Dr. Michael Commer

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EDUCATION

Ph.D. Institute of Geophysics, University of Cologne, Germany, Dissertation title: "Three-dimensional inversion of transient-electromagnetic data: A comparative study". Klaus-Liebrecht Award of the University of Cologne for oustanding dissertation.

Diploma Institute of Geophysics, University of Cologne, Diploma thesis title: "A special method for the combined inversion of long-offset transient electromagnetic and magneto-telluric data". Departmental Award "Completed With Distinction".

HONORS AND AWARDS

2009 R&D 100 Award (by R&D Magazine, http://www.rdmag.com) for EMGeo ElectroMagnetic Geological Mapper geophysical imaging package.

2008 Invited speaker: Aachen institute for advanced study in computational engineering science, Aachen, Germany.

2005 – 2007 Feodor-Lynen-Fellowship, German Alexander-von-Humboldt Foundation.

2004 Klaus-Liebrecht-Award for outstanding Ph.D. dissertation, University of Cologne.

2001 Exchange visitor scholarship, German Academic Exchange Service (DAAD).

PROFESSIONAL EXPERIENCE

2006 – Geological Research Scientist, Lawrence Berkeley National Laboratories, CA.

2004 – Geological Research Postdoc, LBNL.

2000 – Research scientist and assisting faculty member for Prof. B. Tezkan, Prof. A. Hoerdt , Prof. F. M. Neubauer, Institute of Geophysics and Meteorology, University of Cologne.

2001 Internship, Sandia National Laboratories, Albuquerque, NM.

1999 – 2000 System Engineer, STN Atlas Elektronik, Bremen, Germany.

1995 – Scientific assistant and part-time system administrator, University of Cologne.

JOURNAL PUBLICATIONS

1. **Commer** M. and Newman G.A., 2004, A parallel finite-difference approach for three-dimensional transient electromagnetic modeling with galvanic sources, *Geophysics*, **69**, 1192-1202.

2. **Commer** M., Helwig S.L., Hördt A., and Tezkan B., 2005, Interpretation of long-offset transient electromagnetic data from Mount Merapi, Indonesia, using a three-dimensional optimization approach, *Journal of Geophysical Research*, **110**, B03207, doi:10.1029/2004JB003206.

3. Newman G.A. and **Commer** M., 2005, New advances in three-dimensional transient electromagnetic inversion, *Geophysical Journal International*, **160**, 5-32.

4. **Commer** M. and Newman G.A., 2006, An accelerated time domain finite difference simulation scheme for three-dimensional transient electromagnetic modeling using geometric multigrid concepts, *Radio Science*, **41**, RS3007, doi:10.1029/2005RS003413.

5. **Commer** M., Helwig S.L., Hördt A., Scholl C., and Tezkan B., 2006, New results on the resistivity structure of Merapi Volcano (Indonesia), derived from 3D restricted inversion of long-offset transient electromagnetic data, *Geophysical Journal International*, **167**, 1172-1187.

6. Kalscheuer T., **Commer** M., Helwig S.L., Hördt A., Scholl C., and Tezkan B., 2007, Electromagnetic evidence for an ancient avalanche caldera rim on the south flank of Mount Merapi, Indonesia, *Journal of Volcanology and Geothermal Research*, **162**, 81-97.

7. **Commer** M. and Newman G.A., 2008, New advances in three-dimensional controlled-source electromagnetic inversion, *Geophysical Journal International*, **172**, 513-535.

8. **Commer** M., Newman G.A., Carazzone J.J., Dickens T.A., Green K.E., Wahrmund L.A., Willen D.E., and Shiu J., 2008, Massively-parallel electrical-conductivity imaging of hydrocarbons using the Blue Gene/L supercomputer, *IBM Journal of Research and Development*, **52-1/2**, 93-103.

9. **Commer** M., Newman G.A., Carazzone J.J., Dickens T.A., Green K.E., Wahrmund L.A., Willen D.E., and Shiu J., 2008, Massively-parallel electrical-conductivity imaging of hydrocarbons using the Blue Gene/L supercomputer, First Break, **26**, 93-102 (Reprint of Commer et al., *IBM Journal of Research and Development*).

10. **Commer** M. and Newman G.A., 2009, Three-dimensional controlled-source electromagnetic and magnetotelluric joint inversion, *Geophysical Journal International*, **178**, 1305-1316.

11. Newman G. A. and **Commer** M., 2009, Massively Parallel Electrical Conductivity Imaging of the Subsurface, *Journal of Physics*, Conference Series **180**, 012063.

12. Newman G. A., **Commer** M., and Carazzone J.J., 2009, Imaging CSEM data in the presence of electrical anisotropy: *Geophysics*, In Press.