependent elasticity alters host rock/magmatic reservoir models: A case study on the effects of ice-cap unloading on shallow volcanic systems**, *Earth and Planetary Science Letters* 456, 16–25
- Frehner M., 2016: **3D fold growth in transpression**, *Tectonophysics* 693, 183–196
- Frehner M., 2016: **Paul Niggli Medal 2015 awarded to Marcel Frehner**, *Swiss Journal of Geosciences* 109, 117–119
- Frehner M. & Schmid T., 2016: **Parasitic folds with wrong vergence: How pre-existing geometrical asymmetries can be inherited during multilayer buckle folding**, *Journal of Structural Geology* 87, 19–29
- Shih P.-J.R. & Frehner M., 2016: **Laboratory evidence for Krauklis wave resonance in fractures and implications for seismic coda wave analysis**, *Geophysics* 81, T285–T293
- 2015 Frehner M., Ling A.H.M. & Gärtner-Roer I., 2015: **Furrow-and-ridge morphology on rockglaciers explained by gravity-driven buckle folding: A case study from the Murtèl rockglacier (Switzerland)**, *Permafrost and Periglacial Processes* 26, 57–66

- Zhong X., Frehner M., Kunze K. & Zappone A.S., 2015: **A numerical and experimental investigation on seismic anisotropy of Finero Peridotite, Ivrea-Verbano Zone, northern Italy**, in Materials Science and Engineering (Ed: Skrotzki W. & Oertel C.-G.), Volumen 82 von IOP Conference Series, IOP Science and Publishing, 012072
- 2014 Frehner M., 2014: **3D fold growth rates**, Terra Nova 26, 417–424
- Frehner M., 2014: **Krauklis wave initiation in fluid-filled fractures by seismic body waves**, Geophysics 79, T27–T35
- Frehner M. & Exner U., 2014: **Strain and foliation refraction patterns around buckle folds**, in Deformation Structures and Processes within the Continental Crust (Ed: Llana-Fúnez S., Marcos A. & Bastida F.), Volumen 394 von Geological Society, London, Special Publications, The Geological Society of London, ISBN 978-1-86239-627-2, 21–37
- Saenger E.H., Madonna C., Frehner M. & Almqvist B.S.G., 2014: **Numerical support of laboratory experiments: Attenuation and velocity estimations**, Acta Geophysica 62, 1–11
- Sala P., Pfiffner O.A. & Frehner M., 2014: **The Alpstein in three dimensions: Fold-and-thrust belt visualization in the Helvetic zone, Switzerland**, Swiss Journal of Geosciences 107, 177–195
- Tisato N., Quintal B., Chapman S., Madonna C., Subramaniyan S., Frehner M., Saenger E.H. & Grasselli G., 2014: **Seismic attenuation in partially saturated rocks: recent advances and future directions**, The Leading Edge 33, 640–646
- Zhong X., Frehner M., Kunze K. & Zappone A., 2014: **A novel EBSD-based finite-element wave propagation model for investigating seismic anisotropy: Application to Finero Peridotite, Ivrea-Verbano Zone, Northern Italy**, Geophysical Research Letters 41, 7105–7114
- 2013 Frehner M., 2013: **Krauklis wave initiation in fluid-filled fractures by a passing body wave**, in Poromechanics V: Proceedings of the fifth Biot Conference on Poromechanics (Ed: Hellmich C., Pichler B. & Adam D.), American Society of Civil Engineers, ISBN 978-0-7844-1299-2, 92–100
- Frehner M., 2013: **Photograph of the month**, Journal of Structural Geology 55, 196
- Madonna C., Quintal B., Frehner M., Almqvist B.S.G., Tisato N., Pistone M., Marone F. & Saenger E.H., 2013: **Synchrotron-based X-ray tomographic microscopy for rock microstructure investigations**, Geophysics 78, D53–D64
- Quintal B., Frehner M., Madonna C., Tisato N., Kuteynikova M. & Saenger E.H., 2011: **Integrated numerical and laboratory rock physics applied to seismic characterization of reservoir rocks**, The Leading Edge 30, 1360–1367
- Sala P., Frehner M., Tisato N. & Pfiffner O.A., 2013: **Building a three-dimensional near-surface geologic and petrophysical model based on borehole data: A case-study from Chémery, Paris Basin, France**, AAPG Bulletin 97, 1303–1324
- 2012 Burtscher A., Frehner M. & Grasemann B., 2012: **Tectonic geomorphological investigations of antiforms using differential geometry: Permian anticline, northern Iraq**, AAPG Bulletin 96, 301–314
- Frehner M., Reif D. & Grasemann B., 2012: **Mechanical versus kinematical shortening reconstructions of the Zagros High Folded Zone (Kurdistan Region of Iraq)**, Tectonics 31, TC3002
- Quintal B., Steeb H., Frehner M., Schmalholz S.M. & Saenger E.H., 2012: **Pore fluid effects on S-wave attenuation caused by wave-induced fluid flow**, Geophysics 77, L13–L23

- Steeb H., Kurzeja P., Frehner M. & Schmalholz S.M., 2012: **Phase velocity dispersion and attenuation of seismic waves due to trapped fluids in residual-saturated porous media**, Vadose Zone Journal 11, vzj2011.0121
- Tuitz C., Exner U., Frehner M. & Grasemann B., 2012: **The impact of ellipsoidal particle shape on pebble breakage in gravel**, International Journal of Rock Mechanics and Mining Sciences 54, 70–79
- 2011 Frehner M., 2011: **The neutral lines in buckle folds**, Journal of Structural Geology 33, 1501–1508
- Frehner M., Exner U., Mancktelow N.S. & Grujic D., 2011: **The not-so-simple effects of boundary conditions on models of simple shear**, Geology 39, 719–722
- Quintal B., Steeb H., Frehner M. & Schmalholz S.M., 2011: **Quasi-static finite element modeling of seismic attenuation and dispersion due to wave-induced fluid flow in poroelastic media**, Journal of Geophysical Research 116, B01201
- 2010 Frehner M. & Schmalholz S.M., 2010: **Finite-element simulations of Stoneley guided-wave reflection and scattering at the tips of fluid-filled fractures**, Geophysics 75, T23–T36
- Frehner M., Steeb H. & Schmalholz S.M., 2010: **Wave velocity dispersion and attenuation in media exhibiting internal oscillations**, Kapitel 24 in Wave Propagation in Materials for Modern Applications (Ed: Petrin A.), In-Tech Education and Publishing, ISBN 978-953-7619-65-7, 455–476
- Steeb H., Frehner M. & Schmalholz S.M., 2010: **Waves in residual-saturated porous media**, Kapitel 19 in Mechanics of Generalized Continua: One Hundred Years after the Cosserats (Ed: Maugin G.A. & Metrikine A.V.), Volumen 21 von Advances in Mechanics and Mathematics, Springer Verlag, ISBN 978-1-4419-5694-1, 179–190
- 2009 Frehner M., Schmalholz S.M. & Podladchikov Y., 2009: **Spectral modification of seismic waves propagating through solids exhibiting a resonance frequency: a 1-D coupled wave propagation-oscillation model**, Geophysical Journal International 176, 589–600
- Holzner R., Eschle P., Dangel S., Frehner M., Narayanan C. & Lakehal D., 2009: **Hydrocarbon microtremors interpreted as nonlinear oscillations driven by oceanic background waves**, Communications in Nonlinear Science and Numerical Simulation 14, 160–173
- 2008 Frehner M., Schmalholz S.M., Saenger E.H. & Steeb H., 2008: **Comparison of finite difference and finite element methods for simulating two-dimensional scattering of elastic waves**, Physics of the Earth and Planetary Interiors 171, 112–121
- 2006 Frehner M. & Schmalholz S.M., 2006: **Numerical simulations of parasitic folding in multilayers**, Journal of Structural Geology 28, 1647–1657

VORTRÄGE ZU PREISEN, EHRUNGEN & VERTEIDIGUNGEN

- 2016 Einführungsvorlesung zur Erteilung der **Venia Legendi (Habilitation)**, Departement Erdwissenschaften, ETH Zürich, 04. November 2016
- Frehner M.: **Computational Structural Geology – A modern support for field geologists**
- 2015 Vortrag zur Übergabe der **Paul Niggli Medaille** der Schweizerischen Geologischen Gesellschaft, Swiss Geoscience Meeting, Basel, 21. November 2015
- Frehner M.: **3D fold growth in transpression**
- 2012 Vortrag zur Übergabe des **Otto Ampferer Preises** der Österreichischen Geologischen Gesellschaft, Pangeo, Salzburg, Österreich, 17. September 2012

- Frehner M.: **Computational Structural Geology – Examples from combined fold observations and modeling**
- 2009 Verteidigung der **Doktorarbeit**, Geologisches Institut, ETH Zürich, 13. März 2009
- Frehner M.: **Numerical modeling of multiscale wave propagation phenomena in fluid-rock systems**
- 2005 Verteidigung der **Diplomarbeit**, Geologisches Institut, ETH Zürich, 27. Oktober 2005
- Frehner M.: **Strain distribution of buckled multilayer systems and its influence on the development of asymmetric parasitic folds**

EINGELADENE DIDAKTIK-VORTRÄGE UND KURSE

- 2020 Refresh Teaching Special: Teaching in the times of Corona: Low-threshold examples of online teaching, ETH-weiter Didaktikkurs, ETH Zürich, 25. März 2020
- Frehner M.: **Low-tech online instructional videos: A first simpler-than-you-think step towards a pure online course**
- 2018 Fachstelle für Weiterbildung, Universität Zürich, 18. April 2018
- Frehner M.: **How to make students prepare? – Solving the main Flipped Classroom challenge**
- Tag der Lehre, Universitäts-weiter Didaktiktag, Universität Bern, 16. Februar 2018
- Frehner M.: **Gruppenarbeiten und online Selbststudium im “Flipped Classroom” Konstruktionspraktikum**
- 2017 Refresh Teaching, ETH-weiter Didaktikkurs, ETH Zürich, 28. Juni 2017
- Frehner M.: **Student group work in Flipped Classroom environments**
- 2016 Dozenten Lunch, Departments-weiter Didaktikkurs, Departement Erdwissenschaften, ETH Zürich, 28. November 2016
- Frehner M.: **Innovative student examination methods using peer- and self-evaluation of semester-end project work**

EINGELADENE FACHVORTRÄGE

- 2018 WSL-Institut für Schnee- und Lawinenforschung SLF, Davos, 05. April 2018
- Frehner M.: **Quantitative and computational fluid dynamics – A novel approach to understand rockglacier geomorphology**
- 2017 Departement Erdwissenschaften, ETH Zürich, 18. Mai 2017
- Frehner M.: **This is RockETH Science: Computational Structural Geology, Digital Rock Physics, and beyond...**
- 2016 Technisches Meeting des Mont Terri Projekts, Porrentruy, 11. Februar 2016
- Lupi M., Violay M., Frehner M. & Saenger E.H.: **FReD: Fault reactivation frequency-dependent**
- 2015 Department of Earth Sciences, VU Universität Amsterdam, Niederlande, 27. Mai 2015
- Frehner M.: **Computational Structural Geology & Digital Rock Physics – Modern tools integrated into field and lab investigations**
- Section for Earth and Environmental Sciences, Universität Genf, 24. April 2015
- Frehner M.: **Insights into the dynamics of folds by Computational Structural Geology**
- Centre for Hydrogeology and Geothermics, Universität Neuchâtel, 23. April 2015

- Frehner M.: **Insights into the dynamics of folds by Computational Structural Geology**
- 2013 Institut für Geologie, Universität Bern, 04. März 2013
 - Frehner M.: **Insights into the dynamics of folds by Computational Structural Geology**
- 2012 Geophysical Fluid Dynamics Group, ETH Zürich, 23. Mai 2012
 - Frehner M.: **Fold analysis and dynamical unfolding in the Zagros High Folded Zone, Kurdistan Region of Iraq**
- Department of Earth Science and Engineering, Imperial College London, UK, 20. März 2012
 - Frehner M.: **Integrating Numerics into Geoscience – Examples from Computational Structural Geology and Digital Rock Physics**
- 2011 Institute of Geology and Paleontology, Universität Lausanne, 08. November 2011
 - Frehner M.: **Folds in nature and in the computer**
- Physics of Geological Processes (PGP), Oslo, Norwegen, 20. Oktober 2011
 - Frehner M.: **Folds in nature and in the computer**
- Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 18. Oktober 2011
 - Frehner M.: **Folds in nature and in the computer**
- 2010 Structural Geology and Tectonics Group, ETH Zürich, 30. Juli 2010
 - Frehner M.: **Numerics in Geosciences – A useful tool across disciplines**
- 2009 Erdwissenschaftliches Kolloquium, Fakultät für Geowissenschaften, Geographie und Astronomie, Universität Wien und Österreichische Geologische Gesellschaft (ÖGG), Wien, Österreich, 12. November 2009
 - Frehner M.: **Numerical modeling of multiscale wave propagation phenomena in fluid-rock systems**
- Lehrstuhl für Kontinuumsmechanik, Ruhr-Universität Bochum, Deutschland, 09. September 2009
 - Frehner M.: **Stoneley guided wave reflection and scattering at the tips of fluid-filled finite fractures**
- 2006 Diplomandenkongress, Departement Erdwissenschaften, ETH Zürich, 10. Februar 2006
 - Frehner M.: **Numerische Simulation von Parasitärfalten in Mehrschicht-Systemen**

FACHVORTRÄGE FÜR FIRMEN

- 2014 Besuch einer Delegation von ExxonMobil Research, ETH Zürich, 08. Januar 2014
 - Frehner M.: **Krauklis waves in fractured rocks and oscillations in residual saturated rocks**
- 2011 Besuch einer Delegation vom Petrobras Management, ETH Zürich, 31. Oktober 2011
 - Frehner M., Saenger E.H. & Madonna C.: **Integrated laboratory and numerical rock physics applied to seismic characterization of reservoir rocks**
- Workshop bei der OMV E&P: Kurdish Region of Iraq, Wien, Österreich, 19. Oktober 2011
 - Frehner M., Burtscher A., Grasemann B. & Reif D.: **Tectonic geomorphological investigations and mechanical versus kinematical shortening estimates of folded multilayers: Application to the Permian and adjacent anticlines, Zagros Simply Folded Belt, Kurdistan Region of Iraq**

Geophysics Network meeting, Petrobras Research Center (CENPES), Rio de Janeiro, Brasilien, 19. August 2011

- Quintal B., Frehner M., Saenger E.H. & The Rock Physics Network at ETH Zurich: **Integrated laboratory and numerical rock physics applied to seismic characterization of reservoirs**

2010 Workshop bei der OMV E&P: Zagros fold and thrust belt (Kurdistan, NE Iraq), Wien, Österreich, 15. Dezember 2010

- Frehner M.: **Kinematical versus mechanical balancing techniques and curvature analysis of digital elevation models in the Zagros fold and thrust belt (Kurdistan, NE Iraq)**

E&P Technology Platform, OMV E&P, Wien, Österreich, 25. Februar 2010

- Exner U., Rath A. & Frehner M.: **Deformation bands in reservoir analogues at the margin of the Vienna Basin: Microstructural and mineralogical characterization of petrophysical properties**

2009 E&P Technology Platform, OMV E&P, Wien, Österreich, 05. Juni 2009

- Grasemann B., Reif D., Bartl N., Bretis B., Frehner M. & Faber R.: **Quantitative tectonics and geomorphology in the Zagros fold and thrust belt (N-Iraq)**

2008 Workshop bei der Spectraseis-KTI Gruppe, Spectraseis AG, Zürich, 07. November 2008

- Frehner M.: **Scattering and internal oscillations in heterogeneous rocks – Numerical and analytical studies**

Schlumberger Cambridge Research (SCR), Cambridge, UK, 04. Juli 2008

- Frehner M.: **Potential mechanisms for low-frequency spectral anomalies**

Workshop bei der Chevron Corporation: Spectraseis' Passive Technology & Chevron West Texas Field Test, San Ramon CA, USA, 29. April 2008

- Frehner M.: **Potential mechanisms for low-frequency spectral anomalies**

Workshop bei der Abu Dhabi Company for Onshore Oil Operations (ADCO): Hydrocarbon Microtremors, Abu Dhabi, Vereinigte Arabische Emirate, 22. Januar 2008

- Saenger E.H. & Frehner M.: **Hydrocarbon microtremor research**

ERWEITERTE KONFERENZBEITRÄGE

2015 SEG Annual Meeting, New Orleans LA, USA, 18.–23. Oktober 2015

- Shih P.-J.R. & Frehner M.: **Laboratory evidence for Krauklis wave resonance in a fracture and implications for seismic coda wave analysis** (Vortrag)

International Workshop on Rock Physics, Perth, Australien, 13.–17. April 2015

- Shih P.-J.R. & Frehner M.: **Laboratory evidence for Krauklis wave resonance in fractures** (Vortrag)

2014 SEG Annual Meeting, Denver CO, USA, 26.–31. Oktober 2014

- Frehner M., Shih P.-J.R. & Lupi M.: **Initiation of Krauklis waves by incident seismic body waves: Numerical modeling, laboratory perspectives, and application for fracture-size estimation** (Vortrag)

GeoMod, Potsdam, Deutschland, 31. August – 05. September 2014

- Frehner M.: **Fold growth rates in 3D buckle folds** (Poster)
- Frehner M., Gärtner-Roer I., & Ling A.H.M.: **Furrow-and-ridge morphology on rockglaciers explained by gravity-driven buckle folding: A case study from the Murtèl rockglacier (Switzerland)** (Poster)

2013 SEG Annual Meeting, Houston TX, USA, 22.–27. September 2013

- Madonna C., Frehner M., Tisato N., Saenger E.H., Sell K., Kersten M. & Quintal B.: **Synchrotron-based X-ray tomographic images: Raw data, segmentation techniques, and their influence on estimated rock properties** (Vortrag)

SBGf International Congress, Rio de Janeiro, Brasilien, 26.–29. August 2013

- Sell K., Madonna C., Quintal B., Frehner M., Tisato N. & Saenger E.H.: **Synchrotron-based X-ray tomographic images and segmentation techniques to account for effects of grain contacts and micro-cracks on rock properties** (Vortrag)

EAGE Conference, London, UK, 10.–13. Juni 2013

- Madonna C., Quintal B., Frehner M., Almqvist B.S.G., Tisato N., Pistone M., Marone F. & Saenger E.H.: **Synchrotron-based X-ray tomographic microscopy for rock physics investigations** (Vortrag)

2012 SEG Annual Meeting, Las Vegas NV, USA, 04.–09. November 2012

- Saenger E.H., Madonna C., Frehner M. & Almqvist B.S.G.: **Numerical support of laboratory experiments: Attenuation and velocity estimations** (E-Poster)

EAGE Conference, Kopenhagen, Dänemark, 04.–07. Juni 2012

- Frehner M., Quintal B., Tisato N., Riahi N., Madonna C., Sala P., Kuteynikova M. & Saenger E.H.: **Integrated numerical and laboratory rock physics applied to seismic characterization of reservoir rocks** (Vortrag)
- Quintal B., Frehner M., Schmalholz S.M., Steeb H. & Saenger E.H.: **Effects of permeability barriers and pore fluids on S-wave attenuation** (Vortrag)

EAGE Saint Petersburg, Sankt Petersburg, Russland, 02.–05. April 2012

- Korneev V., Goloshubin G., Kashtan B., Bakulin A., Troyan V., Maximov G., Molotkov L., Frehner M., Shapiro S. & Shigapov R.: **Krauklis wave: Half a century after** (Vortrag)

EAGE Workshop: Applications & Challenges of Rock Physics for Quantitative Geophysical Interpretation, Dubai, Vereinigte Arabische Emirate, 15.–18. Januar 2012

- Saenger E.H., Frehner M., Madonna C., Tisato N., Kuteynikova M., Riahi N., Sala P. & Quintal B.: **Integrated numerical and laboratory rock physics applied to seismic characterization of reservoir rocks** (Vortrag)

2011 SEG Annual Meeting, San Antonio TX, USA, 18.–23. September 2011

- Quintal B., Steeb H., Frehner M. & Schmalholz S.M.: **S-wave attenuation caused by wave-induced fluid flow** (Vortrag)

SBGf International Congress, Rio de Janeiro, Brasilien, 15.–18. August 2011

- Quintal B., Steeb H., Frehner M. & Schmalholz S.M.: **S-wave attenuation caused by wave-induced fluid flow** (Vortrag)

EAGE Conference, Wien, Österreich, 23.–26. Mai 2011

- Quintal B., Steeb H., Frehner M. & Schmalholz S.M.: **Pore fluid effects on seismic P- and S-wave attenuation in rocks with double porosity and patchy saturation** (Vortrag)

2010 SEG Annual Meeting, Denver CO, USA, 17.–22. Oktober 2010

- Quintal B., Steeb H., Frehner M. & Schmalholz S.M.: **Finite element modeling of seismic attenuation due to fluid flow in partially saturated rocks** (Vortrag)

2007 SBGf International Congress, Rio de Janeiro, Brasilien, 19.–22. November 2007

- Frehner M., Schmalholz S.M. & Podladchikov Y.: **Low frequency spectral modifications of seismic background noise due to interaction with oscillating fluids entrapped in porous rocks** (Vortrag)

- Saenger E.H., Steiner B., Schmalholz S.M., Lambert M., Podladchikov Y.Y., Quintal B. & Frehner M.: **Considerations of observed spectral anomalies over hydrocarbon reservoirs generated by microtremors** (Vortrag)

SEG Annual Meeting, San Antonio TX, USA, 23.–28. September 2007

- Frehner M., Schmalholz S.M. & Podladchikov Y.: **Interaction of seismic background noise with oscillating pore fluids causes spectral modifications of passive seismic measurements at low frequencies** (Vortrag)

EAGE Conference, London, UK, 11.–14. Juni 2007

- Saenger E.H., Schmalholz S.M., Podladchikov Y., Holzner R., Lambert M., Steiner B., Quintal B. & Frehner M.: **Scientific strategy to explain observed spectral anomalies over hydrocarbon reservoirs generated by microtremors** (Vortrag)
- Frehner M., Schmalholz S.M., Podladchikov Y. & Holzner R.: **Low frequency modifications of seismic background noise due to interaction with oscillating fluids in porous rocks** (Poster)

2006 EAGE Workshop: Passive Seismic: Exploration and Monitoring Applications, Dubai, Vereinigte Arabische Emirate, 10.–13. Dezember 2006

- Frehner M., Schmalholz S.M., Holzner R. & Podladchikov Y.: **Interpretation of hydrocarbon microtremors as pore fluid oscillations driven by ambient seismic noise** (Vortrag)

SEG Annual Meeting, New Orleans LA, USA, 01.–06. Oktober 2006

- Holzner R., Eschle P., Frehner M., Schmalholz S.M. & Podladchikov Y.: **Interpretation of hydrocarbon microtremors as nonlinear oscillations driven by oceanic background waves** (Poster)

Italian Society for Chaos and Complexity (SICC) Workshop: Nonlinear dynamical methods and time series analysis, Udine, Italien, 30. August –01. September 2006

- Holzner R., Eschle P., Dewarrat R., Lambert M., Meftahi R., Graf R., Schmalholz S.M., Steiner B., Frehner M., Podladchikov Y. & Narayanan C.: **Interpretation of hydrocarbon microtremors as nonlinear oscillations driven by oceanic background waves** (Vortrag)

EAGE Conference, Wien, Österreich, 12.–15. Juni 2006

- Holzner R., Eschle P., Frehner M., Schmalholz S.M. & Podladchikov Y.: **Hydrocarbon microtremors interpreted as oscillations driven by oceanic background waves** (Vortrag)

KURZE KONFERENZBEITRÄGE

2022 International Mountain Conference, Innsbruck, Österreich, 11.–15. September 2022

- Amschwand D., Arenson L., Bast A., Beutel J., Bolch T., Cicoira A., Farinotti D., Fiddes J., Frauenfelder R., Frehner M., Gärtner-Roer I., Gruber S., Gubler H., Haeberli W., Hauck C., Hilbich C., Hoelzle M., Jenk T., Käab A., Leisinger Vieli G., Mollaret C., Junghardt J., Noetzli J., Pellet C., Salzmann N., Scherler M., Springman S., Vieli A., Vonder Mühll D. & Wicky J.: **Research history of the Murtèl-Corvatsch Rock Glacier: 50 years of scientific advances and long-standing observations in mountain permafrost** (Vortrag)

2018 Swiss Geoscience Meeting, Bern, 30. November – 01. Dezember 2018

- Amschwand D., Ivy-Ochs S., Frehner M., Kronig O. & Christl M.: **Combining exposure dating, finite-element modelling, and feature tracking to decipher rockglacier evolution: A case study from the Bleis Marscha rockglacier (Val d'Err, Grisons)** (Poster)

GSNZ (Geoscience Society of New Zealand) annual conference, Napier, Neuseeland, 27.–30. November 2018

- Adam L., Frehner M., Sauer K., Toy V. & Guerin-Marthe S.: **Seismic anisotropy and its impact on imaging the Alpine Fault: An experimental and modeling perspective** (Vortrag)

European Conference on Permafrost (EUCOP), Chamonix, Frankreich, 23. Juni – 01. Juli 2018

- Amschwand D., Ivy-Ochs S., Frehner M., Kronig O. & Christl M.: **Active, inactive, relict: Tracking the evolution of the Bleis Marscha rockglacier (Val d'Err, Grisons) with cosmogenic nuclide dating and finite-element modelling** (Poster)

2017 AGU Fall Meeting, New Orleans LA, USA, 11.–15. Dezember 2017

- Adam L., Frehner M., Sauer K.M., Toy V., Guerin-Marthe S. & Boulton C.J.: **Reconciling experimental and static-dynamic numerical estimations of seismic anisotropy in Alpine Fault mylonites** (Vortrag)
- Lupi M., Frehner M., Weis P., Skelton A., Saenger E., Tisato N., Geiger S., Chiodini G. & Driesner T.: **Delayed inflation triggered by regional earthquakes at Campi Flegrei Caldera, Italy** (Poster)

Swiss Geoscience Meeting, Davos, 17.–18. November 2017

- Morgenthaler J. & Frehner M.: **Bulldozer-like soil erosion at the front of a rockglacier indicates change in advance dynamics: Case study from the Furggentälti, Vallais, Switzerland** (Vortrag)
- Nabavi S.T., Alavi S.A. & Frehner M.: **3D FE-modelling of inclined, brittle-ductile transpression** (Poster)
- Nabavi S.T., Alavi S.A., Frehner M., Mohammadi S. & Ghassemi M.R.: **Mechanical evolution of transpression zones affected by fault interactions: insights from 3D elasto-plastic finite element models** (Poster)

AK Permafrost, Einsiedeln, 09.–11. Februar 2017

- Frehner M., Amschwand D. & Gärtner-Roer I.: **Bestimmung des Blockgletscher-Fließverhaltens aufgrund von Deformationsdaten und geomorphologischen Indikatoren: Beispiel des Murtèl Blockgletschers (Engadin, Schweiz)** (Vortrag)

2016 Swiss Geoscience Meeting, Genf, 18.–19. November 2016

- Barnhoorn A., Verheij J. & Frehner M.: **Transition from elastic to inelastic deformation identified by seismic attenuation, not seismic velocity** (Vortrag)
- Frehner M.: **Fold axis rotation during transpressional folding: Insights from numerical modeling and application to the Zagros Simply Folded Belt** (Vortrag)
- Frehner M., Amschwand D. & Gärtner-Roer I.: **Rockglacier flow law determined from deformation data and geomorphological indicators: An example from the Murtèl rockglacier (Engadin, SE Switzerland)** (Vortrag)

GeoMod, Montpellier, Frankreich, 17.–20. Oktober 2016

- Frehner M.: **Fold axis rotation during transpressional folding: Insights from numerical modeling and application to the Zagros Simply Folded Belt** (Poster)
- Frehner M. & Schmid T.: **Structural inheritance during multilayer buckle folding: How pre-existing asymmetries result in parasitic folds with wrong vergence** (Poster)

International Conference on Permafrost (ICOP), Potsdam, Deutschland, 20.–24. Juni 2016

- Frehner M., Amschwand D. & Gärtner-Roer I.: **Non-linearity of rockglacier flow law determined from geomorphological observations: A case study from the Murtèl rockglacier (Engadin, SE Switzerland)** (Poster)

EGU General Assembly, Wien, Österreich, 17.–22. April 2016

- Barnhoorn A., Verheij J., Frehner M., Zhubayev A. & Houben M.: **Transition from elastic to inelastic deformation identified by a change in trend of seismic attenuation, not seismic velocity – A laboratory study** (Poster)
- Frehner M., Amschwand D. & Gärtner-Roer I.: **Non-linear flow law of rockglacier creep determined from geomorphological observations: A case study from the Murtèl rockglacier (Engadin, SE Switzerland)** (Poster)
- Frehner M. & Schmid T.: **Structural inheritance during multilayer buckle folding: How pre-existing asymmetries result in parasitic folds with wrong vergence** (PICO)
- Frehner M. & Schreurs G.: **Fold axis rotation during transpressional folding: Insights from analog and numerical models** (PICO)
- Frehner M. & von Däniken P.: **3D structural model and kinematic interpretation of the Panixer Pass Transverse Fold (Infrahelvetic Complex, eastern Switzerland)** (Poster)

2015 Swiss Geoscience Meeting, Basel, 20.–21. November 2015

- Schmid T. & Frehner M.: **Parasitic folds with wrong vergence: How asymmetries can be inherited** (Poster)
- Shih P.-J.R. & Frehner M.: **Laboratory evidence for Krauklis wave resonance in fractures** (Poster)
- von Däniken P. & Frehner M.: **3D fold geometry at Panixer pass** (Poster)

EGU General Assembly, Wien, Österreich, 12.–17. April 2015

- Bakker R., Lupi M. & Frehner M.: **Effects of ice-cap unloading on shallow magmatic reservoirs** (Poster)
- Frehner M.: **3D fold growth rates in transpressional tectonic settings** (PICO)
- Lupi M., Frehner M., Saenger E.H., Tisato N., Weis P., Geiger S., Chiodini G. & Driesner T.: **Delayed earthquake-volcano interactions at Campi Flegrei Caledra, Italy** (Vortrag)
- Tisato N. Frehner M., Busellato L. & Grasselli G.: **Localized sub-glacial deep karst formation due to water infiltration into glacier crevasses: A case study from Asiago, North Italy** (Poster)

2014 Swiss Geoscience Meeting, Fribourg, 21.–22. November 2014

- Shih P.-J. R. & Frehner M.: **Laboratory evidence for Krauklis wave resonance in fractures** (Poster)
- Bakker R., Lupi M. & Frehner M.: **Effects of rapid icecap melting on a shallow magma chamber: A multi-disciplinary case study of Snæfellsjökull volcano, Western Iceland** (Poster)

Kongress der Società Geologica Italiana, Milano, Italien, 10.–12. September 2014

- Sala P., Pfiffner A. & Frehner M.: **Visualization and modeling techniques in complex tectonic settings for petroleum potential assessment, a geometrical example from a collisional mountain belt** (Vortrag)

International Conference on Textures of Materials, Dresden, Deutschland, 24.–29. August 2014

- Zhong X., Zappone A.S., Frehner M. & Kunze K.: **Numerical and Experimental Investigation on Seismic Anisotropy of Finero Peridotite, Ivrea-Verbano Zone, Northern Italy** (Poster)

European Conference on Permafrost (EUCOP), Évora, Portugal, 18.–21. Juni 2014

- Frehner M., Gärtner-Roer I. & Ling A.H.M.: **Furrow-and-ridge morphology on rockglaciers explained by gravity-driven buckle folding: A case study from the Murtèl rockglacier (Switzerland)** (Vortrag)

Euroconference on Rock Physics and Rock Mechanics, Aussois, Frankreich, 12.–15. Mai 2014

- Frehner M. & Lupi M.: **Krauklis wave initiation in fluid-filled fractures by a passing body wave: Finite-element modeling and application to earthquake-induced mudvolcanic tremor** (Vortrag)
- Shih P.-J.R. & Frehner M.: **Numerical modeling and laboratory measurements of seismic properties in fractured fluid reservoirs** (Poster)

Tectonomechanics Colloquium, Zürich, 05.–06. Mai 2014

- Frehner M., Philippe T. & May D.A.: **3D folds: Growth rates and linkage using the vorticity dominant wave length** (Vortrag)

EGU General Assembly, Wien, Österreich, 27. April –02. Mai 2014

- Bakker R., Lupi M., Frehner M., Berger J. & Fuchs F.: **Volcanic unrest primed by ice cap melting: A case study of Snæfellsjökull volcano, Western Iceland** (PICO)
- Frehner M., Gärtner-Roer I. & Ling A.H.M.: **Rockglacier furrow-and-ridge morphology explained by gravity-driven buckle folding: A case study of the Murtèl rockglacier (Switzerland)** (Vortrag)
- Frehner M. & Lupi M.: **Earthquake-induced seismic tremor explained by Krauklis wave resonance in fractured reservoir rocks: A case study of Salse di Nirano mud volcanic field (Italy)** (Poster)
- Shih P.-J. R. & Frehner M.: **Fracture-related seismic propagation effects studied by combining numerical modeling and laboratory measurements** (Poster)
- Zhong X., Frehner M., Zappone A. & Kunze K.: **A numerical and experimental investigation on seismic anisotropy of Finero Peridotite, Ivrea-Verbano Zone, northern Italy** (Poster)

2013 AGU Fall Meeting, San Francisco CA, USA, 09.–13. Dezember 2013

- Zhong X., Zappone A.S., Kunze K. & Frehner M.: **A numerical and experimental investigation on seismic anisotropy of Finero Peridotite, Ivrea-Verbano Zone, northern Italy** (Poster)

Hubbert Quorum, Menlo Park CA, USA, 08. Dezember 2013

- Lupi M., Saenger E.H., Geiger S., Frehner M., Tisato N., Miller S.A., Fuchs F., Weis P. & Driesner T.: **From the mud volcano catastrophe in Indonesia to the highest risk volcano in Europe: secret affairs between fluids and earthquakes revealed** (Vortrag)

Swiss Geoscience Meeting, Lausanne, 15.–16. November 2013

- Frehner M.: **3D fold growth rates** (Poster)
- Frehner M., Gärtner-Roer I. & Ling A.H.M.: **Furrow-and-ridge structures on active rockglaciers explained by gravity-driven buckle folding: A finite-element study applied to the Murtèl rockglacier** (Vortrag)
- Philippe T.A., Frehner M. & May D.A.: **Single viscous layer fold interplay and linkage: A 3D-FEM modeling approach** (Poster)
- Shih P.-J.R. & Frehner M.: **Numerical modeling and laboratory measurements of seismic properties in fractured fluid reservoirs** (Poster)

Biot Conference on Poromechanics, Wien, Österreich, 10.–12. Juli 2013

- Frehner M.: **Krauklis wave initiation in fluid-filled fractures by a passing body wave** (Vortrag)

Jahrestagung der Schweizerischen Geomorphologischen Gesellschaft (SGmG), Basel, 26.–28. Juni 2013

- Ling A.H.M., Frehner M. & Gärtner-Roer I.: **Application of buckle folding theory to the development of transverse ridges on a rockglacier** (Poster)

Tectonomechanics Colloquium, Paris, Frankreich, 15.–16. April 2013

- Frehner M., Quintal B., Madonna C., Tisato N. & Saenger E.H.: **Multiscale laboratory and numerical rock physics – A snapshot of ongoing ROCKETH-science** (Vortrag)

EGU General Assembly, Wien, Österreich, 07.–12. April 2013

- Frehner M.: **Initiation of Krauklis waves in fluid-filled fractures by an incident seismic body wave** (Vortrag)
- Frehner M.: **3D fold growth rates** (Poster)
- Frehner M. & Tisato N.: **Hands-on guide for 3D image creation for geological purposes** (Poster)
- Ling A., Frehner M. & Gärtner-Roer I.: **Application of buckle folding theory to the development of transverse ridges on a rockglacier** (Poster)
- Sala P., Pfiffner A. & Frehner M.: **Alpine fold-and-thrust structures revealed: A 3D model from the Helvetic Zone (Säntis area, Switzerland)** (Vortrag)

2012 The Geological Society Conference: Industrial Structural Geology – Principles, Techniques and Integration, London, UK, 28.–30. November 2012

- Frehner M., Reif D. & Grasemann B.: **Dynamical unfolding for quality control of geological cross-sections** (Poster)
- Sala P., Frehner M., Tisato N. & Pfiffner A.: **Modeling near surface with shallow borehole information** (Poster)
- Sala P., Pfiffner A. & Frehner M.: **Alpine fold and thrust structures: a 3-D model of the Säntis area (Switzerland)** (Poster)
- Tisato N., Madonna C., Quintal B., Frehner M., Kuteynikova M. & Saenger E.H.: **Combining laboratory and computational experiments to increase rock physics knowledge** (Vortrag)

Swiss Geoscience Meeting, Bern, 16.–17. November 2012

- Collignon M., Kaus B., Frehner M., Fernandez N., Castellort S., Simpson G. & Burg J.-P.: **Modeling interactions between tectonic and surface processes in the Zagros Mountain, Iran** (Poster)
- Frehner M. & Exner U.: **Do foliation refraction patterns around buckle folds represent finite strain?** (Poster)
- Frehner M., Reif D. & Grasemann B.: **Mechanical versus kinematical shortening reconstructions of the Zagros High Folded Zone (Kurdistan Region of Iraq)** (Vortrag)
- Saenger E.H., Madonna C., Frehner M. & Almquist B.S.G.: **Numerical support of laboratory experiments: Attenuation and velocity estimations** (Poster)
- Sala P., Pfiffner O.A. & Frehner M.: **Alpine fold and thrust structures: a 3-D model of the Säntis area (Switzerland)** (Vortrag)
- Steeb H., Kurzeja P., Frehner M. & Schmalholz S.M.: **Phase velocity dispersion and attenuation of seismic waves due to trapped fluids in residual-saturated porous media** (Poster)

GeoMod, Lausanne, 16.–18. Juli 2012

- Collignon M., Kaus B., Fernandez N., Castellort S., Simpson G. & Frehner M.: **Modelling interaction between tectonics and surface processes in the Zagros mountain, Iran** (Poster)
- Frehner M., Reif D. & Grasemann B.: **Mechanical versus kinematical shortening reconstructions of the Zagros High Folded Zone (Kurdistan Region of Iraq)** (Poster)

EGU General Assembly, Wien, Österreich, 22.–27. April 2012

- Collignon M., Kaus B.J.P., Frehner M., Castellort S., Simpson G. & Burg J.-P.: **Modeling interactions between tectonics and surface processes in the Zagros Mountains, Iran** (Poster)

- Frehner M. & Exner U.: **Do foliation refraction patterns around buckle folds represent finite strain?** (Poster)
- Frehner M., Reif D. & Grasemann B.: **Mechanical versus kinematical shortening reconstructions of the Zagros High Folded Zone (Kurdistan Region of Iraq)** (Vortrag)
- Quintal B. & Frehner M.: **Effects of permeability barriers and pore fluids on S-wave attenuation** (Poster)
- Saenger E.H., Frehner M., Madonna C., Tisato N., Kuteynikova M., Riahi N., Sala P. & Quintal B.: **Combining laboratory and computational rock physics** (Poster)
- Sala P., Pfiffner O.A. & Frehner M.: **Alpine fold and thrust structures: insight from the Säntis area (Switzerland)** (Poster)
- Sala P., Tisato N., Pfiffner O.A. & Frehner M.: **Building a 3D geological near surface model from borehole and laboratory data** (Poster)
- Steeb H., Kurzeja P., Frehner M. & Schmalholz S.M.: **Phase velocity dispersion and attenuation of seismic waves due to trapped fluids in residual-saturated porous media** (Vortrag)

2011 Swiss Geoscience Meeting, Zürich, 11.–13. November 2011

- Frehner M.: **The neutral lines in buckle folds** (Vortrag)
- Frehner M. & Quintal B.: **Physical mechanisms for low-frequency seismic wave attenuation in fractured media** (Poster)
- Quintal B., Steeb H., Frehner M. & Schmalholz S.M.: **S-wave attenuation due to wave-induced fluid flow in heterogeneous, partially saturated porous media** (Vortrag)

Deformation Mechanisms, Rheology and Tectonics (DRT) Conference, Oviedo, Spanien, 31. August – 02. September 2011

- Frehner M.: **The neutral lines in buckle folds** (Vortrag)

EGU General Assembly, Wien, Österreich, 03.–08. April 2011

- Bartscher A., Frehner M. & Grasemann B.: **Tectonic geomorphological investigations of antiforms using differential geometry (Permian Anticline, Northern Iraq)** (Poster)
- Frehner M.: **The neutral lines in buckle folds** (Vortrag)

Tectonomechanics Colloquium, Salzburg, Österreich, 31. März – 01. April 2011

- Frehner M.: **The neutral lines in buckle folds** (Vortrag)
- Tuitz C., Exner U., Frehner M. & Grasemann B.: **Variability in breakage load of pebbles in gravels, or: Does shape really matter?** (Vortrag)

2010 Swiss Geoscience Meeting, Fribourg, 19.–20. November 2010

- Frehner M., Exner U., Mancktelow N. & Grujic D.: **The not-so-simple effects of boundary conditions on models of simple shear** (Vortrag)

GeoMod, Lissabon, Portugal, 27.–29. September 2010

- Frehner M. & Exner U.: **Boundary effects in physical models of simple shear** (Poster)

Pangeo, Leoben, Österreich, 15.–19. September 2010

- Frehner M., Exner U., Mancktelow N.S. & Grujic D.: **The not-so-simple effects of boundary conditions on models of simple shear** (Vortrag)

European Conference on Computational Mechanics, Paris, Frankreich, 16.–21. Mai 2010

- Steeb H., Frehner M. & Schmalholz S.M.: **Oscillatory waves in residual saturated porous media: Theoretical and numerical investigations** (Vortrag)

EGU General Assembly, Wien, Österreich, 02.–07. Mai 2010

- Exner U., Frehner M., Mancktelow N.S. & Grujic D.: **Why homogeneous boundary conditions lead to heterogeneous internal strain in analogue simple shear experiments – explained by numerical modeling** (Poster)

- Frehner M., Reif D. & Grasemann B.: **Mechanical restoration of large-scale folded multilayers using the finite element method: Application to the Zagros Simply Folded Belt, N-Iraq** (Poster)
- Frehner M., Steeb H. & Schmalholz S.M.: **Wave velocity dispersion and attenuation in media exhibiting internal oscillations** (Vortrag)
- Tschegg C., Grasemann B. & Frehner M.: **The transition of boudinage into brittle low-angle faults – chemical and mechanical feedback mechanisms** (Poster)

Tectonomechanics Colloquium, Salzburg, Österreich, 29.–30. April 2010

- Frehner M. & Exner U.: **How homogeneous boundary conditions lead to heterogeneous strain in analogue simple shear models** (Vortrag)

Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Bochum, Deutschland, 15.–18. März 2010

- Steeb H., Frehner M. & Schmalholz S.M.: **Wave propagation phenomena in residual-saturated rocks** (Poster)

2009 AGU Fall Meeting, San Francisco CA, USA, 14.–18. Dezember 2009

- Frehner M. & Schmalholz S.M.: **Reflection and scattering of Stoneley guided waves at the tips of fluid-filled fractures** (Poster)

Swiss Geoscience Meeting, Neuchâtel, 20.–21. November 2009

- Frehner M. & Schmalholz S.M.: **Reflection and scattering of Stoneley guided waves at the tips of fluid-filled fractures** (Poster)

Tectonomechanics Colloquium, Salzburg, Österreich, 15.–16. Mai 2009

- Frehner M. & Schmalholz S.M.: **Stoneley guided wave reflection and scattering at the tips of fluid-filled finite fractures** (Vortrag)

EGU General Assembly, Wien, Österreich, 19.–24. April 2009

- Frehner M. & Schmalholz S.M.: **Reflection, radiation and attenuation of Stoneley guided waves in fluid-filled finite cracks** (Poster)

Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Kiel, Deutschland, 23.–26. März 2009

- Frehner M. & Schmalholz S.M.: **Reflection, radiation and attenuation of Stoneley guided waves in fluid-filled fractures** (Vortrag)

Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik (GAMM), Gdansk, Polen, 09.–13. Februar 2009

- Steeb H., Frehner M. & Schmalholz S.M.: **Numerical modeling of scattered elastic waves: Finite element method versus finite difference method** (Vortrag)

2008 Swiss Geoscience Meeting, Lugano, 21.–23. November 2008

- Frehner M., Deubelbeiss Y., Schmalholz S.M., Kaus B., Saenger E.H. & Steeb H.: **Finite element method versus finite difference method: Numerical accuracy study for two different applications** (Vortrag)

SEG Summer Research Workshop: Emergent and Challenging Issues in Rock Physics: Rock This House!, Galway, Irland, 20.–24. Juli 2008

- Schmalholz S.M., Steeb H., Saenger E.H. & Frehner M.: **Theoretical and numerical modeling of waves in three-phase media** (Poster)

EGU General Assembly, Wien, Österreich, 13.–18. April 2008

- Frehner M., Steeb H., Saenger E.H. & Schmalholz S.M.: **Numerical modeling of wave propagation in heterogeneous and poroelastic rocks** (Vortrag)

2007 EGU General Assembly, Wien, Österreich, 15.–20. April 2007

- Frehner M. & Schmalholz S.M.: **Numerical simulations of parasitic folding and strain distribution in multilayer systems** (Vortrag)
 - Frehner M., Schmalholz S.M., Podladchikov Y. & Holzner R.: **Low frequency spectral modification of geoseismic background noise due to interaction with oscillating fluids entrapped in subsurface porous rocks** (Poster)
- 2006 Swiss Geoscience Meeting, Bern, 24.–25. November 2006
- Frehner M. & Schmalholz S.M.: **Numerical simulations of parasitic folding in multilayers** (Vortrag)
- EAGE Conference, Workshop 3: What can EP learn from seismology and vice versa, Wien, Österreich, 11. Juni 2006
- Holzner R., Eschle P., Dewarrat R., Lambert M., Meftahi R., Graf R., Schmalholz S.M., Steiner B., Frehner M. & Podladchikov Y.: **Identification of reservoirs by Hydrocarbon Microtremor Analysis (HyMAS)** (Poster)
- EGU General Assembly, Wien, Österreich, 02.–07. April 2006
- Frehner M. & Schmalholz S.M.: **Numerical simulations of parasitic folding in multilayers** (Poster)
- GEO Middle East Geoscience Conference, Manama, Bahrain, 27.–29. März 2006
- Holzner R., Eschle P., Lambert M., Dewarrat R., Meier P.F., Dangel S., Graf R., Frehner M., Schmalholz S.M. & Podladchikov Y.: **Linear model for low frequency pore liquid oscillations observed in Hydrocarbon Microtremor Analysis (HyMAS)** (Poster)
- 2005 AAPG International Conference, Paris, Frankreich, 11.–14. September 2005
- Burg J.-P., Bahroudi A., Simpson G., Schmalholz S.M., Dolati A. & Frehner M.: **Preliminary structural results on the Makran accretionary wedge, Iran** (Vortrag)

WEITERE PRÄSENTATIONEN

- 2016 Poroelasticity Minisymposium, Hochschule Bochum, Deutschland, 23. Februar 2016
- Frehner M., Verheij J., Zhubayev A., Houben M & Barnhoorn A.: **How seismic attenuation marks the transition from elastic to inelastic deformation in laboratory rock fracturing experiments** (Vortrag)
- 2015 Poroelasticity Minisymposium, ETH Zürich, 24. Februar 2015
- Shih P.-J.R. & Frehner M.: **Laboratory evidence for Krauklis wave resonance in a fracture and implications for seismic coda wave analysis** (Vortrag)
- 2014 Poroelasticity Minisymposium, Universität Lausanne, 18. Februar 2014
- Shih P.-J.R. & Frehner M.: **Laboratory measurements and numerical modeling of Krauklis wave initiation in fractured media** (Poster)
 - Zhong X., Frehner M., Kunze K. & Zappone A.: **Integrated study of seismic anisotropy of Finero Peridotite (Ivrea-Verbano Zone, northern Italy) by combining laboratory measurements, EBSD-based estimations, and fully anisotropic numerical wave-propagation simulation** (Poster)
- 2013 Poroelasticity Minisymposium, ETH Zürich, 19. Februar 2013
- Frehner M.: **On Krauklis waves in fluid-saturated fractured rocks** (Vortrag)
- 2012 Poroelasticity Minisymposium, ETH Zürich, 26. Juni 2012
- Quintal B., Steeb H., Frehner M., Saenger E.H. & Schmalholz S.M.: **Effects of pore fluids and permeability barriers on S-wave attenuation** (Poster)

- Saenger E.H., Frehner M., Madonna C., Tisato N., Kuteynikova M., Riahi N., Sala P. & Quintal B.: **Combining laboratory and computational rock physics** (Poster)
 - Steeb H., Kurzeja P., Schmalholz S.M. & Frehner M.: **Multi-scale modeling of waves in partially saturated rocks** (Vortrag)
- 2011 Structural Geology and Tectonics Seminar, ETH Zürich, 26. Oktober 2011
- Frehner M.: **Folds in nature and in the computer** (Vortrag)
- 2010 Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 14. Dezember 2010
- Frehner M.: **Vienna in retrospective** (Vortrag)
- Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 23. November 2010
- Frehner M., Grasemann B., Rice H., Petrakakis K., Schober A., Bichler M., Kollmann C., Homolova D. & Blumel A.: **Excursion report from Greece** (Vortrag)
- Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 11. Mai 2010
- Exner U., Frehner M., Mancktelow N.S. & Grujic D.: **Why homogeneous boundary conditions lead to heterogeneous internal strain in analogue simple shear experiments – explained by numerical modeling** (Poster)
 - Frehner M., Reif D. & Grasemann B.: **Mechanical restoration of large-scale folded multilayers using the finite element method: Application to the Zagros Simply Folded Belt, N-Iraq** (Poster)
 - Tschegg C., Grasemann B. & Frehner M.: **The transition of boudinage into brittle low-angle faults – chemical and mechanical feedback mechanisms** (Poster)
- Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 27. April 2010
- Frehner M.: **Numerical models in Geosciences** (Vortrag)
- Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 23. März 2010
- Frehner M. & Exner U.: **Boundary effects in physical models of simple shear** (Vortrag)
- 2009 Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 09. Juni 2009
- Frehner M. & Grasemann B.: **Curvature analysis of digital elevation models and mechanical restoration of folds using the finite element method** (Vortrag)
- Informal Structural Seminar (ISS), Department für Geodynamik und Sedimentologie, Universität Wien, Österreich, 28. April 2009
- Frehner M. & Schmalholz S.M.: **Reflection, radiation and attenuation of Stoneley guided waves in fluid-filled finite cracks** (Poster)
- 2007 Structural Geology and Tectonics Seminar, ETH Zürich, 16. Mai 2007
- Frehner M., Schmalholz S.M., Podladchikov Y. & Holzner R.: **Low frequency spectral modification of geoseismic background noise due to interaction with oscillating fluids entrapped in subsurface porous rocks** (Poster)
- Structural Geology and Tectonics Seminar, ETH Zürich, 09. Mai 2007
- Frehner M. & Schmalholz S.M.: **Numerical simulations of parasitic folding and strain distribution in multilayer systems** (Vortrag)
- 2006 Structural Geology and Tectonics Seminar, ETH Zürich, 19. April 2006

- Frehner M. & Schmalholz S.M.: **Numerical simulations of parasitic folding in multilayers**
(Poster)