

Arthur James Rodgers

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Education

University of Colorado, Boulder, CO, USA, Ph.D. Physics, 1993 (advisor: Prof. John Wahr)
University of Colorado, Boulder, CO, USA, M.S. Physics 1988
Northeastern University, Boston, MA, USA, B.S. Physics 1986

Work History

Technical Staff Member, Lawrence Livermore National Laboratory, Livermore, CA, 1998-present
Visiting Researcher, Lawrence Berkeley National Laboratory, 2017-present
Visiting Researcher, University of California, Berkeley Seismological Laboratory, 2015-present
Seismology Group Leader, Lawrence Livermore National Laboratory, 2005-2010.
Postdoctoral Researcher, Lawrence Livermore National Laboratory, Livermore, CA, 1997-1998.
Postdoctoral Researcher, University of California, Santa Cruz, Santa Cruz, CA, 1994-1997.
Postdoctoral Researcher, New Mexico State University, Las Cruces, NM, 1994.

Awards and Honors

Global Security Directorate Award for MIGHTY SABER Technical Nuclear Forensics Event, 2016
DTRA, Outstanding Team Contribution for Integrated Yield Determination Tool (IYDT), 2012
Fulbright Scholarship, 2010 to Laboratoire de géophysique interne et tectonophysique (*LGIT*),
Grenoble, France
PLS Directorate Award, 2012 for CAS Earthquake Show Simulations
CMELS Directorate Award, 2006 for 1906 San Francisco Earthquake Simulations

Synergistic Activities

Member, Fulbright Review Committee (France) Council for International Exchange of Scholars,
Evaluation of Fulbright Scholar applications for France, 2010-2012
Institutional Representative (2006-present) and Chair (2014-2018), Computational
Infrastructure for Geodynamics, Seismology Working Group
Member, Incorporated Research Institutions for Seismology, Program for Array Seismic Studies
of the Continental Lithosphere (PASSCAL), 2006-2010
Member, Seismological Society of America, 1990-present
Member, American Geophysical Union, 1988-present

Recent Publications

Rodgers, A. J., Pitarka, A., Petersson, N. A., Sjogreen, B., & McCallen, D. B. (2018). Broadband (0– 4 Hz) ground motions for a magnitude 7.0 Hayward fault earthquake with 3-D structure and topography. *Geophys. Res. Lett.*, 45. <https://doi.org/10.1002/2017GL076505>

Rodgers, A. J., L. J. Hwang, and L. H. Kellogg (2018), Computational seismology workshop trains early-career scientists, *Eos*, 99, doi: 10.1029/2018EO090991

Kim, K., Rodgers, A., & Seastrand, D. (2018). Local infrasound variability related to in situ atmospheric observation. *Geophys. Res. Lett.*, 45, 2954–2962, doi: 10.1002/2018GL077124

Pitarka, A., A. Al-Amri, M. E. Pasyanos, A. J. Rodgers, and R. J. Mellors (2014). Long-Period Ground Motion in the Arabian Gulf From Earthquakes in the Zagros Mountains Thrust Belt, *PAGEOPH*, 172, 10, 2517-2532, doi:10.1007/s00024-014-0858-z

Ford, S. R., A. J. Rodgers, H. Xu, D. C. Templeton, P. Harben, W. Foxall, and R. E. Reinke (2014). Partitioning of Seismo-acoustic Energy and Estimation of Yield and Height-of-burst/Depth-of-burial for Near-surface Explosions, *Bull. Seismo. Soc. Amer.*, 104 (2), 608-623, doi:10.1785/0120130130.

Xu, H. Arthur J. Rodgers, Ilya N. Lomov, and Oleg Y. Vorobiev, (2014). Seismic Source Characteristics from Simulations of Nuclear and Chemical Explosions in Granite, *Pure and Applied Geophysics*, 171, 507-521, doi:10.1007/s00024-012-0623-0.

Xu, H., A. J. Rodgers, I. N. Lomov, N. A. Petersson, B. Sjogreen and O. Y. Vorobiev (2013). Simulation of Explosion Ground Motions Using a Hydrodynamic-to-Elastic Coupling Approach in Three-Dimensions, *Bull. Seism. Soc. Am.*, 103, doi:10.1785/0120120180

Aagaard, B. T., R. W. Graves, A. Rodgers, T. M. Brocher, R. W. Simpson, D. Dreger, N. A. Petersson, S. C. Larsen, S. Ma, and R. C. Jachens (2010). Ground motion modeling of Hayward fault scenario earthquakes, Part II: Simulation of long-period and broadband ground motions, *Bull. Seismo. Soc. Am.*, 100(6), 2945-2977, doi: 10.1785/0120090379.

Rodgers, A., N. A. Petersson and B. Sjogreen (2010). Simulation of topographic effects on seismic waves from shallow explosions near the North Korean nuclear test site with emphasis on shear wave generation, *J. Geophys. Res.-Sol. Ea.*, 115, B11309.

Zucca, J., W. Walter, A. Rodgers, P. Richards, M. Pasyanos, S. Myers, T. Lay, D. Harris and T. Antoun (2009). The Prospect of Using Three-Dimensional Earth Models to Improve Nuclear Explosion Monitoring and Ground-motion Hazard Assessment, *Seismol. Res. Lett.*, 80, 31-39.

Aagaard, B. T., T. M. Brocher, D. Dolenc, D. Dreger, R. W. Graves, S. Harmsen, S. Hartzell, S. Larsen, K. McCandless, S. Nilsson, N. A. Petersson, A. Rodgers, B. Sjogreen, M. L. Zoback (2008). Ground-Motion Modeling of the 1906 San Francisco Earthquake, Part II: Ground-Motion Estimates for the 1906 Earthquake and Scenario Events, *Bull. Seismo. Soc. Am.*, 98(2), 1012-1046, doi: 10.1785/0120060410.

Rodgers, A., N. A. Petersson, S. Nilsson, B. Sjogreen, K. McCandless (2008). Broadband waveform modeling of moderate earthquakes in the San Francisco Bay Area and preliminary assessment of the USGS 3D seismic velocity model, *Bull. Seismol. Soc. Am.*, 98, 969-988, doi: 10.1785/0120060407.

Hansen, S. E., A. Rodgers, S. Schwartz and A. Al-Amri (2007). Imaging ruptured lithosphere beneath the Red Sea and Arabian Peninsula, *Earth Planet. Sc. Lett.*, 259, 256-265.