

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. Tenure awarded September 2016.

Assistant Research Professor, Center for Earthquake Research and Information (CERI), associated with the 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 (Development Semester*)

Southern Methodist University

- GEOL 1313 Earthquakes and Volcanoes (3 credits, laboratory, undergraduate), Spring 2014-2016.
- GEOL 3380 Introduction to Geophysics (3 credits, undergraduate), Fall 2014*, 2016.
 - ⇒ GEOL 6310 Independent Study – Solid Earth Geophysics (graduate), Fall 2014
- GEOL 3359 Computer Methods in Earth Science (3 credits, undergraduate), Spring 2014*, 2016.
 - ⇒ GEOL 6309 Special Topics in Geology – Computer Methods (graduate), Spring 2014
- GEOL 5392 Introduction to Seismology (3 credits, undergraduate + graduate), Fall 2013*, 2015.
- GEOL 5320 Dynamic Earth I (3 credits, undergraduate + graduate), Spring 2013*.
- GEOL 6380 Geophysical Inverse Theory (3 credits, graduate), Fall 2012, Spring 2015.
- GEOL 6310/6210/6110 Independent Study (1-3 credits, graduate)
 - Topic: *Inverse Methods* (2 credits), Fall 2016
 - Topic: *Advanced Earthquake Location* (3 credits), Fall 2015
 - Topic: *GIS in Earth Sciences, supervising instructor* (1 credit), Fall 2015

University of Memphis

- ESCI 7603 Inverse Methods in Geophysics (3 credits), Fall 2009*, 2011
- ESCI 7205 Data Analysis in Geophysics (3 credits), Fall 2008*, 2010
- ESCI 7702 Seminar in Seismology (3 credits)
 - *Topic: The Seismogenic Zone of Subduction Thrust Faults, Spring 2008*
- ESCI 7621 Independent Study (1-3 credits)
 - *Topic: Double Difference Tomography – Applications to the New Madrid Seismic Zone, Spring 2008*
 - *Topic: Waveform Cross-correlation – Applications to the New Madrid Seismic Zone, Fall 2008*
 - *Topic: Seismogenic Zone Processes, Spring 2009*
 - *Topic: Identifying the Lithosphere/Asthenosphere Boundary in the Central US, Spring 2010*
 - *Topic: Analysis of the IRIS Chile RAMP data, Spring 2011*
 - *Topic: Antelope: Love it or hate it, here is how to use it, Fall 2011*

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 and COOPERATIVE AGREEMENTS

United States Geological Survey Cooperative Agreement, Imaging faults in induced earthquake zones using earthquakes and controlled source data – North Texas and Northern Oklahoma, PI: H.R. DeShon and M.B. Magnani, Start date: 7/1/2016, Duration: 6 months, Award \$60,479.

Texas Bureau of Economic Geology @ the Univ. of Texas Cooperative Agreement, Earthquake Source Characterization in the Fort Worth Basin, TexNet: Seismic network and earthquake research funding through the state of Texas, PI: H.R. DeShon, Start date: 1/1/2016, Duration: 2 years, Award \$200,675 (SMU Cost Share \$83,454).

United States Geological Survey Cooperative Agreement, North Texas Earthquake Study and Network Operations – Irving & Azle, PI: H.R. DeShon and M.B. Magnani, Start date: 5/18/2015, Duration: 1 year, Award \$122,337.

SMU University Research Council grant, Understanding recent North Texas Seismicity: A scientific investigation of the Azle and Mineral Wells earthquake sequences, PI: H.R. DeShon, collaborators: C. Hayward, M. Hornbach, M.B. Magnani, B. Stump, Z. Lu, Start date: 1/22/2014, Duration: 1 year, extended to 5/2016, Award \$10,000.

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, extended to 9/14/2014, SMU Award \$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 Award \$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 Award \$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, No Cost Extension to 05/31/2016, UoM Award \$854,273. Subcontract to SMU: \$87,107.

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 Award \$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 Award \$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 Award \$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 Award \$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 Award \$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

Earthscope Speaker, NSF Earthscope Program, see Invited Presentations, 2015-2016.

Downey Family Award for Faculty Excellence, Institute for the Study of Earth and Man, SMU, 2013.

GeoPRISMS Distinguished Lecturer, NSF GeoPRISMS Subduction Cycles and Deformation program speaker, see Invited Presentations, 2012-2014.

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.

Phi Beta Kappa, inducted 1999

Mustang Award ("M" award), Southern Methodist University, 1999

President's Scholar, Southern Methodist University, 1997-1999.

Barry Goldwater Research Scholarship for Science and Engineering, Barry Goldwater Foundation, 1997-1999.

PROFESSIONAL SERVICE

Representative science expert on the Central and Eastern US, National Seismic Hazard Model Steering Committee, a subcommittee of the Scientific Earthquake Studies Advisory Committee (SESAC), United States Geological Survey, appointed January 2017, 3-year term.

OBSIP Oversight Committee Member, US Ocean Bottom Seismometer Instrument Pool, managed by IRIS, appointed January 2014, 4-year term.

Associate Editor, Bulletin of the Seismological Society of America [BSSA], July 2009 - Spring 2014.

Panel Member, NSF EAR Geophysics (2), NSF OCE Marine Geology and Geophysics (2), NSF GeoPRISMS (1); USGS NEHRP Program (1)

Reviewer, National Science Foundation; Natural Environment Research Council, UK; Bulletin of the Seismological Society of America; Earth and Planetary Science Letters; Encyclopedia of Complexity and Systems Science;

Eos Transactions of the American Geophysical Union; Geochemistry, Geophysics, Geosystems; Geology; Geophysical Journal International; Geophysical Research Letters; International Journal of Earth Sciences; Journal of Geophysical Research; Science; Seismological Research Letters; New Zealand Journal of Geology and Geophysics; Physics of the Earth and Planetary Interiors; Tectonics; Tectonophysics.

Professional Meeting/Workshop Organizing Committee

Ocean Bottom Seismometer Instrument Pool 2017 Symposium, Pittsburgh, PA, Oct X-X 2017.
IRIS USArray Processing and Analysis Short-Course, Focus on the Wavefield Experiment, Indiana University, Aug. 7-11, 2017.
Ocean Bottom Seismometer Instrument Pool 2015 Symposium, Vancouver, WA, Oct 6-8 2015.
New Madrid Seismic Zone Field Trip Organizer, Seismological Society of America Spring 2011 Meeting, Memphis, TN, April 2011.
NSF GeoPRISMS Subduction Cycles and Deformation Implementation Workshop, Austin, TX, January 5-7 2011.

Professional Meeting Session Organizer

IRIS Workshop 2014: Unexpected Science: New Approaches to Using Array Data
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

Short Course Instructor

IRIS USArray Short-Courses
Advanced: Processing and Analysis Short Course (Focus on the Wavefield Experiment), Antelope Databases and Template Matching Approaches, Indiana University, Aug. 7-11 2017.
Beginners: Processing and Analysis Short Course, Antelope Databases and Processing using Antelope/Matlab/Python, Northwestern University, Aug. 3-5 2016.

Antelope: An overview and short tutorial from a user's perspective, developed and maintain a website for general use and provide the tutorial as a short-course (bullets),

<http://faculty.smu.edu/hdeshon/Antelope/index.html>

- University of California Santa Cruz, June 2013
- Volcanological and Seismological Observatory of Costa Rica, Universidad Nacional, 2005

FIELD EXPERIENCE

Principal Investigator, North Texas temporary seismic network and rapid response, Azle: maintain ~13 stations; Irving: deploy and run between 11-22 stations at any one time; Venus: deploy and maintain between 10-15 stations; with team from Southern Methodist University (Stump, Hornbach, Magnani, Hayward), Dec. 2013 – present.

Science Concept Contributor and Field Team Member, IRIS Community Wavefield Experiment in Oklahoma, 18 broadband, 6 infrasound, and 300+ 3component nodal-type sensors placed to maximize recording of the full wavefield and test array design concepts, north-central Oklahoma (east-northeast of Enid); with team members: K. Anderson, J. Sweet, B. Woodward (IRIS); S. Bilek (NMT); M. Brudzinski (Miami-Ohio); M.B. Magnani, C. Hayward, B. Stump (SMU); X. Chen (Oklahoma) S. Karplus (UTEP), C. Langston (CERI-Memphis); F-C Lin (Utah), June-Nov. 2016.

Co-Principal Investigator, Northern Mississippi Embayment Lithosphere Experiment (NELE), 83 PASSCAL/Earthscope Flexible Array seismic experiment, Sept. 2012-present

Principal Investigator (2010-2011) & Co-PI (2009-2010), NVT Array in New Madrid Seismic Zone, 19 PASSCAL seismic stations in array configuration near Ridgely, TN, with team from U. of Memphis, Sept 2009-2011.

Team Member, Rapid Response to the 2004 Parkfield earthquake, deployed PASSCAL seismic stations near Parkfield, CA, with team from U. Wisconsin, Sept. 2004.

Team Member, TICOFLUX II cruise R/V Melville, Shipboard seismic reflection data processing (2 GI guns, 4 channel, 200 m streamer) offshore the Nicoya Peninsula, Costa Rica with a team from UCSC, Oct-Sept 2002.
Team Member, CRSEIZE, Deployed 20 PASSCAL seismic stations on the Nicoya Peninsula, Costa Rica with team from UCSC, Nov-Dec 1999.
Team Member, CRSEIZE, PAGANINI cruise SO14-1a, Deployed 14 Ocean Bottom Seismometers offshore the Osa Peninsula, Costa Rica with team from UCSD, Sept 1999.

UNIVERSITY SERVICE

Southern Methodist University

Guild of Marshals, Opening Convocation and Rotunda Passage, Student Marshall, 2014-2016
Faculty and Alumni Mentor, President's Scholar Program, 2014-present

Student Scholarship

President's Scholar Reading Committee, 2014-present
Hyer Society Selection Committee, Fall 2012 - Spring 2015

University

Council on General Education, Dedman College Division III Representative, Fall 2016-present
Faculty Senate Subcommittee, All-University Finance Committee, member, Fall 2016-present
University Curriculum Ways of Knowing Vetting Committee, Fall 2014-Spring 2016
University Curriculum Working Group, chair P. Moore, Summer 2015

Dedman College of Arts and Sciences

Dean's Research Advisory Committee, member, Fall 2016-present

Huffington Department of Earth Sciences

Search Committees

-Foscue-Scholar Endowed Chair, 2011-2013
-Structural Geology/Tectonics, 2012-2013

Miscellaneous

AARO, Faculty Panel for Transfer Students, Fall 2016
Graduate School Orientation, Faculty Panel on "How to be a great graduate student", Fall 2016
Emerging Leaders Program, Office of the Provost, Spring 2016
Board of Trustees Student Affairs Standing Committee, Student Representative, 1998-1999

University of Memphis

Dept. of Earth Sciences Graduate Program Committee, Jan. 2009 - June 2011
CERI Working Group on Data Conversion, 2009-2012, chair 2011-2012
CERI Rapid Response Committee, 2007-2013
CERI Graduate Curriculum and Graduate Recruitment Committees, 2007-2012

University of California Santa Cruz (Graduate Student)

UC Graduate Council, UCSC Representative, 2001-2002
UCSC Graduate Council, 2000-2002

EDUCATION & OUTREACH ACTIVITIES

North Texas Seismicity

Dallas-Irving Working Group on Earthquake Incidents, monthly or as necessary meetings with Dallas county emergency managers, city managers and press officers, USGS, SMU (DeShon, Stump, Hayward), FEMA; Jan. 2015 – present

Perot Museum of Nature and Science, Science Flash Exhibit, approximately Nov 2015 - present.

City and State Presentations

- Texas Railroad Commission, public hearing on Azle earthquakes, convened by Commissioner Sitton, (Hornbach, DeShon – lead speakers, Stump, Magnani, Hayward, Frohlich, Ellsworth), June 5 2015.
- Texas House Committee on Energy Resources (Hornbach, Stump – speaking; DeShon, Hayward, Magnani document preparation), May 4 2015.
- Irving City Council (Stump, DeShon), Jan. 15 2015.
- Texas House Committee on Energy Resources, Subcommittee on Seismic Activity (Stump, DeShon), May 7 2014.

Community Presentations & Long-form Media Interviews

- KCUR Up to Date, National Public Radio Kansas City, studio interview with DeShon, March 28 2017.
- Association of Petroleum Landmen, Dallas Chapter, Feb. 21 2016.
- Texas Association of Assessing Officers, North Texas, Oct. 24 2016.
- Houston Geological Society, Apr. 13 2016.
- Petroleum Engineers Club of Dallas, Jan. 29 2016.
- KERA THINK Program, National Public Radio Dallas, studio interview with DeShon and Stump, Jan. 13 2015.
- TX Association of Professional Geoscientists, Conference on Hydraulic Fracturing and Environmental Implications, Nov. 12 2014.
- Association of Environmental and Engineering Geologists, TX Chapter, Fall 2014 regional meeting, Oct. 10 2014.
- Environmental Education Lecture Series, C.C. Young Senior Living, Sept. 10 2014.
- KERA and ImpactTexas, National Public Radio, panel discussion on North Texas Earthquakes, Azle High School, June 18 2014.
- Turtle Creek Breakfast Club, Dallas Country Club, April 2 2014.

Response to media requests – local, national and international coverage

Al Jazeera America - TechKnow Science Program: Discussed North Texas earthquakes for a 10-15 minute long program on induced or potentially induced seismicity. Aired Nov 2014.

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.

K-12+ Outreach Activities

- Dallas County Community Colleges STEM Summit, Guest Presentation on Opportunities in Geophysics, April 21 2017.
- Irving ISD Travis Middle School, pre-AP Mathematics classes, Where's it Rockin': Irving-Dallas earthquake epicenter location exercise, Jan. 7 2016. SMU campus day-long visit Feb. 26 2016.
- Richardson ISD Merriman Park Elementary School,
 - Career Day, K-3rd grade, May 27 2016
 - Panther Pals Math Tutor, Kindergarten, Spring 2015
- Azle Public Library, Science Activity Afternoon, June 19 2014.
- Science Fair Judge, 5th grade, Crosswinds Elementary School, Collierville, TN, January 28 2010.
- Filmed textbook supplement for Untamed Science. Topic was the New Madrid Seismic Zone. March 11 2009.
- Workshop leader for the 'Expanding Your Horizons/GEMS (Girls Empowered by Math and Science)' program, Where's it Rockin': New Madrid epicenter location exercise, with Beatrice Magnani. American Association of University, Women, AAUW - Memphis Branch & University of Memphis, Herff College of Engineering, 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

American Geophysical Union (AGU)
Dallas Geophysical Society (DGS)

Seismological Society of America (SSA)
Society of Exploration Geophysicists (SEG)

JOURNAL and BOOK ARTICLES

*First author and/or student first author papers with significant advising contributions

- Hornbach, M.J., M. Jones, M. Scales, H.R. DeShon, M.B. Magnani, C. Frohlich, B. Stump, C. Hayward and M. Layton (2016), Ellenburger wastewater injection and seismicity in North Texas, *Physics of the Earth and Planetary Interiors*, doi:10.1016/j.pepi.2016.06.012.
- Frohlich, C., H.R. DeShon, B. Stump, C. Hayward, M.J. Hornbach, J.I. Walter (2016), A Historical Review of Induced Earthquakes in Texas, *Seismological Research Letters*, 87(4), doi:10.1785/0220160016.
- Frohlich, C., H.R. DeShon, B. Stump, C. Hayward, M.J. Hornbach, J.I. Walter (2016), Reply to “Comment on ‘A Historical Review of Induced Earthquakes in Texas’ by Frohlich, C., H.R. DeShon, B. Stump, C. Hayward, M.J. Hornbach, J.I. Walter” by Steve Everly, *Seismological Research Letters*, 87(6), doi:10.1785/0220160148.
- Hornbach, M., H.R. DeShon, W.L. Ellsworth, B.W. Stump, C. Hayward, C. Frohlich, H.R. Oldham, J.E. Olson, M.B. Magnani, C. Brokaw, J.H. Luetgert (2015), Causal factors for seismicity near Azle, Texas, *Nature Communications*, 6, 6728, doi:10.1038/ncomms7728.
- *Bockholt, B.M., C.A. Langston, H.R. DeShon, S. Horton and M. Withers (2014), Mysterious Tremor-like Signals Seen on the Reelfoot Fault, Northern Tennessee, *Bulletin of the Seismological Society of America*, 104 (5), 2194-2205, doi:10.1785/0120140030.
- *Bisrat, S.T., H.R. DeShon, J. Pesicek, C. Thurber (2014), High-resolution 3-D P-wave Attenuation Structure of the New Madrid Seismic Zone, *Journal of Geophysical Research*, 119 (1), 409-424, doi: 10.1002/2013JB010555.
- *Dunn, M., H.R. DeShon, C.A. Powell (2013), Imaging the New Madrid Seismic Zone using Double-Difference Tomography, *Journal of Geophysical Research*, 118 (10), 5404-5416, doi:10.1002/jgrb.50384.
- Hansen, S., H.R. DeShon, M. Moore-Driskell, A. Al-Amri (2013), Investigating the P-wave Velocity Structure beneath Harrat Lunayyir, northwestern Saudi Arabia, using Double-Difference Tomography and Earthquakes from the 2009 Seismic Swarm, *Journal of Geophysical Research*, 118(9), 4814-4826, doi:10.1002/jgrb.50286.
- *Moore-Driskell, M., H.R. DeShon, W. Rabbel, M.M. Thorwart, Y. Dzierma (2013), Integration of arrival time datasets for consistent quality control: A case study of amphibious experiments along the Middle America Trench, *Bulletin of the Seismological Society of America*, 103(5), doi: 10.1785/0120120274, 2752-2766.
- El Hariri, M., S.L. Bilek, E.R. Engdahl, H.R. DeShon, and S.T. Bisrat (2013), Along-strike variability of rupture duration in subduction-zone earthquakes, *Journal of Geophysical Research*, 118(2), 646-664, doi: 10.1029/2012JB009548.
- 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*, 102(3), 1167-1178, doi: 10.1785/0120100315.
- El Hariri, M., S.L. Bilek, E.R. Engdahl, H.R. DeShon, and S.T. Bisrat (2012), Along-strike variability of rupture duration in subduction-zone earthquakes, *Journal of Geophysical Research*, 118(2), 646-664, doi: 10.1029/2012JB009548.
- 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, *Geophysical Journal International*, 190(3), 1625-1639, doi: 10.1111/j.1365-246X.2012.05560.x.
- 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 (30-40°S), Chile, *Geophysical Journal International*, 191(1), doi: 10.1111/j.1365-246X.2012.05624.x.

- 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).
- 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. Diamante (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. Dissertation, 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.

ARCHIVED SEISMIC DATA SETS

- H.R. DeShon, C. Hayward, J. Walter, M.B. Magnani, M. Hornbach, B. Stump (2015), North Texas Earthquake Study: Venus (Johnson County), TX. International Federation of Digital Seismograph Networks. Other/Seismic Network. doi:10.7914/SN/4F_2015.
- H.R. DeShon, C. Hayward, B. Stump, M.B. Magnani, M. Hornbach (2013), North Texas Earthquake Study: Azle and Irving/Dallas. International Federation of Digital Seismograph Networks. Other/Seismic Network. doi:10.7914/SN/ZW_2013.
- Langston, C., H. DeShon, C. Powell, S. Horton, C. Ammon, R. Herrmann, W. Thomas (2011), Northern Embayment Lithospheric Experiment. International Federation of Digital Seismograph Networks. Other/Seismic Network. doi:10.7914/SN/ZL_2011.
- Langston, C., H. DeShon (2009), Detection and location of non-volcanic tremor in the New Madrid Seismic Zone, International Federation of Digital Seismograph Networks. Other/Seismic Network. doi:10.7914/SN/Y8_2009.

INVITED PRESENTATIONS

- DeShon, H.R., "Earthquakes in the Central United States: Links to Wastewater Disposal and Oil and Gas Production", Johnson Family Lecture Series @ Park University, Parkville, MO, March 28, 2017.

DeShon, H.R., M. Hornbach, M.B. Magnani, B. Stump and C. Hayward, “The meandering path towards mitigating induced earthquakes in north Texas”, 2016 IRIS Workshop, Vancouver, WA, June 8, 2016.

DeShon, H.R., “Death of a Fault: A Comparison of Seismicity in the New Madrid Seismic Zone and North Texas”, Univ. of Texas, Institute for Geophysics, Apr. 15, 2016.

Earthscope Speaker Series 2015-2016

“Death of a Fault: A Comparison of Seismicity in the New Madrid Seismic Zone and North Texas”

- Oregon State, Oct. 8, 2015
- Boston College, Oct. 30, 2015
- Auburn University, Feb. 4, 2016
- Indiana University, Feb. 8, 2016
- Kent State University, Feb. 19, 2016

DeShon, H.R., “Complex faulting, seismicity and swarm activity within the New Madrid Seismic Zone,” National Regulatory Agency Paleoliquefaction Training, Blytheville, AR, Nov. 10, 2015.

DeShon, H.R., “Mitigating Induced Earthquakes in North Texas,” Energy Law Lecture Series, Texas Tech University, Oct. 19 2015.

DeShon, H.R. and North Texas Earthquake Group, “Update on North Texas Seismicity”, USGS Scientific Earthquake Studies Advisory Committee & National Earthquake Prediction Evaluation Council, Fall 2015 meetings held at SMU, Sept. 2 & 3, 2015.

DeShon, H.R., “Earthquakes, Fluid Disposal, Production & North Texas,” Univ. of Texas-Arlington, Feb. 5, 2015.

DeShon, H.R., co-authors M.J. Hornbach, B. Stump, C. Hayward, C. Brokaw, H.R. Oldham, M.B. Magnani, “Understanding North Texas Seismicity: A joint analysis of seismic data and 3D pore fluid pressure modeling,” Workshop on Hazard from Induced Seismicity, USGS and OK Geological Survey, Midwest City, OK, Nov. 18, 2014.

GeoPRISMS Distinguished Lecturer 2012-2014

“Using seismic tomography to image subduction systems: Applications to Costa Rica-Nicaragua and Sumatra,”

- University of Alabama, Jan. 30, 2013
- Georgia Southwestern State University, Jan 27, 2013. Available on YouTube.
- University of Central Washington, Mar. 8, 2013
- University of Washington, Mar. 14, 2013
- New Mexico Tech, Sept. 19, 2013

“Great earthquakes and new insights into subduction seismogenesis,”

- Georgia Southwestern University, Jan 27, 2013. Available on YouTube.
- Trinity University, Oct. 10, 2013
- Midwestern State University, Nov. 7, 2013
- Humbolt State University, April 14, 2014

DeShon, H.R., “Antelope Strikes Back: Using the Perl and Matlab Interfaces to Your Advantage,” IRIS Webinar, March 27, 2014. Available on YouTube.

DeShon, H.R., “Complex faulting and swarm activity along the New Madrid Seismic Zone,” CEUS Earthquake Hazards Research Review and Planning Workshop, Memphis, TN, Feb. 26, 2014

DeShon, H.R., “Great earthquakes and new insights into subduction seismogenesis,” Baylor University, Nov. 1, 2013

DeShon, H.R., “Using seismic tomography to image subduction systems: Applications to Costa Rica-Nicaragua and Sumatra,” Southern Methodist University, Jan. 25, 2013.

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. Available on YouTube.

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", CERL, 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., and M.B. Magnani, Final Technical Report for G16AC00247: Imaging faults in induced earthquake zones using earthquake and controlled source data – North Texas and Oklahoma, submitted to the USGS on March 31, 2017.
- DeShon, H.R., and M.B. Magnani, Final Technical Report for G15AC00141: North Texas Earthquake Studies and Network Operations, submitted to the USGS on October 4, 2016.
- DeShon, H.R., Final Technical Report for G12AP20136: Integrating USArray and Cooperative New Madrid Seismic Network Data to Establish Central US Catalog Location and Magnitude Sensitivities, submitted to the USGS on July 1, 2013.
- DeShon, H.R., Preliminary Technical Report for G12AP20011: Integrating USArray and Cooperative New Madrid Seismic Network Data to Establish Central US Catalog Location and Magnitude Sensitivities, submitted to the USGS on July 30, 2012.
- 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

- Ogwari, P., H.R. DeShon and M. Hornbach (2017), The Dallas-Fort Worth Airport Earthquake Sequence: Seismicity Beyond Injection Period, 2017 Seismological Society of America Meeting, Denver, CO., 18-20 Apr.
- Hennings, P., J.L. Osmond, C. Zahm, and H.R. DeShon (2017), Characterization of faults on the flanks of the Llano Uplift for application to understanding seismogenic faults in the subsurface of the Fort Worth Basin, AAPG 2017 Annual Convention and Exhibition, Houston, TX, 2-5, Apr.
- Anderson, K.R., R. Woodward, J.R. Sweet, S.L. Bilek, M. Brudzinski, X. Chen, H.R. DeShon, M.S. Karplus, K.M. Keranen, C.A. Langston, F-C Lin, M.B. Magnani, B.W. Stump (2016), Full Wavefield Recordings of Oklahoma Seismicity from an IRIS-led Community Experiment, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Blanpied, M., S.C. Perry, J. Carriere, H.R. DeShon, K. Oden, R. Vaz, R.A. Williams, B.W. Stump, C. Hayward,

- G.L. Choy, S.M. Mueller, N. LaGrassa, G. Miller, M. Osburn (2016), Effective Collaboration Between Scientists and Local Governments to Improve Scientific Communication for Public Safety in Dallas and Irving, Texas, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- DeShon, H.R., S. Jeong, L. Quinones, M.E. Layton, P. Ogwari, K.B. Kwong, C. Hayward, B.W. Stump (2016), Earthquake Source Characterization of Induced Earthquakes in the Fort Worth Basin, north Texas, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Hornbach, M.J., M. Jones, M. Scales, H.R. DeShon, M.B. Magnani, C. Frohlich, B. Stump, C. Hayward and M. Layton (2016), Ellenburger wastewater injection and seismicity in North Texas, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Kwong, K., J.W. Kim, Z. Lu, H.R. DeShon (2016), Resolving Seismic Locations and Ground Deformation from Coseismic and Large Aftershock InSAR Images of the 2016 Pedernales Ecuador Earthquake Sequence, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Savvaidis, A., B. Young, T. Mukherjee, P. Hennings, E. Rathje, G. Zalachoris, M. Young, J.I. Walter, H.R. DeShon, C. Frohlich (2016), Site Assessment of a New State-Wide Seismic Network in Texas (Tex-Net), 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Sufri, O., H.R. DeShon, M.M. Scales, C. Hayward, M.B. Magnani (2016), Imaging crustal structure using local earthquake and ambient noise tomography, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- Sweet, J.R., K.R. Anderson, R. Woodward, M.S. Karplus, H.R. DeShon, M.B. Magnani, C. Hayward, C.A. Langston (2016), Preliminary Analysis of the Oklahoma Wavefields Demonstration Dataset, 2016 Fall Meeting, AGU, San Francisco, CA., 12-16 Dec.
- DeShon, H.R., M. Hornbach, M.B. Magnani, B. Stump and C. Hayward (2016), The meandering path towards mitigating induced earthquakes in north Texas (invited talk), 2016 IRIS Workshop, Vancouver, WA. June 8-10, 2016.
- Kwong, K., S. Jeong, B. Stump, H.R. DeShon and J. Walter (2016), Improving local magnitude estimates to improve b-value calculations, 2016 IRIS Workshop, Vancouver, WA., June 8-10, 2016
- Savvaidis, A., M. Young, S. Tinker, E. Rahtje, C.A. Frohlich, J. Walter, H.R. DeShon, J.F. Gale, P. Hennings, P. Eichhubl, J. Olson, H.C. Olson, A. Markaman, L.A. Kahlor (2016), TexNet: A new integrated seismic monitoring program in Texas, Seismological Society of America Spring Meeting, *Seismological Research Letters*.
- DeShon, H.R., M. Scales, C. Hayward, M. Hornbach, M.B. Magnani, B. Stump, C. Frohlich, J. Walter (2015), Comparison Study between North Texas Earthquake Sequences from 2008-2015, 2015 Fall Meeting, AGU, San Francisco, CA., 14-18 Dec.
- Magnani, M.B., T. Pratt, H.R. DeShon (2015), Discriminating Between Induced vs. Tectonic Seismicity From Long-Term History of Fault Behavior in Intraplate Regions, 2015 Fall Meeting, AGU, San Francisco, CA., 14-18 Dec.
- Quinones, L., H.R. DeShon, C. Hayward, M. Scales (2015), Characterization of the 2015 Dallas-Irving Earthquake Sequence, 2015 Fall Meeting, AGU, San Francisco, CA., 14-18 Dec.
- Scales, M., H.R. DeShon, M. Magnani, C. Hayward, J. Walter (2015), Characterization of the 2015 M4.0 Venus, Texas, Earthquake Sequence Using Locally Recorded Seismic Data, 2015 Fall Meeting, AGU, San Francisco, CA., 14-18 Dec.
- Lee, S., Walter, J., C. Frohlich, H.R. DeShon (2015) The relationship between seismicity and wastewater injection in Johnson County, TX, 2015 Fall Meeting, AGU, San Francisco, CA., 14-18 Dec.
- Kwong, K., H.R. DeShon, C. Thurber, J. Saul (2015), Teleseismic Double-Difference Relocation of the 2012 Indian Ocean Intraplate Earthquake Sequence, Seismological Society of America Spring Meeting, *Seismological Research Letters* 85(2B), p. 685.
- DeShon, H.R., M.J. Hornbach, W. Ellsworth, H.R. Oldham, C. Hayward, B. Stump, C. Frohlich, J. Olson, and J. Luetgert (2014), Understanding North Texas Seismicity: A joint analysis of seismic data and 3D pore fluid pressure modeling, 2014 Fall Meeting, AGU, San Francisco, CA., 15-19 Dec. S51A-4399.
- Hayward, C., M. Barklage, D. Hollis, H.R. DeShon, and M.B. Magnani (2014), Characterizing North Texas Seismicity with a High Density Network of Exploration Seismic Reflection Recorders, S54A-08
- Phillips, M., H.R. DeShon, H.R. Oldham, and C. Hayward (2014), Waveform Cross-Correlation for Improved North Texas Earthquake Locations, 2014 Fall Meeting, AGU, San Francisco, CA., 15-19 Dec. S51A-4391
- Oldham, H.R., H.R. DeShon, C. Langston and S. Horton (2014), Noise Analysis of the Northern Mississippi Embayment, 2014 Fall Meeting, AGU, San Francisco, CA., 15-19 Dec. S13C-4462.

- DeShon, H.R., M.J. Hornbach, B. Stump, C. Hayward, C. Brokaw, H.R. Oldham, M.B. Magnani (2014), Understanding North Texas Seismicity: A joint analysis of seismic data and 3D pore fluid pressure modeling, SEG/SPE/ARMA Workshop on Injection Induced Seismicity, Banff, Alberta, Canada, 15-18 Sept.
- Hayward, C., H.R. Oldham, H.R. DeShon, B. Stump, M.J. Hornbach, M.B. Magnani (2014), Understanding North Texas Seismicity: Detailed seismic studies of the Azle earthquake sequence, SEG/SPE/ARMA Workshop on Injection Induced Seismicity, Banff, Alberta, Canada, 15-18 Sept.
- Ellsworth, W.L., H.M. Benz, C. Cain, H.R. DeShon, C. Hayward, J.H. Luetert, V. Quitariano, B. Stump, and D. Wald (2014), The Azle, Texas, earthquake sequence of 2013-2014: Induced or natural?, Seismo. Soc. of America Spring Meeting, Anchorage, AK, SRL 85(2), p. 452.
- Langston, C. and the NELE team (2014), Northern Embayment Lithosphere Experiment (NELE): Summary, Status and Noise Analysis, Seismo. Soc. of America Spring Meeting, Anchorage, AK, SRL 85(2), p. 443.
- Moore-Driskell, M., S.T. Birsat, and H.R. DeShon (2014), Comparison of velocity attenuation patterns along the frictionally heterogeneous Nicaragua-Costa Rica seismogenic zone, Seismo. Soc. of America Spring Meeting, Anchorage, AK, SRL 85(2), p. 445.
- Cahoon, K., H.R. DeShon, J. Pesicek, and C. Thurber (2013), Refining Fault Structure and Seismic Behavior along the Kuril Islands, Russia, using Teleseismic Double-Difference Relocation, 2013 Fall Meeting, AGU, San Francisco, CA., 9-13 Dec.
- DeShon, H.R., M. Moore-Driskell and S.T. Birsat, Velocity and Attenuation Heterogeneity Along the Nicoya Peninsula, Costa Rica, Seismogenic Zone, 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Hansen, S., H.R. DeShon, M. Moore-Driskell, A. Al-Amri (2013), Investigating the P-wave Velocity Structure beneath Harrat Lunayyir, northwestern Saudi Arabia, using Double-Difference Tomography and Earthquakes from the 2009 Seismic Swarm, GSA Abstracts with Programs, Denver, CO, 27-30 October.
- DeShon, H.R. and M. Moore-Driskell (2013), Reduced compressional wavespeeds and Poisson's Ratios along the Nicoya Peninsula, Costa Rica, AGU Meeting of the Americas, Cancun, Mexico, 14-17 May.
- Bilek, S.L., H.R. DeShon, E.R. Engdahl, and M. El Hariri (2013), What can earthquake rupture heterogeneity tell us about subduction zone fault heterogeneity?, Seismo. Soc. of America Spring Meeting, Salt Lake City, UT, April 17-19 2013.
- DeShon, H.R. (2012), Integrating USArray and Cooperative New Madrid Seismic Network Data to Establish Central US Catalog Location and Magnitude Sensitivities, S53I-03 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Moore-Driskell, M. and H.R. DeShon (2012), Variability of High Resolution Vp/Vs and Seismic Velocity Structure Along the Nicaragua/Costa Rica Segment of the Middle America Subduction Zone, T13F-2685 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Pesicek, J.D., H. Zhang, C.H. Thurber, D. Lange, E.R. Engdahl, and H.R. DeShon, Subducting slab structure and seismicity in the region of the 2010 M8.8 Maule earthquake: results from multi-scale P-wave tomography and relocation, S52D-05 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- McQuillan, P.J., R. Welti, J. Johnson, C. Shiffman, S.E. Olds, H.R. DeShon, and C.A. Powell (2012), Earthscope and New Madrid content modules for the IRIS Active Earth Monitor, Geological Society of America Abstracts with Programs. Vol. 44, No. 7, p.179.
- 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. Birsat (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.
- Birsat, 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. Birsat, 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.
- Langston, C.A., H.R. DeShon*, S. Horton, and M. Withers (2010), Preliminary Results for the Detection of Non-volcanic Tremor in the New Madrid Seismic Zone using a Phased Array, Seismo. Soc. of America Spring Meeting, April 2010, Portland, OR. *presenting author
- DeShon, H.R., M. Moore-Driskell, W. Rabbel, I. Arroyo, M. Thorwart, Y. Dzierma (2010), Imaging 3D Seismic Velocity and Attenuation Heterogeneity Along the Seismogenic Zone of Costa Rica and Nicaragua: A Progress Report, *NSF Margins Successor Meeting*, Feb. 2010, San Antonio, TX.
- DeShon, H.R., S.T. Bisrat, C.A. Powell (2009), Characterizing Near Fault Velocity Structure and Seismogenesis Along the New Madrid Seismic Zone, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T53D-1628.
- Bilek, S.L., H.R. DeShon, E.R. Engdahl (2009), Along-Strike Variations in Shallow Earthquake Distribution and Source Parameters Along the Kurile-Kamchatka Arc, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T23B-1908.
- Bisrat, S.T., H.R. DeShon, E.R. Engdahl, S.L. Bilek (2009), Improved Teleseismic Locations of Shallow Subduction Zone Earthquakes, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T23B-1913.
- El Hariri, M., S.L. Bilek, H.R. DeShon, E.R. Engdahl (2009), Investigating Along-Strike Variations of Source Parameters for Relocated Thrust Earthquakes Along the Sumatra-Java Subduction Zone, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T23B-1920.
- Moore-Driskell, M.M., H.R. DeShon, W. Rabbel, M.M. Thorwart, Y. Dzierma (2009), An Integrated Arrival Time Dataset for Onshore/Offshore Experiments Conducted Along The Middle America Trench, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T23B-1893.

- Pesicek, J.D., C.H. Thurber, H. Zhang, H.R. DeShon, E.R. Engdahl (2009), Teleseismic Relocation of Earthquakes along the Sumatra-Andaman Subduction Zone, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T33B-1914.
- Powell, C.A., M. Withers, H.R. DeShon (2009), Intrusions and Anomalous Vp/Vs Ratios Associated with the New Madrid Seismic Zone, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T53D-1616.
- Wiley, S., H.R. DeShon, O.S. Boyd (2009). Seismic Noise Characterization in the Northern Mississippi Embayment, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract S23A-1730.
- DeShon, H.R., S.T. Birsat, M. Dunn, and S. Wiley (2009), Characterizing near fault velocity structure and seismogenesis along the New Madrid seismic zone, *USGS CEU Investigator meeting*, Memphis, TN, Oct. 2009.
- Birsat, S.T., H.R. DeShon, E.R. Engdahl, S.L. Bilek (2009), Improved Teleseismic Locations of Shallow Subduction Zone Earthquakes, *NSF Margins TEI Volatiles in Subduction Zone meeting*, Mt. Hood, OR., Sept 28-Oct 1, 2009.
- Moore-Driskell, M.M., H.R. DeShon, S.T. Birsat, W. Rabbel, M.M. Thorwart, Y. Dzierma (2009), An Integrated Arrival Time Dataset for Onshore/Offshore Experiments Conducted Along The Middle America Trench, *NSF Margins TEI Volatiles in Subduction Zone meeting*, Mt. Hood, OR., Sept 28-Oct 1, 2009.
- DeShon, H.R., N. Dinc, W. Rabbel, P-wave Velocity Modeling Using Onshore/Offshore Passive Seismic Networks Along the Middle America Subduction Zone, Costa Rica and Nicaragua, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract U51C-08, AGU Fall Meeting, San Francisco, CA, Dec. 2008.
- Birsat, S., H.R. DeShon, and C.A. Rowe, Swarm Activity Within the New Madrid Seismic Zone Identified Using Waveform Cross- Correlation Techniques, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract S51C-1757, AGU Fall Meeting, San Francisco, CA, Dec. 2008.
- Dunn, M., H.R. DeShon, and C.A. Powell, P and S Wave Velocity Structure and Vp/Vs Ratios for the New Madrid Seismic Zone, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract S43A-1876, AGU Fall Meeting, San Francisco, CA, Dec. 2008.
- Pesicek, J., C.H. Thurber, H. Zhang, H.R. DeShon, S. Widiyantoro, E.R. Engdahl, Sharpened tomographic image of the subducting slab beneath the Sumatra-Andaman region from 3-D ray tracing and earthquake relocation, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract S14A-07, AGU Fall Meeting, San Francisco, CA, Dec. 2008.
- Sumiejski, L., C. Thurber, and H.R. DeShon, Relocation of Eruption-Related Earthquake Clusters at Augustine Volcano, Alaska, using Station-Pair Differential Times, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract V51A-2017, AGU Fall Meeting, San Francisco, CA, Dec. 2008.
- DeShon, H.R., N. Dinc, and W. Rabbel, Seismogenic zone structure along the Middle America subduction zone, Costa Rica and Nicaragua, 2008 Margins SEIZE Meeting, Mt. Hood, OR, September 2008.
- DeShon, H.R., C.H. Thurber, and J. Power, Evolution of waveform similarity at Augustine volcano, Alaska, during the 2006 eruption, Spring SSA Meeting, Santa Fe, NM. April 2008. *Seismological Research Letters*, 79, p. 334.
- Bilek, S.L., H.R. DeShon, and E.R. Engdahl, Are “slow” events common in regions of tsunami earthquakes?, Spring SSA Meeting, Santa Fe, NM. April 2008. *Seismological Research Letters*, 79, p. 343.
- Mitchell, L.M., and H.R. DeShon, Relocation of the Mw 8.4 2007 Southern Sumatra aftershock sequence and prior regional seismicity, Spring SSA Meeting, Santa Fe, NM. April 2008. *Seismological Research Letters*, 79, p. 355.
- DeShon, H.R., H. Zhang, C.H. Thurber, E.R. Engdahl, Imaging the Andaman and Sunda Subduction Zones Using Regional Double-Difference Tomography, AGU Fall Meeting, San Francisco, CA, Dec. 2007.
- Dunn, M., S. Horton, H.R. DeShon, and C.A. Powell, High Resolution Earthquake Location in the New Madrid Seismic Zone, AGU Fall Meeting, San Francisco, CA, Dec. 2007.
- Engdahl, E.R., H.R. DeShon, S. Bilek, A. Villasenor, C.H. Thurber, Assessment of Well-Constrained Seismicity and Focal Mechanisms in the Andaman- Sumatra-Java Subduction Systems, AGU Fall Meeting, San Francisco, CA, Dec. 2007.
- Pesicek, J., C.H. Thurber, S. Widiyantoro, E.R. Engdahl, H. DeShon, Tomographic Image of Subducting Lithosphere beneath Indonesia, AGU Fall Meeting, San Francisco, CA, Dec. 2007.
- DeShon, H.R., C.H. Thurber, M.R. Brudzinski, and E.R. Engdahl, A semi-automated technique for waveform cross-correlation of teleseismically recorded depth phases, *SSA Spring Meeting*, Waikiloa, HA, April 2007.
- Pesicek, J., H.R. DeShon, M.R. Brudzinski and C.H. Thurber, Testing teleseismic cross-correlation techniques using synthetic seismograms: Application to aftershocks of the 26 December 2004 Mw 9 Sumatra megathrust earthquake, *SSA Spring Meeting*, Waikiloa, HA, April 2007.

- DeShon, H.R., S.G. Prejean, C.H. Thurber, and J.A. Power, High-precision earthquake location, velocity determination, and event family identification at Augustine Volcano, Alaska, from 1993 through the 2005-2006 eruption, *AGU Fall Meeting*, San Francisco, CA, Dec. 2006.
- Engdahl, E.R., O.P. Mishra, J.R. Kayal, G.K. Chakraborty, O.P. Singh, A. Villasenor, and H.R. DeShon, Reanalysis of aftershocks of the 2004 great Sumatra earthquake in the Andaman-Nicobar Islands region using temporary local network and global arrival time data, *AGU Fall Meeting*, San Francisco, CA, Dec. 2006.
- Pesicek, J., C. Thurber, H.R. DeShon, and H. Zhang, Analysis of seismic data from Great Sitkin volcano: Tomographic images, earthquake relocations, and stress calculations, *AGU Fall Meeting*, San Francisco, CA, Dec. 2006.
- Brown, J., H.R. DeShon, S.G. Prejean, C.H. Thurber and J. Power, Cross-correlation analysis reveals waveform similarity in long-period events prior to eruptive activity at Mt. Spurr volcano, Alaska, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- DeShon, H.R., C.A. Rowe, and C.H. Thurber, High-precision earthquake location and three-dimensional P-wave velocity determination at Redoubt Volcano, Alaska, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- Engdahl, E. A. Villasenor, and H. DeShon, Teleseismic relocation and assessment of seismicity (1918-2005) in the region of the 2004 Mw 9.0 Sumatra-Andaman and 2005 Mw 8.6 Nias Island great earthquakes, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- Meyer, N.R., H.R. DeShon, C.H. Thurber, S.G. Prejean, Cross-correlation and double-difference techniques used in earthquake relocations at Shishaldin Volcano, Alaska, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- Pesicek, J., H.R. DeShon, C.H. Thurber, and S.G. Prejean, High-precision earthquake locations at Great Sitkin Volcano, Alaska using waveform alignment and double-difference techniques, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- Thurber, C., H. Zhang, M. Brudzinski, H. DeShon, and E. Engdahl, Earthquake location and seismic tomography: Pushing the envelope for subduction zone studies, *SSA Spring Meeting*, San Francisco, CA, Apr. 2006.
- DeShon, H.R., C.A. Rowe, and C. Thurber, Two cross-correlation techniques applied to volcanic seismic waveforms, *AGU Fall Meeting*, San Francisco, CA, Dec. 2005.
- Schwartz, S.Y., H.R. DeShon, K.M. Brown, The Influence of Fluids on Seismogenic Zone Processes in Northern Costa Rica, *AGU Fall Meeting*, San Francisco, CA, Dec. 2005.
- Thurber, C.H., M. Brudzinski, H.R. DeShon, and E.R. Engdahl, Global Double Benioff Zone Prevalence and Characteristics through Statistical Estimates of Slab-Normal Distribution, *AGU Fall Meeting*, San Francisco, CA, Dec. 2005.
- DeShon, H.R., M. Brudzinski, C. Thurber, and E.R. Engdahl, The search for double Wadati-Benioff zones using waveform cross-correlation of teleseismically recorded phases, *IASPEI General Assembly*, Santiago, Chile, Oct. 2005.
- DeShon, H.R., M.R. Brudzinski, C. Thurber, and S.L. Bilek, Moment release of history of large-magnitude earthquakes in the region of the 2004 M 9 Sumatra-Andaman Islands earthquake, *SSA Spring Meeting*, Incline Village, NV, Apr. 2005.
- Bilek, S.L., A.V. Newman, and H.R. DeShon, Aftershock characteristics of the 2004 M 9.0 Sumatra Andaman Islands earthquake, *SSA Spring Meeting*, Incline Village, NV, Apr. 2005.
- DeShon, H.R., S.Y. Schwartz, A.V. Newman, V. Gonzalez, M. Protti, L.M. Dorman, Seismogenic zone structure along the Middle America Trench, Nicoya Peninsula, Costa Rica, from 3D local earthquake tomography, *AGU Fall Meeting*, San Francisco, CA, Dec. 2004.
- Brown, K.M., M.D. Tryon, H.R. DeShon, L.M. Dorman, and S.Y. Schwartz, Transient Fluid Pulsing and Seismic Tremor-like Seismic Noise: Episodic Creep and/or Fluid Expulsion at the Updip Edge of the Seismogenic Zone, Costa Rica, *AGU Fall Meeting*, San Francisco, CA, Dec. 2004.
- Dorman, L.M., H.R. DeShon, K. Brown, S. Schwartz, M. Tryon, Seismic Noise Correlation with Seismicity and Fluid Flow, *AGU Fall Meeting*, San Francisco, CA, Dec. 2004.
- Schwartz, S.Y. and H.R. DeShon, Distinct Geodetic and Seismic Up-dip Limits to the Northern Costa Rica Seismogenic Zone: Evidence for Two Mechanical Transitions, *AGU Fall Meeting*, San Francisco, CA, Dec. 2004.
- DeShon, H.R., S.Y. Schwartz, A.V. Newman, L.M. Dorman, M. Protti, and V. Gonzalez, Geometry and velocity structure of the northern Costa Rica seismogenic zone from 3D local earthquake tomography, *AGU Fall Meeting*, San Francisco, CA, Dec. 2003.
- Schwartz, S.Y., C. Flores, and H.R. DeShon, Shallow Subduction Zone Structure in Northern Costa Rica From Receiver Function Analysis at CRSEIZE Seismic Stations, *AGU Fall Meeting*, San Francisco, CA, Dec. 2003.

- DeShon, H.R., K.M. Brown, S.Y. Schwartz, M. Tryon, and L.M. Dorman, Comparisons of seismicity and fluid flow behavior along the western Costa Rica margin, MARGINS SEIZE Theoretical Workshop, Snowbird, Utah, March 2003.
- DeShon, H.R., S.Y. Schwartz, J. Revenaugh, M.T. Hagerty, and M. Protti, Statistical Studies on summit explosions and volcanic tremor, Arenal Volcano, Costa Rica, AGU Fall Meeting, San Francisco, CA, Dec 2002.
- DeShon, H.R., S.Y. Schwartz, S.L. Bilek, L.M. Dorman, and M. Protti, Seismogenic zone structure along the Middle America Trench from aftershock relocations offshore the Osa Peninsula, Costa Rica, IRIS, Waikola, Hawaii, June 2002.
- DeShon, H.R., S.Y. Schwartz, J. Revenaugh, and M.T. Hagerty, Summit explosion and volcanic tremor statistics from 1995-1999, Arenal Volcano, Costa Rica, SSA Spring Meeting, Victoria, British Columbia, Canada, April 2002.
- DeShon, H.R., S.Y. Schwartz, S.L. Bilek, L. Dorman, M. Protti, and V. Gonzalez, Characteristics of the central Costa Rican seismogenic zone determined from microseismicity, AGU Fall Meeting, San Francisco, CA, Dec 2001.
- Schwartz, S.Y., S. Bilek, H. DeShon, A. Newman, D. Sampson, M. Protti, V. Gonzalez, F. Guendel, L. Dorman, A. Sauter, S. Escher, J. Bialas, E. Flueh, T. Dixon, E. Norabuena, M. Avants, Preliminary seismic results from the Osa and Nicoya Peninsulas, Costa Rica, MARGINS SEIZE Theoretical Workshop, Heredia, Costa Rica, June 2001.
- DeShon, H.R., S.Y. Schwartz, and S.L. Bilek, 2000. Seismogenic zone structure northwest of the Osa Peninsula, Costa Rica as defined by earthquake locations, AGU Fall Meeting, Dec 2000.
- DeShon, H.R., and V.L. Hansen, Geologic evolution in southern Rusalka Planitia in the Diana-Dali Quadrangle (V37), USGS/NASA Mars and Venus Mappers Meeting, Buffalo, NY, June 1999.
- DeShon, H.R., and V.L. Hansen, Geologic Relations within the Diana-Dali Quadrangle (V37), USGS/NASA Mars and Venus Mappers Meeting, Flagstaff, AZ, June 1998.
- DeShon, H.R. and V.L. Hansen, Preliminary Geologic History of the Diana-Dali Quadrangle (V37), Venus, Lunar and Planetary Science Conference [CD-ROM], XXIX, abstract 1438, 1998.

POSTDOCTORAL RESEARCH ASSOCIATES and STUDENTS

Postdoctoral Research Supervisor:

- Paul Ogwari, Induced earthquakes and fluid diffusion modeling, Jan. 2016-present
Oner Sufri, Texas earthquakes, TexNet and advanced nodal data processing techniques, May 2016-present

Primary Advisor:

Current:

- Kevin Kwong, PhD, Southern Methodist University, expected 2018.
Monique Scales, MS, Southern Methodist University, expected 2017
Louis Quinones, MS, Southern Methodist University, expected 2018

Awarded:

- Harrison (Remi) Oldham, MS, Southern Methodist University, May 2016
Thesis title: *NELE: Noise Characterization of the Northern Mississippi Embayment*

- Kara Jones (nee Cahoon), MS, Southern Methodist University, December 2014

Now at Microseismic, Inc., Houston, TX

Thesis title: *Refining Fault Structure and Seismic Behavior Along the Kuril Islands, Russia, Using Teleseismic Double-Difference Relocation and High-resolution Waveform Cross-correlation*

- Shishay T. Bisrat, Ph.D., Univ. of Memphis, August 2013

Now at Berger Geosciences, Pore Pressure Dept., Houston, TX

Dissertation title: *Three Dimensional Attenuation and High Resolution Earthquake Location: Applications to the New Madrid Seismic Zone and Costa Rica Seismogenic Zone*

- Melissa M. Moore-Driskell, Ph.D., Univ. of Memphis, December 2012

Now at University of North Alabama, Dept. of Physics and Earth Science, Florence, AL

Dissertation title: *3D Double Difference Velocity Tomography of the Middle America Subduction Zone Beneath Nicaragua and Costa Rica*

Thesis/Dissertation Committee Memberships (awarded only):

Yanjun Hao, Ph.D., Southern Methodist University, 2015
Stephany Sit, Ph.D., Miami Univ. in Ohio, 2013
Meredith Dunn, Ph.D., Univ. of Memphis, 2009
Chuntao Liang, Ph.D., Univ. of Memphis, 2008

Madeline Jones, M.S., Southern Methodist University, 2016
Fransiska Danneman, M.S., Southern Methodist University, 2016
Sarah McComas, M.S., Southern Methodist University, 2015
Ryan Christiansen, M.S., Southern Methodist University, 2015
Onur Mataracioglu, M.S., Univ. of Memphis, 2012
Chigozie Obikili, M.S. Univ. of Memphis, 2011
Solomon Ayele, M.S., Univ. of Memphis, 2010

Undergraduate Interns/Researchers:

Theresa Sawi, Univ. of California Berkeley, IRIS Intern, Summer 2017
Mary Elizabeth Layton, Southern Methodist University, Maar Scholar (ISEM), Fall 2015-Spring 2017
Louis Quinones, Texas A&M University, IRIS Intern, Summer 2015
Monique Scales, Southern Methodist University, Maar Scholar (ISEM), Spring 2015
Mason Phillips, University of Texas-Austin, IRIS Intern, Summer 2014
Austen Klauser, Southern Methodist University, Maar Scholar (ISEM), Spring 2014
Brett Mattingly, Southern Methodist University, Summer 2013
Eric Gamble, University of Memphis, Spring 2012
Hiue Doan, University of Memphis, Spring 2012
Sarah Wiley, Whitman College, IRIS Intern, Summer 2009

High School Interns/Researchers:

Kaylee Kaigler, Lake Highlands High School, Spring 2014
-Advanced Academic Studies Professional Internship Program
-shared with Maria Richards, SMU Geothermal Laboratory

LEAVE HISTORY

Southern Methodist University, Maternity Leave, March 9 2015 through May 3 2015
University of Memphis, Maternity Leave, April 6 2009 through May 17 2009