

KOLJA ROTZOLL

U.S. Geological Survey, Pacific Islands Water Science Center
677 Ala Moana Blvd, #415, Honolulu, HI 96813

Phone: (808) 587-2419
E-mail: kolja@usgs.gov

EDUCATION

| | | |
|---------|---|--|
| 2002-07 | Ph.D. in GEOLOGY & GEOPHYSICS | University of Hawaii |
| 1999-01 | M.Sc. in COASTAL GEOSCIENCES AND ENGINEERING | Christian-Albrechts Universität, Kiel, Germany |
| 1996-99 | B.Sc. in GEOGRAPHY | Christian-Albrechts Universität, Kiel, Germany |

Awards

| | |
|------|---|
| 2007 | Harold T. Stearns Fellowship (Estimating hydraulic conductivity from specific capacity) |
| 2006 | J. Watumull Merit Scholarship, student of the year 2006-07 in the G&G Dept. |
| 2006 | 1 st place in poster competition at 32 nd Annual Hawaii Section AWWA Conference |
| 2005 | GSO, University of Hawaii, travel grant for AGU Fall 2005 Meeting |
| 2003 | Harold T. Stearns Fellowship (Groundwater modeling of tides & physical applications) |

Workshops

| | |
|------|--|
| 2007 | HYDRUS 2D/3D Workshop in Honolulu (M. Van Genuchten) |
| 2005 | USGS Aquifer-Test Workshop in Sacramento (K.Halford, D.Galloway, E.Kuniansky, and E.Weeks) |

WORK EXPERIENCE

2008-present USGS Pacific Islands Water Science Center & WRRC

Post-Doc, Research Hydrologist, supervisor: Chip Hunt

- Causes and effects of borehole flow on salinity profiles in Hawaii
- Application of radar imagery as input to a rainfall-runoff model for the Kawela watershed, Molokai

2007-08 University of Hawaii

Research Assistant in Geology & Geophysics with Dr. Aly El-Kadi

- Estimating hydraulic properties for volcanic island aquifers using wave setup

2006-07 University of Hawaii

Research Assistant in Geology & Geophysics with Dr. Aly El-Kadi

Working for The Environmental Company, Inc., supervisor: Jeff Hart

- Aquifer test design for shafts, updating and refining the Oahu SWAP Model
- Ground-water flow modeling (MODFLOW) for Red Hill Ridge, Oahu

2004-06 University of Hawaii

Research Assistant in Geology & Geophysics with Dr. Aly El-Kadi

Internship at USGS Pacific Islands Water Science Center, supervisor: Dr. Stephen Gingerich

- Estimation of aquifer properties for central Maui by analyzing 234 aquifer tests
- Estimating hydraulic properties with tidal responses using analytical and numerical methods

2002-04 University of Hawaii

Research Assistant in Geology & Geophysics with Dr. Aly El-Kadi

Working for Dept. of Health, Safe Drinking Water Branch, supervisor: Daniel Chang

- Develop and implement a source water assessment program (SWAP) to protect drinking water from contamination
- Groundwater modeling: MODFLOW / MODPATH to delineate capture zones, GIS to evaluate potential contaminating activities, ACCESS database integration and generation of final reports
- Presentation of methods & results to water purveyors and the public on the Hawaii Islands

1999 & 2002 Office for Rural Development, Kiel, Germany

Internship at Dept. of Coastal Protection, supervisor: D. Köhrsen

- Flood scenario assessment for storm surges at the Baltic Sea coast using GIS
-

MEMBERSHIPS AND VOLUNTARY SERVICES

- American Geophysical Union
 - Peer reviewer for Journal of Ground Water, Water Resources Research, Advances in Water Resources, Hydrological Processes, and Environmental & Engineering Geosciences
 - Student representative in the Dept. of Geology and Geophysics 2006/07
 - SOEST biennial open house volunteer
 - G&G Autumn Assembly 2007 organizing committee
-

LANGUAGES

- German, English: fluent in conversation and writing
- Spanish, Portuguese, and French: conversational

PUBLICATIONS

Peer-Reviewed Journals

- Rotzoll, K.** and A.I. El-Kadi (2008): Estimating hydraulic properties for coastal aquifers using wave setup. *Journal of Hydrology*. 353(1): 201-213
- Rotzoll, K.,** A.I. El-Kadi, and S.B. Gingerich (2008): Analysis of an unconfined aquifer subject to asynchronous dual-tide propagation. *Ground Water* 46(2): 239-250
- Rotzoll, K.** and A.I. El-Kadi (2008): Estimating hydraulic conductivity from specific capacity for Hawaii Aquifers, USA. *Hydrogeology Journal*. 16(5): 969-979
- Rotzoll, K.,** A.I. El-Kadi, and S.B. Gingerich (2007): Estimating hydraulic properties for volcanic aquifers using constant-rate and variable-rate aquifer tests. *Journal of the American Water Resources Association*. 43(2):334-345
- Roerber, V., **K. Rotzoll,** K. Statterger and H. Vital (2005): Dynamics of the complex coastal system at Galinhos (RN), NE-Brazil. *Meyniana*, 57:133-155, Kiel

Technical Reports

- Rotzoll, K.** and A.I. El-Kadi (2007): Numerical ground-water flow simulation for Red Hill Fuel Storage Facilities, NAVFAC Pacific, University of Hawaii, Water Resources Research Center, prepared for TEC Inc., Oahu, Hawaii. 76 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2006): Hawaii Source Water Assessment Program Report, Vol. 1 - Approaches used for the assessment. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 65 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2006): Hawaii Source Water Assessment Program Report, Vol. 5 - Island of Maui. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 41 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2005): Hawaii Source Water Assessment Program Report, Vol. 2 - Island of Hawaii. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 56 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2005): Hawaii Source Water Assessment Program Report, Vol. 6 - Island of Molokai. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 19 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2005): Hawaii Source Water Assessment Program Report, Vol. 7 - Island of Oahu. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 43 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2004): Hawaii Source Water Assessment Program Report, Vol. 3 - Island of Kauai. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 48 p.
- Whittier, R.B., **K. Rotzoll,** S. Dhal, A.I. El-Kadi, C. Ray, G. Chen and D. Chang (2004): Hawaii Source Water Assessment Program Report, Vol. 4 - Island of Lanai. University of Hawaii, Water Resources Research Center, prepared for Hawaii Dept of Health, 18 p.

Thesis & Dissertation

- Rotzoll, K.** (2007): Hydraulic parameter estimation using aquifer tests, specific capacity, ocean tides, and wave setup for Hawaii aquifers. Ph.D. diss. G&G Dept, University of Hawaii, 160 p.
- Rotzoll, K.** (2001): Structure and dynamics of the tidal channel system near Galinhos, Rio Grande do Norte (NE-Brazil). M.Sc. thesis, Christian-Albrechts Universität, Kiel, Germany, 80 p.

Conference Abstracts

- Rotzoll, K.,** C.D. Hunt, Jr. and A.I. El-Kadi (2009): The effect of borehole flow on salinity profiles in Hawaii. 35th annual Hawaii section American Water Works Association Conference. Honolulu, 13-15 May 2009
- Rotzoll, K.,** C.D. Hunt, Jr. and A.I. El-Kadi (2008): The effect of borehole flow on salinity profiles from deep monitor wells in Hawaii. Eos Trans. AGU, 89(52) Fall Meet. Suppl., Abstract H21D-0849
- Rotzoll, K.** and A.I. El-Kadi (2007): Estimating hydraulic properties of coastal aquifers using wave setup. Eos Trans. AGU, 88(52) Fall Meet. Suppl., Abstract H21C-0696
- Spengler, S.R., A.I. El-Kadi, R.B. Whittier, **K. Rotzoll,** and W. Freeman (2007): Post-audit of the State of Hawaii's Source Water Assessment Program. 6th International IAHS Groundwater Quality Conference, Fremantle, Western Australia, 2-7 Dec 2007
- Rotzoll, K.** (2007): Numerical ground-water flow simulation around Red Hill Ridge, Oahu, Hawaii. 1st Autumn Assembly, G&G Dept, University of Hawaii, Honolulu, 7 Sep 2007
- Rotzoll, K.,** A.I. El-Kadi, S.B. Gingerich, and T.A. Bianco (2007): Ground-water responses to dual-tide loading in an island aquifer. 32nd annual Albert L. Tester Memorial Symposium. University of Hawaii, Honolulu, 21-23 March 2007
- Rotzoll, K.** and A.I. El-Kadi (2006): The effect of large ocean swells on water-table fluctuations in Hawaiian aquifers. 32nd annual Hawaii section American Water Works Association Conference. Honolulu, 9-12 May 2006
- Rotzoll, K.** and A.I. El-Kadi (2005): Estimating hydraulic properties for Hawaiian aquifers using aquifer tests and tidal responses. Eos Trans. AGU, 86(52) Fall Meet. Suppl., Abstract H24C-07
- Rotzoll, K.,** S.B. Gingerich, and A.I. El-Kadi (2005): Estimating hydraulic properties from aquifer tests and tidal responses for central Maui, Hawai'i. In: Levy, J.K., C.C.K. Liu, J.E.T. Moncur and C.F. Ice (Eds), 2005: Institutions for sustainable watershed management: Reconciling physical and management ecology in the Asia-Pacific. AWRA's 2006 Summer Specialty Conference, American Water Resources Association, Middleburg, Virginia, TPS-05-2