Florian M. Wagner

Curriculum vitae

Professional Experience

since Oct. 2019 **Substitute professor of Applied Geophysics**, *RWTH Aachen University*, Aachen, Germany.

Sept. 2018 – Dec. 2018 **Visiting scholar**, *Earth & Environmental Sciences Area, Lawrence Berkeley National Laboratory*, Berkeley, CA, USA.
Joint inversion of seismic refraction and electrical resistivity data.

Aug. 2016 – Sept. 2019 **Postdoctoral research associate**, *University of Bonn, Geophysics Section*, Bonn, Germany.
Research on joint and process-based imaging for permafrost characterization and monitoring as well as teaching & theses supervision on Bachelor and Master level.

Nov. 2011 – May 2016 **Research associate**, *GFZ German Research Centre for Geosciences, Section 6.3 - Geological Storage*, Potsdam, Germany.
Research on geoelectrical CO_2 monitoring, field experiments, server administration.

Education

2012–2016 **Doctor of Sciences**, *ETH Zurich*, Department of Earth Sciences.
Supervisors: Prof. Dr. Hansruedi Maurer and Dr. Cornelia Schmidt-Hattenberger (GFZ)
Dissertation: www.diss.fwagner.info

2009 –2011 **Master of Science**, *IDEA League: TU Delft, ETH Zurich, RWTH Aachen*.
Joint M.Sc. in Applied Geophysics (http://www.idealeague.org/geophysics)

2006–2009 **Bachelor of Science**, *RWTH Aachen University*.
B.Sc. in Georesources Management

Scientific interests

- Geophysical monitoring of subsurface fluid migration
- Permafrost characterization
- Tomographic experimental design
- Numerical modeling and (process-based/joint) inversion
- Scientific software development (www.pygimli.org)

Teaching

since 2019 RWTH Aachen University
- *Physics of the Earth*, Lecture, B.Sc.
- *Geothermics*, Lecture and exercise, M.Sc.
- *Application of geophysical prospection methods in Earth and Environmental Sciences*, Lecture and exercise, M.Sc.

2016 – 2019 University of Bonn
- *Environmental geophysics*, Lecture, B.Sc.
- *Inverse modeling*, Lecture and exercise, M.Sc.
- *Hydrogeophysical process simulation*, Block course, M.Sc.
- *Applied hydrogeophysics*, Seminar & field course, M.Sc.
- Supervision of five Bachelor and five Master theses

2013 – 2015 ETH Zurich
- *Geophysical field work and data processing*, Field course & block course, M.Sc.
- Supervision of a master thesis and committee member during oral defense

Other
- *Modeling & inversion with pyGIMLi*, One-day course, Univ. of Leipzig, Sept. 2016 and Jan. 2019
- *Scientific computing with Python*, One-day course, GFZ Potsdam, Nov. 2012
- *Best Practices for Modern Open-Source Research Codes*, Workshop at AGU Fall Meeting, Washington D.C., Dec. 2018

Scholarships & Awards

Sept. 2017 *Wasser-Monitoring-Preis* (50.000 €) awarded by the Dr. Erich Ritter foundation in cooperation with the Water Science Alliance e.V. (www.deutsches-stiftungszentrum.de/aktuelles/2017_09_12_wasser-monitoring-preis)

Apr. 2016 1st place in category "EGU Talk" at the 11th annual GFZ PhD Day, Potsdam, Germany

Sept. 2014 Best oral presentation award at the 4th Science Forum of the Helmholtz-Alberta-Initiative (www.helmholtz-alberta.org), Edmonton, Canada

Sept. 2013 Best oral presentation award at the 3rd Science Forum of the Helmholtz-Alberta-Initiative, Edmonton, Canada

Sept. 2012 Best oral presentation award at the 2nd Science Forum of the Helmholtz-Alberta-Initiative, Potsdam, Germany

2009–2011 Scholarship from the education fund of North Rhine-Westphalia

2009–2011 Private scholarship from DEA Deutsche Erdoel AG (www.dea-group.com/en)

Professional services

Reviewer *Computers and Geosciences, Geophysical Journal International, Geophysics, Journal of Applied Geophysics, Journal of Geophysical Research - Earth Surface, Near Surface Geophysics, Pure and Applied Geophysics, The Cryosphere, Water Resources Research*

Convenor	Co-convenor at AGU 2018 for session on open-source software and lead convenor at EGU 2019 for session on geophysical imaging
Software development and support	*pyGIMLi*: An open-source library for modeling and inversion in geophysics (www.pygimli.org)

Invited conference contributions

Wagner, F. M., Wiese, B., Schmidt-Hattenberger, C., Maurer, H. (2016): Insights on CO_2 Migration Based on a Multi-physical Inverse Reservoir Modeling Framework. 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, WS10-Quantitative Data Integration and Joint Inversion from Surface to Reservoir, DOI:10.3997/2214-4609.201601659.

Wagner, F. M., Rücker, C., Günther, T. (2017): Reproducible hydrogeophysical inversions through the open-source library pyGIMLi. AGU Fall Meeting, New Orleans, 11-15 Dec 2017, Open-Source Software in the Geosciences (NS41B-0016), DOI:10.5281/zenodo.1095621.

Journal articles

2020

Weigand, M., **Wagner, F. M.**, Limbrock, J., Hilbich, C., Hauck, C., Kemna, A. (2020): A monitoring system for spatiotemporal electrical self-potential measurements in cryospheric environments. *Geoscientific Instrumentation, Methods and Data Systems Discussions*, 2020, 1-30, DOI:10.5194/gi-2020-5.

Mollaret, C., **Wagner, F. M.**, Hilbich, C., Scapozza, C., Hauck, C. (2020): Petrophysical joint inversion applied to alpine permafrost field sites to image subsurface ice, water, air and rock contents. *Front. Earth Sci.*, DOI:10.3389/feart.2020.00085.

2019

Wagner, F. M., Mollaret, C., Günther, T., Kemna, A., Hauck, C. (2019): Quantitative imaging of water, ice, and air in permafrost systems through petrophysical joint inversion of seismic refraction and electrical resistivity data. *Geophysical Journal International*, 219, 1866–1875, DOI:10.1093/gji/ggz402.

Steiner, M., **Wagner, F. M.**, Flores Orozco, A. (2019): Improved characterization of alpine permafrost through structurally constrained inversion of refraction seismic data. *The Cryosphere Discussions*, , 1-27, DOI:10.5194/tc-2019-52.

2018

Wagner, F. M., Wiese, B. (2018): Fully coupled inversion on a multi-physical reservoir model - Part II: The Ketzin CO_2 storage reservoir. *International Journal of Greenhouse Gas Control*, 75, 273-281, DOI:10.1016/j.ijggc.2018.04.009.

Wiese, B., **Wagner, F. M.**, Norden, B., Maurer, H., Schmidt-Hattenberger, C. (2018): Fully coupled inversion on a multi-physical reservoir model - Part I: Theory and concept. *International Journal of Greenhouse Gas Control*, 75, 262-272, DOI:10.1016/j.ijggc.2018.05.013.

Uhlemann, S., Wilkinson, P., Maurer, H., **Wagner, F. M.**, Johnson, T., Chambers, J. (2018): Optimized survey design for Electrical Resistivity Tomography: combined optimization of measurement configuration and electrode placement. *Geophysical Journal International*, 214, 108-121, DOI:10.1093/gji/ggy128.

2017

Wiese, B., **Wagner, F. M.**, Norden, B., Schmidt-Hattenberger, C. (2017): Fully Coupled Hydrogeophysical Inversion of Hydraulics, Gas Pressure and Geoelectrics. *Energy Procedia*, 114, 3588-3596, DOI:10.1016/j.egypro.2017.03.1490.

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., Pommerencke, J., Rippe, D., **Wagner, F. M.**, Wiese, B. (2017): Monitoring the Complete Life-cycle of a CO_2 Storage Reservoir - Demonstration of Applicability of Geoelectrical Imaging. *Energy Procedia*, 114, 3948-3955, DOI:10.1016/j.egypro.2017.03.1526.

Rücker, C., Günther, T., **Wagner, F. M.** (2017): pyGIMLi: An open-source library for modelling and inversion in geophysics. *Computers and Geosciences*, 109, 106-123, DOI:10.1016/j.cageo.2017.07.011.

Bergmann, P., Schmidt-Hattenberger, C., Labitzke, T., **Wagner, F. M.**, Just, A., Flechsig, C., Rippe, D. (2017): Fluid injection monitoring using electrical resistivity tomography - five years of CO_2 injection at Ketzin, Germany. *Geophysical Prospecting*, 65, 859-875, DOI:10.1111/1365-2478.12426.

2016

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., **Wagner, F. M.**, Rippe, D. (2016): Permanent crosshole electrical resistivity tomography (ERT) as an established method for the long-term CO_2 monitoring at the Ketzin pilot site. *International Journal of Greenhouse Gas Control*, 52, 432-448, DOI:10.1016/j.ijggc.2016.07.024.

Bergmann, P., Diersch, M., Götz, J., Ivandic, M., Ivanova, A., Juhlin, C., Kummerow, J., Liebscher, A., Lüth, S., Meekes, S., Norden, B., Schmidt-Hattenberger, C., **Wagner, F. M.**, Zhang, F. (2016): Review on geophysical monitoring of CO_2 injection at Ketzin, Germany. *Journal of Petroleum Science and Engineering*, 139, 112-136, DOI:10.1016/j.petrol.2015.12.007.

2015

Wagner, F. M., Bergmann, P., Rücker, C., Wiese, B., Labitzke, T., Schmidt-Hattenberger, C., Maurer, H. (2015): Impact and mitigation of borehole related effects in permanent crosshole resistivity imaging: An example from the Ketzin CO_2 storage site. *Journal of Applied Geophysics*, 123, 102-111, DOI:10.1016/j.jappgeo.2015.10.005.

Wagner, F. M., Günther, T., Schmidt-Hattenberger, C., Maurer, H. (2015): Constructive optimization of electrode locations for target-focused resistivity monitoring. *GEOPHYSICS*, 80, E29-E40, DOI:10.1190/geo2014-0214.1.

2014

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., **Wagner, F. M.** (2014): CO_2 Migration Monitoring by Means of Electrical Resistivity Tomography (ERT) - Review on Five Years of Operation of a Permanent ERT System at the Ketzin Pilot Site. *Energy Procedia*, 63, 4366-4373, DOI:10.1016/j.egypro.2014.11.471.

2013

Wagner, F. M., Möller, M., Schmidt-Hattenberger, C., Kempka, T., Maurer, H. (2013): Monitoring freshwater salinization in analog transport models by time-lapse electrical resistivity tomography. *Journal of Applied Geophysics*, 89, 84-95, DOI:10.1016/j.jappgeo.2012.11.013.

Schmidt-Hattenberger, C., Bergmann, P., Bösing, D., Labitzke, T., Möller, M., Schröder, S., **Wagner, F. M.**, Schütt, H. (2013): Electrical Resistivity Tomography (ERT) for Monitoring of CO_2 Migration - from Tool Development to Reservoir Surveillance at the Ketzin Pilot Site. *Energy Procedia*, 37, 4268-4275, DOI:10.1016/j.egypro.2013.06.329.

Conference contributions

2019

Wagner, F. M., Mollaret, C., Günther, T., Kemna, A., Hauck, C. (2019): Quantitative Bildgebung von Permafrostsystemen mittels petrophysikalisch gekoppelter Inversion von seismischen und geoelektrischen Messdaten. 79. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Braunschweig, 04.-07.03.2019.

Wagner, F. M., Mollaret, C., Günther, T., Uhlemann, S., Dafflon, B., Hubbard, S., Hauck, C., Kemna, A. (2019): Characterization of permafrost systems through petrophysical joint inversion of seismic and geoelectrical data. EGU General Assembly 2019, Vienna.

Uhlemann, S., Dafflon, B., **Wagner, F. M.**, Shirley, I., Peterson, J., Ulrich, C., Hubbard, S. (2019): Imaging Spatial and Temporal Subsurface Variability in a Discontinuous Permafrost Environment. AGU Fall Meeting, San Francisco, 9-13 Dec 2019, Geophysical Advances in Cryospheric Processes, Structure, and Environmental Change II (NS14A).

Mollaret, C., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2019): Alpine permafrost field applications of a petrophysical joint inversion of refraction seismic and electrical resistivity data to image the subsurface ice content. EGU General Assembly 2019, Vienna.

2018

Wagner, F. M., Uhlemann, S., Dafflon, B., Ulrich, C., Peterson, J., Akins, H., Kemna, A., Hubbard, S. (2018): Permafrost characterization near Teller, Alaska, using petrophysical joint inversion of seismic and geoelectrical data. AGU Fall Meeting, Washington, D.C., 10-14 Dec 2018, Advances and Revelations from Geophysical Exploration and Observation in the Cryosphere I (NS42A).

Mollaret, C., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2018): Ice and liquid water saturations jointly inverted from electrical and refraction seismic datasets in mountain permafrost. 5th European Conference on Permafrost (EUCOP 2018), Chamonix-Mont Blanc, France, 23th June - 1st July 2018.

Manhaeghe, T., **Wagner, F. M.**, Dumont, G., Garré, S. (2018): Evaluation of the Effect of Micro-Topography of a Potato Field on ERT to Assess Soil Moisture Patterns in Sandy Soil. Near Surface Geoscience 2018 - the 24th European Meeting of Environmental and Engineering Geophysics, Near Surface Geoscience (9-13 September, Porto, Portugal), DOI:10.3997/2214-4609.201802627.

Hauck, C., Kemna, A., Weigand, M., **Wagner, F. M.**, Pellet, C., Mollaret, C., Hoelzle, M., Hilbich, C. (2018): Monitoring spatio-

temporal infiltration pattern and its interaction with permafrost thaw using electrical resistivity and self-potential measurements at Schilthorn, Swiss Alps. EGU General Assembly 2018, Vienna.

2017

Wagner, F. M., Rücker, C., Günther, T. (2017): Reproducible hydrogeophysical inversions through the open-source library pyGIMLi. AGU Fall Meeting, New Orleans, 11-15 Dec 2017, Open-Source Software in the Geosciences (NS41B-0016), DOI:10.5281/zenodo.1095621 (invited).

Wagner, F. M., Weigand, M., Kemna, A. (2017): Removal of outliers and electrode effects from spatial self-potential monitoring data to elucidate subsurface process dynamics. AGU Fall Meeting, New Orleans, 11-15 Dec 2017, Data Integration, Inverse Methods, and Data Valuation Across a Range of Scales in Hydrogeophysics (H31B-1502).

Wagner, F. M., Weigand, M., Kemna, A. (2017): Identification of outliers, electrode effects and process dynamics in electrical self-potential monitoring data. 4th International Workshop on Geoelectrical Monitoring, Nov. 22-24, Vienna.

Zoporowski, A., **Wagner, F. M.**, Kemna, A. (2017): Programmieren mit Python - Einbindung in Bachelor- und Mastermodule. 77. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Potsdam, 27.-30.03.2017, DOI:10.13140/RG.2.2.22326.70725.

Weigand, M., **Wagner, F. M.** (2017): Towards unified and reproducible processing of geoelectrical data. 4th International Workshop on Geoelectrical Monitoring, Nov. 22-24, Vienna, DOI:10.5281/zenodo.1067502.

Heinze, T., Limbrock, J., Weigand, M., **Wagner, F. M.**, Kemna, A. (2017): Self-potential monitoring of landslides on field and laboratory scale. AGU Fall Meeting, New Orleans, 11-15 Dec 2017, Landslide Geophysics: Advances in the Characterization and Monitoring of Unstable Slopes (NS43A-02).

Mollaret, C., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2017): Joint inversion of electric and seismic data applied to permafrost monitoring. 4th International Workshop on Geoelectrical Monitoring, Nov. 22-24, Vienna.

Kemna, A., Weigand, M., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2017): Monitoring the Dynamics of Water Flow at a High-Mountain Permafrost Site Using Electrical Self-Potential Measurements. 77. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Potsdam, 27.-30.03.2017.

Kemna, A., Weigand, M., Flores-Orozco, A., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2017): Use of geoelectrical monitoring methods for characterizing thermal state, ice content and water flow in permafrost environments. 4th International Workshop on Geoelectrical Monitoring, Nov. 22-24, Vienna.

Günther, T., Rücker, C., **Wagner, F. M.** (2017): Advanced ERT inversion strategies with BERT & pyGIMLi. 4th International Workshop on Geoelectrical Monitoring, Nov. 22-24, Vienna.

2016

Wagner, F. M., Wiese, B., Schmidt-Hattenberger, C., Maurer, H. (2016): Estimating permeability of a CO_2 storage reservoir based on multi-physical observations. 76. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Münster, 14.-17.03.2016.

Wagner, F. M., Wiese, B., Schmidt-Hattenberger, C., Maurer, H. (2016): Insights on CO_2 Migration Based on a Multi-physical Inverse Reservoir Modeling Framework. 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, WS10-Quantitative Data Integration and Joint Inversion from Surface to Reservoir, DOI:10.3997/2214-4609.201601659 (invited).

Kemna, A., Weigand, M., **Wagner, F. M.**, Hilbich, C., Hauck, C. (2016): Monitoring the Dynamics of Water Flow at a High-Mountain Permafrost Site Using Electrical Self-Potential Measurements. AGU Fall Meeting, 12-16 December, 2016, San Francisco, USA.

Rippe, D., Bergmann, P., Labitzke, T., **Wagner, F. M.**, Schmidt-Hattenberger, C. (2016): Surface-downhole and crosshole geoelectrics for monitoring of brine injection at the Ketzin CO_2 storage site. Geophysical Research Abstracts, Vol. 18, EGU2016-15388, EGU General Assembly 2016.

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., Rippe, D., **Wagner, F. M.** (2016): CO_2 Reservoir Monitoring Using a Permanent Electrode Array - The Ketzin Case Study. 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, DOI:10.3997/2214-4609.201600576.

Rücker, C., Günther, T., **Wagner, F. M.** (2016): Lösung gekoppelter Inversionsprobleme mit pyGIMLi. 76. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Münster, 14.-17.03.2016.

Rücker, C., Günther, T., **Wagner, F. M.** (2016): pyGIMLi - An Open Source Python Library for Inversion and Modelling in Geophysics. 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, WS08-Open Source Software in Applied Geosciences, DOI:10.3997/2214-4609.201601651.

Bergmann, P., Schmidt-Hattenberger, C., Labitzke, T., **Wagner, F. M.**, Just, A., Flechsig, C., Rippe, D. (2016): Fluid injection

monitoring using electrical resistivity tomography - Five years of CO_2 injection at Ketzin, Germany. 76. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Münster, 14.-17.03.2016.

Bergmann, P., Schmidt-Hattenberger, C., Labitzke, T., **Wagner, F. M.**, Just, A., Flechsig, C., Rippe, D. (2016): Five Years of CO_2 Injection Monitoring at Ketzin, Germany, Using Electrical Resistivity Tomography. 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, DOI:10.3997/2214-4609.201601496.

2015

Wagner, F. M., Bergmann, P., Labitzke, T., Wiese, B., Schmidt-Hattenberger, C., Rücker, C., Maurer, H. (2015): Effekte und Korrektur von Bohrloch bedingten Fehlern bei der permanenten geoelektrischen Überwachung von geologischen Speichern. 75. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Hannover 2015.

Wagner, F. M., Wiese, B., Schmidt-Hattenberger, C., Maurer, H. (2015): Insights on CO_2 migration by means of a fully-coupled hydrogeophysical inversion. 3rd International Workshop on Geoelectrical Monitoring - GELMON (Vienna 2015).

Schmidt-Hattenberger, C., Bergmann, P., **Wagner, F. M.** (2015): A Permanent Downhole Electrode Array as Valuable Tool for CO_2 Monitoring at the Ketzin Pilot Site. Third EAGE Workshop on Permanent Reservoir Monitoring 2015 (Stavanger, Norway 2015), DOI:10.3997/2214-4609.201411959.

Rippe, D., Bergmann, P., Labitzke, T., **Wagner, F. M.**, Schmidt-Hattenberger, C. (2015): A Permanent Downhole Electrode Array as Valuable Tool for CO_2 Monitoring at the Ketzin Pilot Site. 8th Trondheim Conference on CO_2 Capture, Transport and Storage, 16-18 June 2015 (Trondheim, Norway).

Rippe, D., Bergmann, P., Labitzke, T., **Wagner, F. M.**, Schmidt-Hattenberger, C. (2015): Surface-downhole geoelectrics for post-injection monitoring at the Ketzin pilot site. 3rd International Workshop on Geoelectrical Monitoring - GELMON (Vienna 2015).

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., Rippe, D., **Wagner, F. M.** (2015): Technical and methodological requirements for a permanent downhole geoelectrical measurement system as CO_2 monitoring tool - A review from the Ketzin pilot site. 3rd International Workshop on Geoelectrical Monitoring - GELMON (Vienna 2015).

Rücker, C., Günther, T., **Wagner, F. M.** (2015): Coupled hydrogeophysical modelling and ERT monitoring using pyGIMLi. 3rd International Workshop on Geoelectrical Monitoring - GELMON (Vienna 2015).

Rücker, C., Günther, T., **Wagner, F. M.** (2015): pyGIMLi - Eine Open Source Python Bibliothek zur Inversion und Modellierung in der Geophysik. 75. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Hannover 2015.

2014

Wagner, F. M., Bergmann, P., Labitzke, T., Schmidt-Hattenberger, C., Rücker, C., Maurer, H. (2014): Accounting for complex borehole completion in crosshole resistivity monitoring. 4th Helmholtz-Alberta Initiative (HAI) Science Forum, September 29, 2014, Edmonton, Canada.

Wagner, F. M., Bergmann, P., Labitzke, T., Schmidt-Hattenberger, C., Günther, T., Maurer, H. (2014): High-Resolution Monitoring of CO_2 Injection with Permanent Electrodes: A 5-Year Retrospect from the Ketzin Site and Design Recommendations for Future Projects. AGU Fall Meeting, 15-19 December, 2014, San Francisco, USA.

Wagner, F. M., Bergmann, P., Labitzke, T., Deisman, N., Schmidt-Hattenberger, C., Maurer, H., Chalaturnyk, R. (2014): Paving the way to estimate CO_2 saturation from geoelectrical data. 4th Helmholtz-Alberta Initiative (HAI) Science Forum, September 29, 2014, Edmonton, Canada (acknowledged with the Best Oral Presentation Award).

2013

Wagner, F. M., Günther, T., Schmidt-Hattenberger, C., Maurer, H. (2013): Estimating optimum electrode locations for high-resolution cross-hole resistivity monitoring. 2nd Internat. Workshop on Geoelectrical Monitoring, GELMON 2013, Vienna, 04.-06.12.2013, Berichte Geol. B.-A., 104, ISSN 1017-8880.

Wagner, F. M., Günther, T., Schmidt-Hattenberger, C., Maurer, H. (2013): Optimized crosshole resistivity monitoring strategies for geological carbon dioxide storage reservoirs. 3rd Helmholtz-Alberta Initiative (HAI) Science Forum, September 2013, Edmonton, Canada (acknowledged with the Best Oral Presentation Award).

Wagner, F. M., Günther, T., Schmidt-Hattenberger, C., Maurer, H. (2013): On the Design of Cross-hole Resistivity Arrays for High-resolution and Cost-effective Storage Reservoir Monitoring. Near Surface Geoscience 2013 - the 19th European Meeting of Environmental and Engineering Geophysics of the Near Surface Geoscience (Bochum 2013), DOI:10.3997/2214-4609.20131430.

Wagner, F. M., Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., Chalaturnyk, R., Giroux, B. (2013): Towards quantitative monitoring of CO_2 with time-lapse electrical resistivity tomography (ERT): Experiences from the Ketzin pilot site, Germany. 3rd

Annual Conference of Carbon Management Canada, Calgary, Canada.

Schmidt-Hattenberger, C., Bergmann, P., Bösing, D., Labitzke, T., Möller, M., Schröder, S., **Wagner, F. M.**, Schütt, H. (2013): Permanent Downhole Geoelectrical Monitoring at the Ketzin CO_2 Pilot Site. Second EAGE Workshop on Permanent Reservoir Monitoring 2013 - Current and Future Trends (Stavanger, Norway 2013), DOI:10.3997/2214-4609.20131314.

Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., **Wagner, F. M.** (2013): Electrical Resistivity Tomography (ERT) as a permanent monitoring tool to image the CO_2 migration at the Ketzin pilot site - Experiences from more than five years of operation. 2nd Internat. Workshop on Geoelectrical Monitoring, GELMON 2013, Vienna, 04.-06.12.2013, Berichte Geol. B.-A., 104, ISSN 1017-8880.

2012

Wagner, F. M., Hosseini, B., Kempka, T., Schmidt-Hattenberger, C., Chalaturnyk, R. (2012): Optimized resistivity monitoring strategies for geological carbon dioxide storage based on reservoir simulations. 2nd Science Forum of the Helmholtz-Alberta-Initiative, Potsdam Sep. 2012 (acknowledged with the Best Oral Presentation Award).

Wagner, F. M., Möller, M., Schmidt-Hattenberger, C., Kempka, T., Maurer, H. (2012): Monitoring brine migration in analog transport models using surface-to-hole ERT. Geophysical Research Abstracts Vol. 14, EGU2012-2101, 2012.

Wagner, F. M., Schmidt-Hattenberger, C., Bergmann, P., Labitzke, T., Möller, M., Schröder, S. (2012): Quantitative CO_2 monitoring via time-lapse electrical resistivity tomography (ERT): From tool development to advanced inversion strategies. 3rd Annual Meeting, Helmholtz Alberta Initiative (Edmonton, Alberta, Canada 2012).

Möller, M., Schmidt-Hattenberger, C., **Wagner, F. M.**, Schröder, S. (2012): Hochauflösende Geoelektrik als Teil eines Frühwarnsystems zur Überwachung einer möglichen Grundwasserversalzung bei der CO_2-Speicherung. 72. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (DGG), Hamburg 2012.

Kempka, T., Endler, R., Eydam, D., Herd, R., Huenges, E., Jahnke, C., Jolie, E., Janetz, S., Krause, Y., Kühn, M., Magri, F., Moeck, I., Möller, M., Muñoz, G., Nakaten, B., Ritter, O., Schafrik, W., Schmidt-Hattenberger, C., Schöne, E., Tillner, E., Voigt, H., **Wagner, F. M.**, Zimmermann, G. (2012): CO_2 storage in eastern Brandenburg: Implications for geothermal heat provision and conception of a salinisation early warning system - Review of current progress of the joint-project brine. Schriftenreihe der Deutschen Gesellschaft für Geowissenschaften 78.

2011

Wagner, F. M., Möller, M., Schmidt-Hattenberger, C., Kempka, T., Maurer, H. (2011): Detection of groundwater salinisation by geoelectric measurements. EGU General Assembly 2011, Vienna.

Möller, M., Schmidt-Hattenberger, C., **Wagner, F. M.**, Schröder, S. (2011): Development of an integrated monitoring concept to detect possible brine migration. 1st International Workshop on Geoelectrical Monitoring - GELMON (Vienna 2011).