HEATHER RENE DESHON

CURRICULUM VITAE

Huffington Dept. of Earth Sciences
Southern Methodist University
PO Box 750395
Dallas, TX 75275-0395

office: (214) 768-2916
fax: (214) 768-2701
hdeshon@smu.edu
faculty.smu.edu/hdeshon

EDUCATION

Ph.D., Earth Science (Geophysics), University of California, Santa Cruz, June 2004.
Thesis title: *Seismogenic zone structure along the Middle America subduction zone, Costa Rica*.
Primary thesis advisor: Dr. Susan Schwartz
B.S., magna cum laude with honors in the liberal arts, Geophysics and Mathematics, Southern Methodist University, May 1999.

POSITIONS HELD

Associate Professor, Roy M. Huffington Department of Earth Sciences, Southern Methodist University, August 2012-present.
Assistant Research Professor, Center for Earthquake Research and Information (CERI) and Department of Earth Sciences, University of Memphis, July 2007-June 2012.
Assistant Scientist, Department of Geology and Geophysics, University of Wisconsin-Madison, July 2006-June 2007.
Post Doctoral Research Associate, Department of Geology and Geophysics, University of Wisconsin-Madison, primary collaborator Dr. Clifford Thurber, September 2004-June 2006.
Post Doctoral Research Associate, Institute of Geophysics and Planetary Physics, University of California-Santa Cruz, primary collaborator Dr. Susan Schwartz, July-August 2004.
Graduate Research Assistant, Earth Sciences Department, University of California-Santa Cruz, primary advisor Dr. Susan Schwartz, September 1999-June 2004.
Undergraduate Research Assistant, Department of Geological Sciences, Southern Methodist University, primary research advisor Dr. Vicki Hansen, Fall 1996-Summer 1999.

TEACHING EXPERIENCE

Courses Taught/Developed
Southern Methodist University

- GEOL 6380 Geophysical Inverse Theory (3 credits)

University of Memphis

- ESCI 7702 Seminar in Seismology (3 credits)
  - *Topic: The Seismogenic Zone of Subduction Thrust Faults*
- ESCI 7205 Data Analysis in Geophysics (3 credits)
- ESCI 7603 Inverse Methods in Geophysics (3 credits)
- ESCI 7621 Independent Study (1-3 credits)
  - *Topic: Identifying the Lithosphere/Asthenosphere Boundary in the Central US*
  - *Topic: Double Difference Tomography – Applications to the New Madrid Seismic Zone*
  - *Topic: Seismogenic Zone Processes*
  - *Topic: Waveform Cross-correlation – Applications to the New Madrid Seismic Zone*
  - *Topic: Analysis of the IRIS Chile RAMP data*

- *Topic: Antelope: Love it or hate it, here is how to use it*

Teaching Assistant, University of California-Santa Cruz

- Planetary Discovery (undergraduate level), Spring 2003.
- The Dynamic Earth (undergraduate level), Spring 2001, 2002.
- Earth Catastrophes (undergraduate level), Spring 2000.

Teaching Assistant, Southern Methodist University

- Earth Systems (undergraduate level), Fall and Spring 1997, Fall 1998.

GRANTS

National Science Foundation grant, Collaborative Research: Examining the variation in earthquake parameters along the Nicaragua and Costa Rica subduction zone using onshore and offshore seismic data, PI: H.R. DeShon. Start date: 9/15/2012, Duration: 12 months, SMU Request: $51,027.

United States Geological Survey grant, Integrating USArray and Cooperative New Madrid Seismic Network Data to Establish Central US Catalog Location and Magnitude Sensitivities, NEHERP, PI: H.R. DeShon [UoM/SMU], Start date: 1/1/2012, Duration: 12 months, UoM Request: $21,920. Transfer to SMU: $13,648.

United States Geological Survey grant, Improving Regional Ground Motion Attenuation Boundaries and Models Using EarthScope USArray Data for Use in the National Seismic Hazards Mapping Project, NEHERP, PI: C.H. Cramer; Co-PI H.R. DeShon, Start Date: 1/1/2012; Duration: 24 months, UoM Request: $135,670.

National Science Foundation grant, Collaborative Research: Northern Embayment Lithosphere Experiment (NELE), EAR-Earthscope, PI: C.A. Langston; Co-PIs H.R. DeShon, S. Horton, and C.A. Powell [UoM], C. Ammon [Penn St.], B. Hermann [SLU], Start date: 06/01/2011, Duration: 4 years, UoM Request: $854,273.

United States Geological Survey grant, Continuation of Detection and Location of Non-Volcanic Tremor in the New Madrid Seismic Zone, NEHRP, PI: H.R. DeShon; Co-PIs: C. Langston & S. Horton [UoM]. Start date: 12/01/2010, Duration: 12 months, UoM request: $76,815.

United States Geological Survey grant, Imaging Body Wave Attenuation Heterogeneity within the New Madrid Seismic Zone using Local Earthquakes, NEHRP, PI: H.R. DeShon [UoM]. Start date: 01/01/2010, Duration: 12 months, UoM request: $64,341.

United States Geological Survey grant, Detection and Location of Non-Volcanic Tremor in the New Madrid Seismic Zone, NEHRP, PI: C. Langston; Co-PIs: H.R. DeShon, S. Horton, M. Withers [UoM]. Start date: 09/01/09, Duration: 12 months, UoM request: $53,000.

National Science Foundation grant, Collaborative Research: Defining locations and patch sizes for slow earthquake ruptures in subduction zones, Marine Geology and Geophysics, PIs: H.R. DeShon [UoM], S.L. Bilek [New Mexico Tech], E.R. Engdahl [U. Colorado], Start date: 02/01/09, Duration: 24 months, UoM request: $83,573.

National Science Foundation grant, Imaging 3D Seismic Velocity and Attenuation Heterogeneity Along the Seismogenic Zone of Costa Rica and Nicaragua, MARGINS Program, PIs: H.R. DeShon [UoM]. Start date: 02/01/09, Duration: 24 months, UoM request: $132,513.

National Science Foundation grant, Collaborative Research: High-precision teleseismic relocation and tomography for the M 9 and M 8.7 Sumatra great earthquake sequences, EAR-Geophysics, PI H.R. DeShon [Univ. Wisconsin], Co-PIs C. Thurber and H. Zhang (Univ. of Wisconsin), PI E.R. Engdahl [Univ. of Colorado], PI M. Brudzinski [Univ. of Miami-Ohio], and PI F. Waldhauser [Columbia Univ.], Start date: 07/01/2007, Duration: 24 months, Univ. Wisconsin award $135,920. *Moved to Univ. Memphis on 7/1/2007* Start date: 07/01/2007, Duration: 12 months, extended through 06/31/2011. UoM award: $45,056.

HONORS and AWARDS

GeoPRISMS Distinguished Lecturer, NSF GeoPRISMS Subduction Cycles and Deformation program speaker, Spring 2013.

Honorable Mention, NSF MARGINS program Outstanding Student Presentation at the American Geophysical Union Fall Meeting, 2003.

ARCS Scholarship Recipient, Achievement Rewards for College Scientists Foundation, 2001-2002.

Regents Fellowship, University of California Santa Cruz, 1999.

Invited participant, 5th Workshop on Three Dimensional Modeling of Seismic Waves Generation, Propagation, and Inversion, Trieste, Italy. Selected as 1 of 8 U.S. student participants, 2000.
President Scholar, Southern Methodist University, 1997-1999.
Barry Goldwater Research Scholarship for Science and Engineering, Barry Goldwater Foundation, 1997-1999.
Phi Beta Kappa, inducted 1999.
Mustang Award for Outstanding Student Leadership, Southern Methodist University, 1999
John Robert McCaw Merit Award in Mathematics, Southern Methodist University, 1999
Academic Excellence Award in Geological Sciences, Southern Methodist University, 1999
Karen Kellogg Memorial Scholarship, Dallas Geophysical Society, 1998
Fosque Geology Scholar, Southern Methodist University, 1995-1997.
Edwin and Louise Jordan Scholarship, Southern Methodist University, 1995-1997.

ACADEMIC SERVICE

Associate Editor, Bulletin of the Seismological Society of America [BSSA] (appointed July 2009)

Panel Member, NSF EAR (Spring 2011) and OCE (Fall 2011); USGS NEHRP Program (Summer 2011)

Reviewer, National Science Foundation; Natural Environment Research Council, UK; Bulletin of the Seismological Society of America; Earth and Planetary Science Letters; Geochemistry, Geophysics, Geosystems; Geology; Geophysical Journal International; Geophysical Research Letters; Journal of Geophysical Research; Science, Physics of the Earth and Planetary Interiors, Tectonics, Tectonophysics.

Professional Meeting Session Convener/Organizer
- AGU Fall 2011: Progress in Understanding Intraplate Faulting
- SSA Spring 2011: Integrating Geodynamic, Structure and Deformation Studies of the Seismogenic and Transition Zones in Subduction Zones and Other Margins
- AGU Fall 2008: Crustal Structure of the Central and Eastern US
- AGU Fall 2007: Earthquakes and Tsunami of the Eastern Indian Ocean

New Madrid Seismic Zone Field Trip Organizer, developed for the Seismological Society of America Spring 2011 Meeting in Memphis, TN.

NSF GeoPRISMS Subduction Cycles and Deformation Implementation Workshop Co-convener, Workshop held in Austin, TX, January 5-7, 2011.

OUTREACH ACTIVITIES

IRIS Active Earth Display module on the New Madrid Seismic Zone, developed paleoseismology section and serve as contact person with IRIS developers. The display went live in late 2011.

Science Fair Judge, 5th grade, Crosswinds Elementary School, Collierville, January 28, 2010.

Filmed textbook supplement for Untamed Science. Topic was the New Madrid Seismic Zone. March 11, 2009

Co-developed and then facilitated an earthquake location exercise aimed at 7-8th graders and specific to the New Madrid Seismic Zone. This was done in conjunction with Beatrice Magnani as workshop leaders for the 'Expanding Your Horizons/GEMS (Girls Empowered by Math and Science)' program. This day-long outreach program was sponsored by American Association of University, Women, AAUW - Memphis Branch & the University of Memphis, Herff College of Engineering on Oct. 18, 2008.

Special Programs Teacher, Earthquakes module in the COSMOS program (California high school student summer program for Science and Mathematics), Summer 2000.

PROFESSIONAL AFFILIATIONS

Seismological Society of America (SSA) American Geophysical Union (AGU)

JOURNAL and BOOK ARTICLES

Van Arsdale, R.B., H.R. DeShon, and M.P. Tuttle (2012), New Madrid Seismic Zone field trip guide, in *From the Blue Ridge to the Coastal Plain: Field Excursions in the Southeastern United States,* eds. M.C. Eppes and M.J. Bartholomew, Geological Society of America Field Guide 29, p. 1-14, doi: 10.1130/2012.029(04).

Pesicek, J.D., E.R. Engdahl, C.H. Thurber, H.R. DeShon, and D. Lange (2012), Mantle subducting slab structure in the region of the 2010 M8.8 Maule earthquake (30-40ºS), Chile, *Geophys. J. Int*, doi: 10.1111/j.1365-246X.2012.05624.x.

Graham, S.E., C. DeMets, H.R. DeShon, R. Rogers, M. Rodriguez Maradiaga, W. Strauch, K. Wiese, and D. Hernandez (2012), GPS and seismic constraints on the M = 7.3 2009 Swan Islands earthquake: implications for stress changes along the Motagua fault and other nearby faults, *Geophys. J. Int*., 190, p. 1625-1639, doi: 10.1111/j.1365-246X.2012.05560.x

Bilek, S., H.R. DeShon and E.R. Engdahl (2012), Spatial variations in earthquake source characteristics within the 2011 Mw 9.0 Tohoku, Japan rupture zone, *Geophysical Research Letters*, 39, L09304, doi:10.1029/2012GL051399.

Bisrat, S.T., H.R. DeShon, and C. Rowe (2012), Microseismic Swarm Activity in the New Madrid Seismic Zone, *Bulletin of the Seismological Society of America* (in press June 2012).

Bilek, S.L., E.R. Engdahl, H.R. DeShon, and M. El Hariri (2011), The 24 October 2010 Sumatra tsunami earthquake: Slip in a slow patch, *Geophysical Research Letters*, 38, L14306, doi:10.1029/2011GL047864.

Hamburger, M., K. Shoemaker, S. Horton, H.R. DeShon, M. Withers, G. Pavlis, and E. Sherrill (2011), Aftershocks of the 2008 Mt. Carmel, Illinois Earthquake: Evidence for Conjugate Faulting near the Termination of the Wabash Valley Fault System, *Seismological Research Letters*, 82, 735-747, doi: 10.1795/gssrl.82.5.735.

DeShon, H.R., C.H. Thurber, and J. Power (2010), Earthquake waveform similarity and evolution at Augustine volcano, Alaska, from 1993-2006, in *The 2006 Eruption of Augustine Volcano, Alaska*, eds. J.A. Power, M.L. Coombs, J.T. Freymueller, USGS Professional Paper 1769, p. 103-118.

Dunn, M., S. Horton, C.A. Powell and H.R. DeShon (2010), High Resolution Earthquake Location in the New Madrid Seismic Zone, *Seismological Research Letters*, 81, 406-413.

Pesicek, J.D., C.H. Thurber, S. Widiyantoro, E.R. Engdahl, and H.R. DeShon (2010), Sharpening the Tomographic Images of the Subducting Slab below the Sumatra-Andaman Region, *Geophysical Research International*, *182*, 433-453, doi:10.1111/j.1365-246X.2010.04630.x.

Pesicek, J.D., C.H. Thurber, H. Zhang, H.R. DeShon, and E.R. Engdahl (2010), Teleseismic Double-difference Relocation of the Earthquakes along the Sumatra-Andaman Subduction Zone using a Three-dimensional Model, *Journal of Geophysical Research*, *115*, B10303, doi:10.1029/2010JB007443.

Powell, C.A., H.R. DeShon, and M. Withers (2010), Intrusions and Anomalous Vp/Vs Ratios Associated with the New Madrid Seismic Zone, *Journal of Geophysical Research*, *115*, B08311, doi:10.1029/2009JB007107.

Sumiejski, L., C.H. Thurber, and H.R. DeShon (2009), Relocation of eruption-related earthquake clusters at Augustine volcano, Alaska, using station-pair differential times, *Geophysical Journal International*, 176, 1017-1022.

Pesicek, J., C.H. Thurber, S. Widiyantoro, E.R. Engdahl, and H.R. DeShon (2008), Folded slab subduction beneath Sumatra, *Geophysical Research Letters*, *35*, L20303, doi:10.1029/2008GL035262.

Pesicek, J., C.H. Thurber, H.R. DeShon, S.G. Prejean, and H. Zhang (2008), Three-dimensional P-wave velocity structure and precise earthquake relocation at Great Sitkin Volcano, Alaska, *Bulletin of the Seismological Society of America*, *98 (5)*, 2428-2448, doi:10.1785/0120070213.

DeShon, H.R., C.H. Thurber, and C.A. Rowe (2007), High-precision earthquake location and three-dimensional P-wave velocity determination at Redoubt Volcano, Alaska, *Journal of Geophysical Research*, *112*, B07312 1-24, doi:10.1029/2006JB004751.

Engdahl, E.R., A. Villasenor, H.R. DeShon, and C. Thurber (2007), Teleseismic relocation and assessment of seismicity (1918-2005) in the region of the 2004 Mw 9 Sumatra-Andaman and 2005 M 8.7 Nias great earthquakes, *Bulletin of the Seismological Society America*, *97*, S43-S61, doi:10.1785/0120050614.

Hutnak, M., A.T. Fisher, C.A. Stein, R. Harris, K. Wang, E. Silver, G. Spinelli, M. Pfender, H. Villinger, R. MacKnight, P. Costa Pinani, H.R. DeShon, and C. Diamente (2007), The thermal station of 18-24 Ma upper lithosphere subducting below the Nicoya Peninsula, northern Costa Rica, in *The Seismogenic Zone of Subduction Thrust Faults*, eds. T. Dixon and J.C. Moore, Columbia University Press, New York, 86-122.

Schwartz, S.Y. and H.R. DeShon (2007), Evidence for multiple mechanical transitions along the updip limit, Nicoya Peninsula, Costa Rica, in *The Seismogenic Zone of Subduction Thrust Faults*, eds. T. Dixon and J.C. Moore, Columbia University Press, New York, 576-599.

DeShon, H.R., S.Y. Schwartz, A.V. Newman, V. Gonzalez, J.M. Protti, L.M. Dorman, T. Dixon, E. Norabuena and E. Flueh (2006), Seismogenic zone structure beneath the Nicoya Peninsula, Costa Rica, from 3D local earthquake *P*- and *S*-wave tomography, *Geophysical Journal International*, *164*, 109-124, doi:10.1111/j.1365-246X.2005.02809.x.

Hansen, S.E., S.Y. Schwartz, and H.R. DeShon (2006), Earthquake relocation and focal mechanism determination using waveform cross-correlation, Nicoya Peninsula, Costa Rica, *Bulletin of the Seismological Society of America*, *96* (3), 1003-1011, doi: 10.1785/0120050129.

Brown, K.M., M. Tryon, H.R. DeShon, L.M. Dorman, and S.Y. Schwartz (2005), Transient fluid pulsing and seismic tremor: Evidence of episodic creep at the updip edge of the seismogenic zone, Costa Rica? *Earth Planetary Science Letters*, *238*, 189-203.

DeShon, H.R., E.R. Engdahl, C.H. Thurber, and M. Brudzinski (2005), Constraining the boundary between the Sunda and Andaman subduction systems: Evidence from the 2002 M_w 7.3 Northern Sumatra earthquake and aftershock relocations of the 2004 and 2005 great earthquakes, *Geophysical Research Letters*, *32*, L24307, doi:10.1029/2005GL024188.

Lay, T., H. Kanamori, C.J. Ammon, M. Nettles, S.N. Ward, R. Aster, S.L. Beck, S.L. Bilek, M.R. Brudzinski, R. Butler, H.R. DeShon, G. Ekström, K. Satake, and S. Sipkin (2005), The great Sumatra-Andaman earthquake of 26 December 2004, *Science*, *308*, 1127-1133.

Lay, T., H. Kanamori, C.J. Ammon, M. Nettles, S.N. Ward, R. Aster, S.L. Beck, S.L. Bilek, M.R. Brudzinski, R. Butler, H.R. DeShon, G. Ekström, K. Satake, and S. Sipkin (2005), Response to Comment on "The great Sumatra-Andaman earthquake of 26 December 2004". [Editorial Material] *Science, 310*, NIL_3.

DeShon H.R. (2004), Seismogenic zone structure along the Middle America subduction zone, Costa Rica, Ph.D. Thesis, pp. 359, University of California-Santa Cruz, Santa Cruz, CA, June.

DeShon, H.R., and S.Y. Schwartz (2004), Evidence for serpentinization of the forearc mantle wedge along the Nicoya Peninsula, Costa Rica, *Geophysical Research Letters*, *31*, L21611 1-4, doi:10.1029/2004GL021179.

Norabuena, E., T.H. Dixon, S.Y. Schwartz, H.R. DeShon, M. Protti, L. Dorman, E.R. Flueh, P. Lundgren, A. Newman, F. Pollitz, D. Sampson (2004), Geodetic and seismic constraints on seismogenic zone processes in Costa Rica, *Journal of Geophysical Research*, *109*, B11403 1-25, doi:10.1029/2003JB002931.

Silver, E., P. Costa Pisani, M. Hutnak, A. Fisher, H.R. DeShon, and B. Taylor (2004), An 8-10 Ma tectonic event on the Cocos Plate offshore Costa Rica: Result of Cocos Ridge collision?, *Geophysical Research Letters*, *31*, L18601 1-4, doi:10.1029/2004GL020272.

Bilek, S.L., S.Y. Schwartz, and H.R. DeShon (2003), Control of seafloor roughness on earthquake rupture behavior, *Geology, 31,* 455-458.

DeShon, H.R., S.Y. Schwartz, S.L. Bilek, L.M. Dorman, V. Gonzalez, J.M. Protti, E.R. Flueh, and T.H. Dixon (2003), Seismogenic zone structure of the southern Middle America Trench, Costa Rica, *Journal of Geophysical Research, 108*, doi:10.1029/2002JB002294.

Newman, A.V., S.Y. Schwartz, V. Gonzalez, H.R. DeShon, J.M. Protti, and L.M. Dorman (2002), Along-strike variability in the seismogenic zone below Nicoya Peninsula, Costa Rica, *Geophysical Research Letters, 29,* 1977 1-4, doi: 10.1029/2002GL015409.

DeShon, H.R., D.A. Young and V.L. Hansen (2000), Geologic evolution of southern Rusalka Planitia, Venus, *Journal of Geophysical Research, 105*, 6983-6995.

PUBLISHED MAP

Hansen, V.L. and H.R. DeShon (2002), Geologic map of the Diana Chasma Quadrangle (V-37), Venus, Geologic Investigations Series - U. S. Geological Survey, Report: I-2752, U. S. Geological Survey, Reston, VA, USA.

INVITED PRESENTATIONS

DeShon, H.R., "Using seismic tomography to image subduction systems: Applications to Costa Rica-Nicaragua and Sumatra," Univ. of Texas Dallas, Oct. 5, 2012.

DeShon,H.R., "Antelope and SAC: An overview and short tutorial from a user's perspective," IRIS Webinar, October 3, 2012.

DeShon, H.R. and M. Moore-Driskell, "3D Double-difference tomography of the seismogenic zone beneath Costa Rica and Nicaragua," SFB574 Final Symposium, Lubeck, Germany, May 2012.

DeShon, H.R., "Using seismic tomography to image subduction systems: applications to Middle America and Sunda," NSF GeoPRISMS Implementation Planning Meeting, Jan. 6, 2011.

DeShon, H.R., "Waves through the Earth: Using seismology to understand our dynamic planet," Ruby Cook Lecture, St. Jude Children's Research Hospital, March 8, 2011.

DeShon, H.R., "Waveform Cross-correlation and Seismic Velocity Determination at Alaskan Volcanoes", Christian Albrechts Univ., Kiel, Germany, May 2008.

DeShon, H.R., "Waveform Cross-correlation and Seismic Velocity Determination at Alaskan Volcanoes", CERI, University of Memphis, November 2008.

DeShon, H.R., "Seismogenic zone behavior along the Andaman, Sunda, and Middle America subduction systems," Southern Methodist University, Dallas, TX, March 9, 2007.

DeShon, H.R., "Comparisons between seismogenic zone behavior: the Middle America Trench, Costa Rica vs. the Andaman-Sunda Trenches," Alaska Volcano Observatory, Fairbanks, AL, June 4, 2005.

DeShon, H.R., "Comparisons between seismogenic zone behavior: the Middle America Trench, Costa Rica vs. the Andaman-Sunda Trenches," Alaska Volcano Observatory, Anchorage, AL, May 31, 2005.

NON-REFEREED PUBLICATIONS

DeShon, H.R., C.A. Langston, B. Bockholt, and S.P. Horton, Final Technical Report for G11AP20005: Continuation of Detection and Location of Non-volcanic Tremor in the New Madrid Seismic Zone, submitted to the USGS on April 9, 2012.

Morgan, J. and 20 others, GeoPRISMS Implementation Plan (Subduction Cycles and Deformation), submitted to the National Science Foundation, March 2, 2011.

DeShon, H.R. and R. van Arsdale, Field Trip Guide: Taking a New Look at the New Madrid Seismic Zone, published by the Seismological Society of America as part of the 2011 annual meeting.

DeShon, H.R., C.A. Langston, S.P. Horton, and M. Withers, Final Technical Report for G09AP00141: Detection and location of non-volcanic tremor in the New Madrid Seismic Zone, submitted to the USGS on March 31, 2011.

DeShon, H.R. and S.T. Bisrat, Final Technical Report for G10AP00013: Imaging Body Wave Attenuation Heterogeneity within the New Madrid Seismic Zone using Local Earthquakes, submitted to the USGS on May 20, 2011.

ABSTRACTS

Al Noman, M.N., H.R. DeShon, C. Cramer (2012), Ground Motion Prediction for ENA: Learning from and limitations of the NGS-East Database, Seismo. Soc. of Am. Spring Meeting, San Diego, CA, April 2012.

Bilek, S.L., H.R. DeShon, E.R. Engdahl, S.T. Bisrat (2011), Investigation of spatial variations in earthquake source and frictional characteristics in the 2011 Mw 9.0 Tohoku, Japan earthquake rupture area, U51B-0034 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Bisrat, S.T., H.R. DeShon (2011), High-resolution 3-D seismic attenuation structure of the New Madrid Seismic Zone, S11B-2224 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Bockholt, B., C.A. Langston, H.R. DeShon (2011), Microtremors from the Reelfoot Fault, S11B-2225 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

DeShon, H.R., S.T. Bisrat, C.A. Powell (2011), Characterizing complex faulting and near fault velocity and attenuation heterogeneity along the New Madrid Seismic Zone, S11B-2227 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

El Hariri, M., S.L. Bilek, H.R. DeShon, and E.R. Engdahl (2011), Along-strike variations of source parameters for subduction zone earthquakes, T21B-2321 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Mataracioglu, M.O., M.B. Magnani, H.R. DeShon, R.T. Cox (2011), Investigation of collisional styles of the Caribbean LIP vs. normal oceanic crust from seismic reflection profiles, T21B-2358 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Moore-Driskell, M., H.R. DeShon (2011), 3D double difference velocity tomography of the Middle America subduction zone beneath Costa Rica and Nicaragua, T21B-2352 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Bilek, S., E.R. Engdahl, H.R. DeShon, and M. El-Hariri (2011), The 2010 Sumatra Tsunami Earthquake: Slip in a Slow Patch, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

Bockholt, B., L. Thompson, H.R. DeShon, S. Horton, and C. Langston, (2011), The Search for Non-Volcanic Tremor on the Reelfoot Fault, Northern Tennessee, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

Bisrat, S.T. and H.R. DeShon (2011), 3-D Seismic Attenuation Structure of the New Madrid Seismic Zone, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

DeShon, H.R., J.D. Pesicek, C.H. Thurber, and H. Zhang (2011), Comparisons Between High-resolution Earthquake Relocations, Thermal Modeling, and Structure along the Sunda Subduction Zone, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

El-Hariri, M., S. Bilek, H.R. DeShon, and E.R. Engdahl (2011), Investigating Along-Strike Variations of Source Parameters for Subduction-Zone Earthquakes, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

Moore-Driskell, M.M. and H.R. DeShon (2011), 3D Double Difference Velocity Tomography of the Costa Rican and Nicaraguan Subduction Zones, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

Powell, C., H.R. DeShon, and C. Langston (2011), Complex Faulting and Velocity Structure Within the New Madrid Seismic Zone, Seismo. Soc. of Am. Spring Meeting, Memphis, TN, April 2011.

DeShon, H.R., C.A. Powell, M.B. Magnani, S. Bisrat (2010), Complex Faulting within the New Madrid Seismic Zone, Am. Geophys. Union Fall Meeting, San Francisco, CA, Dec. 2010.

Bockholt, B., C.A. Langston, H.R. DeShon, S. Horton (2010), The Search for Non-volcanic Tremor on the Reelfoot Fault, Northern Tennessee, Am. Geophys. Union Fall Meeting, San Francisco, CA, Dec. 2010.

Wessale, M.S., J.D. Pesicek, E.M. Syracuse, C.H. Thurber, H.R. DeShon, J.A. Power, S.G. Prejean (2010), Comparison of Seismicity Preceding the 1989-1990 and 2009 Eruptions of Redoubt Volcano, Alaska, Am. Geophys. Union Fall Meeting, San Francisco, CA, Dec. 2010.

DeShon, H.R., M. Moore-Driskell, W. Rabbel, I. Arroyo, N. Dinc, M. Thorwart, Y. Dzierma, P-wave velocity modeling using amphibious networks along the Middle America subduction zone, Costa Rica and Nicaragua, Geophysical Hazards and Plate Boundary Processes in Central America, Mexico, and the Caribbean: A workshop to build seismological collaboration and capacity; IRIS, USAID, NSF, and AGU; Heredia, Costa Rica, Oct. 24-28, 2010.

DeShon, H.R., S. Bisrat, E.R. Engdahl, and S. Bilek (2010), Automated Identification of Teleseismically Recorded Depth Phases, *IRIS Annual Meeting*, June 2010, Snowbird, UT.

Moore-Driskell, M., H.R. DeShon, W. Rabbel, M. Thorwart, Y. Dzierma (2010), Large-scale Integration of Arrival Time Datasets for Consistent Tomography Quality Control: A Case Study of Onshore/Offshore Experiments along the Middle America Trench, *IRIS Annual Meeting*, Snowbird, UT, June 2010.

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STUDENTS

Primary advisor for:

Shishay Bisrat, Ph.D., Univ. of Memphis, expected 2012
Melissa Moore-Driskell, Ph.D., Univ. of Memphis, expected 2012

Other committee memberships (matriculated students only):

Chuntao Liang, Ph.D., Univ. of Memphis, graduated 2008
Meredith Dunn, Ph.D., Univ. of Memphis, graduated 2009
Solomon Ayele, M.S., Univ. of Memphis, graduated 2010
Chigozie Obikili, M.S. Univ. of Memphis, graduated 2011
Onur Mataracioglu, M.S., Univ. of Memphis, graduated 2012

Undergraduate Intern:

Sarah Wiley, Whitman College, IRIS Intern Summer 2009