

Prof. Dr. Charlotte M. Krawczyk

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Area of expertise

Geosciences, Geophysics

Research interests

Seismic methods in applied geophysics
Geophysical imaging of deformation and mass transport
Sub-/seismic deformation analysis
Geodynamic interpretation

Short CV and Academic Training

2009 Vice-Director (LIAG, Hannover)
since 2007 Head of Section 'Seismics, Magnetism, Gravimetry' (LIAG, Hannover)
since 2007 Professor for 'Geophysics with focus on Seismics' (TU Berlin)
2002-2007 Senior Scientist in Section 'Lithosphere Dynamics' (GFZ Potsdam)
1997-2001 Leadership of young-academics group 'Northgerman Basin' (GFZ Potsdam)
1995-1997 Project management DEKORP (GFZ Potsdam)
1995 Ph.D. (GEOMAR Kiel)
Thesis: Detachment Tectonics during Continental Rifting off the West Iberia Margin - Seismic Reflection and Drilling Constraints
1993 Physical properties specialist, ODP-leg149 (Texas A&M University)
1991 Teaching the use of seismic sources in Brasilia (AWI and GTZ)
1991 Diploma in Geophysics (CAU Kiel)
1986 Pre-Diploma in Oceanography/Physics
1984 Abitur (baccalaureate)

Memberships in Boards and Jurys

- Topical Editor for geophysics in 'Solid Earth' (since 2011)
- President of the Division Seismology in EGU (since 2011)
- Member of EGU program committee in Division TS (2009-2010)
- Member of the steering committee of the German Geophysical Society (since 2008)
- Elected member of the advisory board at GFZ Potsdam (2001-2007)
- Vice women's representative at GFZ Potsdam (2001-2006)
- Member of DGG (German Geophysical Society), EGU, EAGE, AGU, SEG

Awards

- PROCOPE-Stipends, 1994, 1995
- C.F.Gauss-Lecture; EGU, Vienna/Austria, 2009
- Best Poster Award; IGCP559 committee 'Active source images of the crust', 2009
- Best of Near Surface 2009 in Dublin; EAGE, Houten/NL, 2010
- Member of Academia-Net

Selected projects

- Quick Clays (landslide processes in Nordic countries, Sweden)
- PROTECT (deformation modelling, Otway Basin)
- SeSAR (geothermal exploration, Indonesia)
- TIPTEQ (subduction dynamics, Chile)
- DEKORP (deep seismics, Germany)

Selected Publications

- Krawczyk, C.M., Polom, U., Trabs, S., Dahm, D., 2011. Sinkholes in the city of Hamburg – New urban shear-wave reflection seismic system enables high-resolution imaging of subsurface structures. *Journal of Applied Geophysics*, doi:10.1016/j.jappgeo.2011.02.003.
- Gabriel, G., Vogel, D., Scheibe, R., Lindner, H., Pucher, R., Wonik, T. & Krawczyk, C.M., 2011. Anomalies of the Earth's Total Magnetic Field in Germany – the first complete homogenous dataset reveals new opportunities. *Geophysical Journal International*, doi: 10.1111/j.1365-246X.2010.04924.x.
- Chen, H.C., Kumpel, H.-J. & Krawczyk, C.M., 2010. Field layout of a tiltmeter array to monitor micro-deformation induced by pumping through a horizontal collector well. *Near Surface Geophysics*, 8 (4), 321-330, doi:10.3997/1873-0604.2010023.
- Polom, U., Hansen, L., Sauvin, G., L'Heureux, J.-S., Lecomte, I., Krawczyk, C.M., Vanneste, M. & Longva, O., 2010. High-resolution SH-wave seismic reflection for characterization of onshore ground conditions in the Trondheim harbor, central Norway. *In Advances in Near-Surface Seismology and Ground-Penetrating Radar, SEG, Tulsa*, p. 75-92.
- Buddensiek, M.-L., Krawczyk, C.M., Kukowski, K. & Oncken, O., 2009. Performance of piezo-crystal transducers with respect to amplitudes and waveform in laboratory seismic application. *Geophysics*, 74 (2), T33-T45.
- Endres, H., Lohr, T., Trappe, H., Samiee, R., Thierer, P.O., Krawczyk, C.M., Tanner, D.C., Oncken, O., Kukla, P.A., 2008. Quantitative Fracture Prediction from Seismic Data. *Petrol. Geosciences*, 14, 369-377.
- Krawczyk, C.M., McCann, T., Cocks, L.R.M., England, R., McBride, J. & Wybraniec, S., 2008. Caledonian Tectonics. *In The Geology of Central Europe*, vol. 1, *Geological Society, London*, p. 301-381.
- Lohr, T., Krawczyk, C.M., Tanner, D.C., Samiee, R., Endres, H., Thierer, P.O., Oncken, O., Trappe, H., Bachmann, R., Kukla, P.A., 2008. Prediction of sub-seismic faults and fractures - integration of 3D seismic data, 3D retrodeformation, and well data. *AAPG Bull.*, 92, 473-485.
- Dransch, D., Krawczyk, C. & Helm, A., 2007. Visualisierung – eine leistungsfähige Methode für den geowissenschaftlichen Forschungsprozess. *Nova Acta Leopoldina*, 94 (349), pp. 151-164.
- Dransch, D. & Krawczyk, C., 2006. Studying Long-term Earth Deformation Processes with Visual Analytics Methods. Workshop at the GIScience conference Münster 2006, extended abstracts, 10 pp.
- Krawczyk, C.M., Mechie, J., Lueth, S., Tasarova, Z., Wigger, P., Stiller, M., Brasse, H., Echtler, H.P., Araneda, M. & Bataille, K., 2006. Geophysical Signatures and active tectonics at the South-Central Chilean margin. *Frontiers in Earth Sciences*, 1, 171-192.
- Echtler, H.P., Stiller, M., Steinhoff, F., Krawczyk, C., Suleimanov, A., Spiridonov, V., Knapp, J.H., Menshikov, Y., Alvarez-Marron, J., Yunusov, N., 1996. Preserved collisional crustal structure of the Southern Urals revealed by Vibroseis profiling. *Science*, 274, 224-226.