

CURRICULUM VITAE
JOHN D. WEST

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RESEARCH INTERESTS

Seismology
Upper mantle dynamics
Seismic data management software
Small-footprint seismic instrument design

EDUCATION

Arizona State University	Seismology (Ph.D. program, Advisor: Edward Garnero)	2010+
Arizona State University	Seismology (MS, Advisor: Matt Fouch)	2010
New Mexico State University	Geology (course work)	2005
North Carolina State University	Electrical & Computer Engineering (course work)	1983-1987
Rose-Hulman Institute of Technology	Electrical Engineering (BSEE)	1979

EMPLOYMENT

2015+	Graduate Student (Ph.D.), Arizona State University
2010-2014	Graduate Research Assistant (Ph.D.), Arizona State University
2007-2008	Graduate Research Assistant (MS), Arizona State University
1999-present	President, Silverheels Software, Scottsdale, AZ
1994-1999	Independent Software Developer
1995-1996	Consultant, Financial Dynamics, Inc., Raleigh, NC
1986-1996	President, Network Group, Inc., Raleigh, NC
1989-1994	President, Environmental Sensing Devices, Inc., Raleigh, NC
1984-1986	Project Engineer, FiberLAN, Inc., Research Triangle Park, NC
1981-1984	Development Engineer, AMP, Inc., Winston-Salem, NC
1981	Engineer II, Teledyne Brown Engineering, Huntsville, AL
1979-1981	Instrumentation Engineer, Pratt & Whitney Aircraft Group, West Palm Beach, FL

FIELD EXPERIENCE

2006-2009	High Lava Plains Continental Dynamics seismic experiment (HLP)
2014	The Southeastern Suture of the Appalachian Margin Experiment (SESAME)
2014	Pre-Hydrofracking Regional Assessment of Central Carolina Seismicity

(PHRACCS)
2015 Geophysical Methods for Volcano Monitoring field class (Pucon, Chile)

PROFESSIONAL AFFILIATIONS

American Geophysical Union
Geological Society of America
Seismological Society of America

PROFESSIONAL CREDENTIALS

Professional Engineer (PE), registered in North Carolina and Louisiana (inactive)
Microsoft Certified Systems Engineer
Certified PowerBuilder Developer Professional

PATENTS

US Patent #5,074,053, Magnetically Actuated Linear Position Sensor
US Patent #4,477,132, Connector for Twin Axial Cable

HONORS & AWARDS

ASU SESE Merit Award, 2010
Best Student Paper Award Honorable Mention, EarthScope National Meeting, 2009

PUBLICATIONS

West, J.D., M.J. Fouch, EMERALD: A Web Application for Seismic Event Data Processing, *Seismological Research Letters*, **83** (6), (2012) doi:10.1785/0220110138.
West, J.D., M.J. Fouch, J.B. Roth, and L.T. Elkins-Tanton, Vertical mantle flow associated with a lithospheric drip beneath the Great Basin, *Nature Geoscience*, **2**, 439 - 444 (2009) doi:10.1038/ngeo526.

PRESENTATIONS AT PROFESSIONAL MEETINGS

West, J.D., E. Garner, and M. Shirzaei, Earthquake Weather: Linking Seismicity, Barometric Pressure, and Earth Tides, CIDER Summer Program 2015.
West, J.D., E. Garner, and M. Shirzaei, Triggered Seismicity due to Barometric Pressure Changes, SSA Annual Meeting, 2015.
West, J.D., E. Garner, and M.J. Fouch, Local Seismic Event Detection using Image Processing Techniques, AGU Fall Meeting, 2013.
West, J.D., and M.J. Fouch, The IRIS-Bus Concept for Seismic Instrumentation, IRIS Seismic Instrumentation Technology Symposium, 2013.
West, J.D., and M.J. Fouch, Detecting Small Seismic Events by Applying Image Processing Techniques to Transportable Array Data, EarthScope National Meeting, 2013.
West, J.D., J.S. Lockridge, and M.J. Fouch, Automated Detection of Small Seismic Events using the Transportable Array, AGU Fall Meeting, 2012.
Porter, R.C., M.J. Fouch, **J.D. West**, and C.M. Allison, Dynamic Lithosphere Beneath the Southwestern US, Geological Society of America annual meeting, 2012.
West, J.D., and M.J. Fouch, Investigating Long-Term Seismic Activity using Integrated Ground Motion, IRIS Workshop, 2012.
Fouch, M.J. and **J.D. West**, The Mantle Flow Field Beneath Western North America, IRIS Workshop, 2012.

West, J.D., M.J. Fouch, and J R. Arrowsmith, Case Studies in Seismic Data Processing using EMERALD, EarthScope National Meeting, 2011.

West, J.D., M.J. Fouch, and J R. Arrowsmith, EMERALD: A Flexible Framework for Managing Seismic Data, AGU Fall Meeting, 2010.

Holt, W. E., Fouch, M. J., Flesch, L. M., Klein, E. C., **West, J. D.**, Short-Term versus Steady-State Crustal Deformation: Are Some Anomalies Driven by Transient Coupling with Mantle Flow?, AGU Fall Meeting, 2010.

West, J.D., M.J. Fouch, and J R. Arrowsmith, EMERALD: Managing the Explosion in Seismic Data, IRIS Annual Workshop, 2010.

West, J.D., M.J. Fouch, and J R. Arrowsmith, EMERALD: Software for Managing Large Seismic Data Sets, SSA Annual Meeting, 2010.

Fouch, M.J., and **J.D. West**, The mantle flow field beneath western North America, SSA Annual Meeting, 2010.

West, J.D., M.J. Fouch, J.B. Roth, and L.T. Elkins-Tanton, The Great Basin lithospheric drip: detection of vertical mantle flow, *Eos Trans. AGU*, **90(52)**, Fall Meet. Suppl., Abstract U33C-05, 2009, (invited talk).

West, J.D., M.J. Fouch, and J.R. Arrowsmith, EMERALD: Coping with the Explosion of Seismic Data, *Eos Trans. AGU*, **90(52)**, Fall Meet. Suppl., Abstract U51C-0028, 2009.

Fouch, M.J., W.E. Holt, B.P. Wernicke, J.L. Davis, **J.D. West**, E.C. Klein, L.M. Flesch, E. Chong, Dynamics of Great Basin Crust-Mantle Coupling, *Eos Trans. AGU*, **90(52)**, Fall Meet. Suppl., Abstract U51C-0028, 2009.

Fouch, M.J., and **J.D. West**, Plate tectonics and the mantle flow field beneath western North America, EarthScope National Meeting, 2009.

West, J.D., M.J. Fouch, J.B. Roth, and L.T. Elkins-Tanton, Vertical mantle flow associated with a lithospheric drip beneath the Great Basin, EarthScope National Meeting, 2009, (student poster honorable mention).

Holt, W. E., M.J. Fouch, E. Klein, **J.D. West**, and L.M. Flesch, GPS Measured Contraction in Nevada in the Vicinity of the Great Basin Mantle Drip, EarthScope National Meeting, 2009.

Zandt, G., E. Humphreys, M.J. Fouch, and **J.D. West**, The role of toroidal mantle flow in the tectonic evolution of the western US: Emerging evidence from Earthscope, EarthScope National Meeting, 2009.

James, D.E., M.J. Fouch, **J.D. West**, and J. Johnson, High Lava Plains Seismic Experiment: Lessons from a major broadband deployment, SSA National Meeting, 2009.

Beghein, C., A. Snoke, M.J. Fouch, and **J.D. West**, Azimuthal anisotropy from surface waves in the Great Basin, *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract DI13A-1676, 2008.

Fouch, M.J., and **J.D. West**, High-resolution imaging of the mantle flow field beneath western North America, *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract U53C-06, 2008.

Fouch, M.J., F-C. Lin, M.H. Ritzwoller, and **J.D. West**, Seismic azimuthal anisotropy beneath the western United States from ambient noise tomography and shear wave splitting, *Eos Trans. AGU*, **89(53)**, Fall Meet. Suppl., Abstract S32B-01, 2008.

West, J.D., M.J. Fouch, J.B. Roth, and L. Elkins-Tanton, Geophysical detection of lithospheric delamination beneath the central Great Basin, United States, IRIS National Meeting, Stevenson, WA, 2008.

West, J.D., and M.J. Fouch, Shear-wave splitting in the Great Basin, *Eos Trans. AGU*, **88(52)**, Fall Meet. Suppl., Abstract S41B-0556, 2007.

West, J.D., and M.J. Fouch, Shear-wave splitting in the Great Basin, EarthScope National Meeting, Monterey, CA, 2007.

James, D.E., M. Fouch, K. Eager, S. Nair, J. Roth, L. Warren, C. Beghein, **West, J.D.**, R. Carlson, J. Johnson, and others, The High Lava Plains Broadband Seismic Experiment: Objectives, Status and Preliminary Results, *AGU Fall Meeting Abstracts*, 2006.

MANUSCRIPTS IN PREPARATION

Fouch, M.J., and **J.D. West**, The mantle flow field beneath the western United States, in preparation for *Earth Planet. Sci. Lett.*, 2012.

Holt, W., M.J. Fouch, E. Klein, **J.D. West**, and L.M. Flesch, Short-term versus steady-state crustal deformation in western U.S. Great Basin: evidence for transient coupling with mantle flow?, in preparation for *Earth Planet. Sci. Lett.*, 2012.

INVITED PRESENTATIONS & OUTREACH

West, J.D., The Lazy Programmer: Lessons in code reuse from my 17 years as a software developer, EarthScope USArray Data Processing and Analysis Short Course, Northwestern University, 2011.

West, J.D., EMERALD: A software framework for seismic event processing, EarthScope USArray Data Processing and Analysis Short Course, Northwestern University, 2011.

West, J.D. and M.S. Miller, FuncLab: A Matlab interactive toolbox for handling receiver function datasets, EarthScope USArray Data Processing and Analysis Short Course, Northwestern University, 2011.

West, J.D., Introduction to Web Services, Arizona State University, 2011.

West, J.D., EMERALD: An extensible database application for seismic investigation, PASSCAL Instrument Center, 2010.

West, J.D., EMERALD: An extensible database application for seismic investigation, IRIS Data Management Center, 2009.

SCIENTIFIC COMMUNITY ACTIVITIES

Reviewed proposal for National Science Foundation, 2014

Reviewed manuscript for Seismological Research Letters, 2013.

Reviewed manuscript for Earth and Planetary Science Letters, 2012.

Member of USArray Transportable Array Working Group, 2011-2013.

Member of Nature Reader Panel, 2010-2011.

Reviewed manuscript for Geology magazine, 2010.

Reviewed proposal for National Science Foundation, 2010.