VITA

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Education

1978 BS with high honors in Applied Geophysics, Michigan Technological University
1980 MS Geophysics, University of Utah
1984 Ph.D. Geophysics, University of Utah

Professional Experience

1996-present	Professor, Director Kidd Memorial Seismic Observatory, Department of Geological Sciences, University of Texas at El Paso
2004-2008	Chair, Department of Geological Sciences
2000-2003	Director, BS in Environmental Science Program, MS in Interdisciplinary Science Program
1991-1996	Associate Professor, Director Kidd Memorial Seismic Observatory, Department of Geological Sciences, University of Texas at El Paso
1986-1991	Assistant Professor, Department of Geological Sciences, University of Texas at El Paso
1984-1985	Bantrell Postdoctoral Fellow in Geophysics, Seismological Laboratory, California Institute of Technology

Professional and Honor Societies

Registered Professional Geoscientist (in geophysics), State of Texas, license no. 4787
American Geophysical Union, Seismological Society of America, Environmental and Engineering Geophysical Society, Geological Society of America, National Association of Geoscience Teachers, Tau Beta Pi, Sigma Pi Sigma, Phi Kappa Phi, Sigma Xi

Awards

2017 Outstanding UTEP Graduate Mentor
2016 Seismological Society of America Distinguished Service Award
2015 UTEP Dept. Geol. Sciences, Undergraduate Student Choice Award for Outstanding Teaching
2010 Univ. of Texas System Regents' Outstanding Teaching Award
1999 Distinguished Achievement Award in Research, University of Texas at El Paso
1997 Academy of Geological Engineering and Sciences, Michigan Technological University

Other Professional Activities

2017-present	vice-chair, Geol. Society America, Geophysics and Geodesy Division
2016	member, Fulbright U.S. student grant program panel
2011-2017	member, American Chemical Society Petroleum Research Fund Advisory Board
2010-2016	editor in chief, Bulletin of the Seismological Society of America
1996-2010	associate editor, Bulletin of the Seismological Society of America

2009-2012 faculty fellow, Center for Excellence in Teaching and Learning (CETaL)
2009-present member, Nat. Assoc. Geoscience Teachers visiting workshop program
1997-present member, geophysical advisory board, Michigan Technological University
1997-present member, Presidential Council of Alumnae, Michigan Technological University

Publications, Refereed Journals (2014-2018)

*=student author

Jin, L., D. Doser, V. Lougheed, E. Walsh, L. Hamdan, M. Zarei, and G. Corral, Experiential learning and mentoring improve recruitment and retention in the undergraduate environmental science curriculum at a Hispanic serving institution, submitted to J. Geosci. Educ., August, 2018.

Hiebing, M.*, D. Doser, V. Avila* and L. Ma, Geophysical studies of fault and bedrock control on groundwater geochemistry within the southern Mesilla Basin, west Texas and southern New Mexico, Geosphere 14, no. 4, 1912-1934, 2018.

Budhathoki*, P., D. Doser, A. Thapalia*, R.P. Langford, V.M. Avila*, Geological and Geophysical Studies of the Structure and Stratigraphy of the Northwestern Hueco Bolson Aquifer, El Paso, Texas, Geosphere, 14, no. 2, 731-748, 2018.

Doser, D.I., and M.R. Baker, Characterizing Uncertainties in the Geophysical Properties of Soils in the El Paso, Texas Region, O. Kosheleva, S. Shary, G. Ziang and R. Zapatrin (eds)., Beyond Traditional Probabilistic Data Processing Techniques: Interval, Fuzzy, etc. Methods and Their Applications, Springer Festschrift volume, accepted, December, 2017.

Doser, D.I., and J.I. Villalobos, Use of InTeGrate materials to engage instructors and encourage curriculum change in the El Paso Higher Education Community, Chapter 15, AESS *Interdisciplinary Environmental Studies and Sciences Series: Interdisciplinary Teaching About Earth and the Environment for a Sustainable Future*, in press, Springer, ISBN 978-3-030-03272-2, October, 2018.

Doser, D.I., and M.J. Hussein, Employing InTeGrate materials in an upper division undergraduate engineering course, Chapter 13, AESS *Interdisciplinary Environmental Studies and Sciences Series: Interdisciplinary Teaching About Earth and the Environment for a Sustainable Future*, in press, Springer, ISBN 978-3-030-03272-2, October, 2018.

Dena, O., D. Doser, O. Ibañez, G. Obeso and M. Galdean, 2-D hydraulic modeling and geotechnical analysis of earthen regulation dams located at Arroyo Las Viboras watershed in a major transboundary Mexico-USA metroplex: How an ordinary rain event caused major damage related to extraordinary flooding**,** Chapter 8 in *Flood Risk Management*, T. Hromadka and P. Rao, eds., published by Intech, 2017.

Abercrombie, R. E., S. Bannister, J. Ristau, and D. Doser, Variability of earthquake stress drop in a subduction setting, the Hikurangi Margin, New Zealand, Geophys. J. Internat., 208, 306-320, 2017.

Doser, D.I., and J. I. Villalobos, Mentoring instructors to teach about Earth for a sustainable future, Proceedings 9th Annual Mentoring Conference, University of New Mexico, October 24-28, 2016.

Avila, V.M.*, D. Doser, O.S. Dena-Ornelas, M.M. Moncada*, and S. S. Marrufo-Cannon*, Using geophysical techniques to trace active faults in the urbanized northern Hueco Bolson, west Texas, USA, and northern Chihuahua, Mexico, Geosphere, 12, 264-280, 2016.

Doser, D.I., and P. Galvan*, Determining location and magnitude of historic (pre-1963) events in the Rio Grande rift region using intensity information, Bull. Seismol. Soc. Amer., 105 (3), 1562-1575, doi:10.1786/0120140264, 2015.

Chapman, J.B.*, J. Elliot, D.I. Doser, and T.L. Pavlis, Slip on the Suckling Hills splay fault during the 1964 Alaska earthquake, Tectonophysics 637, 191-197, 2014.

Doser, D.I., C. Manduca, and D. Rhodes, Recruiting and supporting diverse geoscience and environmental science students, Eos Trans. Amer. Geophys. Union. 95, No. 32, 289, 2014.

Doser, D. I., Seismicity of Southwestern Yukon, Canada, and its Relation to Slip Transfer Between the Fairweather and Denali Fault Systems, Tectonophysics, 611, 121-129, 2014.

Abstracts (2017-2018)

*=student author

D'Marco-Garcia*, A., and D.I. Doser, Utilizing gravity, magnetics, and shallow seismic methods to image a subsurface igneous intrusion below Three Sisters in western El Paso, Texas, abstract NS41A-0815, fall meeting of American Geophysical Union, 2018.

Graves*, E., D. Doser and C. Rowe, Exploring a well-located seismic sequence near Jackson, Wyoming: Application of array methods and waveform cross-correlation, abstract S11C-0371, fall meeting of American Geophysical Union, 2018.

Doser, D.I., J. Cervantes*, M. Hiebing*, L. Ma, P. Budhathoki*, and M.Ornelas*, A Tale of Two Rift Basins: Geophysical and Groundwater Studies of the Hueco and Mesilla Bolsons, Western Texas, Southern New Mexico and Northern Chihuahua, abstract number T13F-0280, fall meeting of American Geophysical Union, 2018.

Cervantes*, J.P., D. I. Doser, M. Hiebing*, V. Avila*, and L. Ma, Tracing Quaternary Faults within the Mesilla Bolson, Western Texas and Southern New Mexico, abstract number T13F-0279, fall meeting of American Geophysical Union, 2018.

Rohrbaugh, R., D.I. Doser and J.I. Villalobs, Engaging Students at the 2YC level through the Service Learning Activities Targeting the Earth Sciences (SLATES) Program at El Paso Community College and the University of Texas at El Paso (Invited), abstract number ED22A-01, fall meeting of American Geophysical Union, 2018.

Jin, L., V.L. Lougheed, E. Walsh, D.I.Doser, M. Chaleshton Zarei and G. Corral, Improved STEM Education for 21st Century Environmental Scientists through Stratified Mentoring and Professional Networking at a Hispanic Serving Institution, abstract number ED12A-07, fall meeting American Geophysical Union, 2018.

Rohrbaugh, R., D. Doser and J. Villalobos, 2YC REU profile of the 2019 UTEP ROCCS Program: A leapfrog research experience for 2YC undergraduate development …real research, real challenges, real experience, real growth, abstract no. 103, fall Geological Society of America meeting, 2018.

Doser, D.I., R. Rohrbaugh, and J. Villalobos, SLATES: A collaborative service-learning program for two-year and four-year college students in the El Paso, Texas region, abstract no. 133, fall Geological Society of America meeting, 2018.

Doser, D.I., M. Ornelas*, L. Jin, and G. Kaip Geophysical Investigations of Agricultural Soils in the El Paso, Texas Region, fall Geological Society of America meeting, 2018.

Haveles, A.W., M.B. Awalt, R.H. MacDonald, R.J. Beane, D.I. Doser, S.C. Ebanks, C.A. Riihimake, J. Villalobos, G.S. Weissmann, and C.A. Manduca, Seeding a system of broadening participation in the geosciences through traveling workshops, abstract 147, fall Geological Society of America meeting, 2018.

Ziwu, F.D., K.L. Mickus, and D.I. Doser, Investigating serpentinization within the Cook Inlet Basin, Alaska from inversion of magnetic data, Geol. Soc. Amer. Rocky Mtn.-Cordillera Section Meeting, Flagstaff, AZ, paper no. 5-4, May 2018,

Doser, D.I., and M.R. Baker, Permian Basin seismicity, looking backwards, moving forwards, invited, Amer. Assoc. Petrol. Geol. SW Section Mtg., El Paso, TX, April, 2018.

Manduca, C., D. Blockstein, T. Bralower, F. Davis, D. Doser, A. Egger, S. Fox, L. Gilbert, D. Gosselin, R. Gragg, III, E. Iverson, K. Kastens, D. McConnell, E. Nagy-Shadman, C. Huyck Orr, D. Steer and J. Taber**,** InTeGrate project: Interdisciplinary Teaching about the Earth for a Sustainable Future**,** Geophysical Research Abstracts Vol. 20, European Geosciences Union General Assembly 2018-11029, 2018, https://meetingorganizer.copernicus.org/EGU2018/EGU2018-11029.pdf

Macdonald, H., C. Manduca, R. Beane, D. Doser, S. Ebanks, J. Hodder, J. McDaris, and C. Ormand, Diversifying geoscience by preparing faculty as workshop leaders to promote inclusive teaching and inclusive geoscience departments, Amer. Geophys. Union Annual Meeting, 2017.

Doser, D., A. Olivarez, R. Rohrbaugh, and J. Villalobos, Assessing student-mentor interaction during a summer REU for two year college students, Amer. Geophys. Union Annual Meeting, 2017.

Ma, L., M. Hiebing, S. Garcia, A. Szynkiewicz and D. Doser, Combining geochemical tracers with geophysical tools to study sources of groundwater salinity in the Mesilla Bolson aquifer of the semi-arid Rio Grande watershed, Amer. Geophys. Union Annual Meeting, 2017.

Ziwu, F. D.*, K.L. Mickus and D.I. Doser, Investigating serpentinization with the Cook Inlet basin, Alaska from the inversion of magnetic data, Geol. Soc. Amer. Annual Meeting, 2017.

Doser, D.I., M. J. Hussein, L. Ma, L. Jin, B. Barnes and M. Zarei, Extending InTeGrate materials across the University of Texas at El Paso (UTEP) science and engineering curriculum, Geol. Soc. Amer. Annual Meeting, 2017.

Rohrbaugh, R., J. Villalobos and D.I. Doser, Research experience as an effective tool for accelerated 2YC undergraduate development, Geol. Soc. Amer. Annual Meeting, 2017.

Villalobos, J., and D. I. Doser, Bridging the gaps between 2YC and 4YC: Strategies implemented by 2YC and 4YC (INVITED), Geol. Soc. Amer. Annual Meeting, 2017.

Cervantes*, J. P., and D. I. Doser, Developing research based laboratories for introductory physical and historical geology, Geol. Soc. Amer. Annual Meeting, 2017.

Rhodes, D., and D. Doser, The Building Strong Geoscience Departments Traveling Workshop Program: A Retrospective, Earth Educators' Rendezvous, Albuquerque, NM, July 2017, https://serc.carleton.edu/earth_rendezvous/2017/program/posters/friday/174608.html

Jin, L., V.L. Lougheed, E.J. Walsh, D.I. Doser, L.K. Hamdan, M. Zarei, and G. Corral, Employing effective strategies to improve undergraduate education in Environmental Sciences through curriculum revision at a Hispanic Serving Institution, Earth Educators' Rendezvous, Albuquerque, NM, July 2017, https://serc.carleton.edu/earth_rendezvous/2017/program/posters/wednesday/174521.html

Veilleux, A., T. Carrick, D. Doser and L. Serpa, Programs that broaden participation in geosciences in the El Paso region, Earth Educators' Rendezvous, Albuquerque, NM, July 2017, https://serc.carleton.edu/earth_rendezvous/2017/program/posters/wednesday/174503.html

Doser, D.I., Using InTeGrate Materials in Large Introductory Environmental Science Courses, Earth Educators' Rendezvous, Albuquerque, NM, July 2017, https://serc.carleton.edu/earth_rendezvous/2017/program/talks/wednesdayA/174740.html.

Cervantes*, J., and D. Doser, Developing research based laboratories for introductory physical and historical geology, Earth Educators' Rendezvous, Albuquerque, NM, July 2017, https://serc.carleton.edu/earth_rendezvous/2017/program/posters/wednesday/174542.html

Ochoa-Chavez*, J.A., and D. I. Doser, Analysis of the 30 July 1972 Mw7.6 Sitka earthquake aftershock sequence, annual meeting Seismological Society of America, Denver, CO, April 2017.

Lougheed, V.L., Walsh, E. J., Doser, D. I., Jin, L., Hamdan, L. K., Carre, J. L.* and Corral, G., Developing authentic wetland research experiences in the environmental science curriculum at a Hispanic Serving Institution, Society of Wetland Scientists, Annual Meeting, San Juan, Puerto Rico, June, 2017.

Published Peer-Reviewed Course Materials (2016-2018)

Doser, D.I., Comparing human population trends (part of the *On the Cutting Edge Exemplary Teaching Activities* collection), https://serc.carleton.edu/teachearth/activities/180287.html (July, 2017)

Doser, D.I., How four households in the United States use energy (part of the *On the Cutting Edge Peer Reviewed Teaching Activities* collection), https://serc.carleton.edu/teachearth/activities/180293.html (July, 2017)

Doser, D.I., and G. Weissmann, Observing the Rio Grande ecosystem to promote systems thinking (part of the *On the Cutting Edge Peer Reviewed Teaching Activities* collection), https://serc.carleton.edu/teachearth/activities/180485.html (July, 2017)

Webinars (2016-2018)

(Doser presentation on "Ways to Support All Students") (Nov. 13, 2017)
https://serc.carleton.edu/integrate/workshops/webinars/2017_2018/itg_supportstudents/index.html

(Doser presentation on "Sustainable Solutions to Societal Issues: Teaching Earth literacy across the undergraduate curriculum) (Sept. 21, 2017)
http://serc.carleton.edu/integrate/workshops/webinars/2015_2016/envirojustice/index.html

(Doser presentation on "*Connecting Science to Issues of Justice in Your Course*") (February 25, 2016)
http://serc.carleton.edu/integrate/workshops/webinars/2015_2016/diverse_students/index.html

(Doser presentation on "*Working with Diverse Students on Societally Relevant Issues*") (May 11, 2016)
http://serc.carleton.edu/integrate/workshops/webinars/2016_2017/diversity_equity/index.html

(Doser presentation on "*The Importance of Diversity and Equity in Supporting the Whole Student*") (September 22, 2016)

Other Presentations/Workshops (2016-2018)

Doser, D.I., and J.I. Villalobos, National Assoc. Geoscience Teachers Traveling Workshop Program, workshop at University of Hawaii-Manoa, November 30-December 1, 2018.

Doser, D.I., History of Permian Basin seismicity, Los Alamos National Laboratory, March 27, 2018.

Doser, D.I., Characterizing Uncertainties in the Geophysical Properties of Soils in the El Paso, Texas Region, Los Alamos National Laboratory, March 26, 2018.

Doser, D.I., R.H. MacDonald, S. Sit, and G. Weissmann, Traveling Workshop Leaders Workshop, committee to develop new "supporting all students" workshop, Boise, ID, March 4-6, 2018.

Richards, G., and D. I. Doser, Sustainable solutions to societal issues: Teaching Earth literacy across the undergraduate curriculum, workshop, American Geophysical Union, Dec. 12, 2017.

Weissmann, G., and D. I. Doser, National Assoc. Geoscience Teachers, Traveling Workshop Program, workshop at Indiana University, Sept. 15-16, 2017.

Doser, D.I., and J. Villalobos, National Assoc. Geoscience Teachers, Traveling Workshop Program, workshop at Pasadena City College for 11 two-year colleges, August 25-26, 2017.

Gosselin, D., D. Doser, R. Parnell, and D. Hassenzahl, Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems: Part I and Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems Part II, workshops for Assoc. for Envir. Studies and Sciences meeting, Tucson, AZ, June 21, 2017.

Doser, D.I., and J. Villalobos, Preparing two-year college students for success at four-year colleges, invited, Annual Meeting of Texas Community College Teachers Association, Houston, Texas, Feburary 25-27, 2016.

Doser, D., and G. Weissmann, National Assoc. Geoscience Teachers, Traveling Workshop Program, workshop at Univ. Idaho, Moscow, ID, April 9-10, 2016.

Doser, D.I., and J. Villalobos, Building Bridges from 2YC to 4YC, invited presentation, Summit on the Future of Undergraduate Education, Austin, Texas, January 8-10, 2016. (see http://www.jsg.utexas.edu/events/files/Doser-Diane_Villalobos-Joshua.pdf)

Research grants (2016-2018)

funded:

National Science Foundation:

9/17-8/20 GP-Impact: Service learning activities targeting the earth sciences (SLATES) (D. Doser, PI; R. Langford, J. Villalobos (El Paso Commun. College), R. Rohrbaugh (El Paso Commun. College) co-PIs, $174,701

9/1/16-8/31/19, REU Site: UTEP-ROCCS (University of Texas at El Paso – Research Experience for Community College Students), (D. Doser, PI, and J. Villalobos, El Paso Commun. College, co-PI), $330,532.

8/16-9/19, Improved STEM education for 21st century environmental scientists through stratified mentoring and professional networking, (L. Jin PI, D. Doser, V. Lougheed, E. Walsh, co-PIs), $298,431.

1/1/12-11/30/19 InTeGRATE: Interdisciplinary Teaching of Geoscience for a Sustainable Future (part of a DUE-GEO STEP Center proposal) (K. Manduca-PI, Carleton College, D. Doser co-PI), $201,467 (UTEP portion)

Howard Hughes Medical Institute:

9/14-8/19 UTEP Program to Educate and Retain Students in STEM Tracks (PERSIST) (S. Aley, PI, D. Doser senior personnel) $2,400,000

Society of Exploration Geophysicist-Student Chapter Outreach Award:
10/18-5/19 An Outreach Program between the SEG Student Chapter at the University of Texas at El Paso and 5th and 8th Grade Students from Local El Paso County Schools, (D. Doser, PI, A. Veilleux, co-PI), $640

TexNet/CISR:
7/18-6/20 Investigating West Texas Seismicity and Structure with Dense Geophone Arrays, (M. Karplus PI, S. Veitch, D. Doser, J. Chaput co-PIs), $194,974.45

pending:
National Science Foundation:
8/19-7/22 Combine sensors, geophysical survey and geochemical tools to investigate pedogenic carbonate precipitation and carbon dioxide emission in irrigated soils of aridlands (L. Jin, PI, A. Dorrouzet-Nardi, D. Doser, co-PIs) $778,486

not funded:
Society of Exploration Geophysicists-Geoscientists Without Borders Program:
6/18-5/20 Texas-Mexico Borderland - Fresh Water Aquifer Delineation using Geophysical Techniques (J. Kubicki, PI, D. Doser, R. Langford, T. Pavlis, L. Ma, M. Karplus, co-PI's), $100,000.
9/17-8/19 Texas-Mexico Borderland - Fresh Water Aquifer Delineation using Geophysical Techniques (J. Kubicki, PI, D. Doser, R. Langford, T. Pavlis, L. Ma, M. Karplus, co-PI's), $100,000.
UT System-ConTex Program:
9/18-8/19 Geophysics Applied to Soils, Surface Water, and Earthquake Hazards Studies in the West Texas-northern Chihuahua Region (D. Doser and O. Dena-Ornelas (UACJ), co-PI's), $74,925
9/17-8/19 Geophysics Applied to Soils, Surface Water, and Earthquake Hazards Studies in the West Texas-northern Chihuahua Region (D. Doser and O. Dena-Ornelas (UACJ), co-PI's), $111,013
Department of Education:
6/16-5/19, SUCCESS: Supporting Undergrad College Completion for Environmental Science Students, (L. Jin PI, D. Doser, V. Lougheed, E. Walsh, co-PIs), $3,247,571
U.S. Dept. of Agriculture:
10/18-10/23 Cultivating Research through Interdisciplinary Opportunities in Undergraduate STEM (CuRIOUS): Advancing Knowledge in the Agricultural Sciences (J. Olimpo, PI, L. Diaz-Martinez, D. Doser, L. Jin, W-Y. Lee, Paat, Apodaca, co-PIs), $499,768
National Earthquake Hazard Reduction Program (U.S. Geol. Survey):
6/1/16-5/31/17 Seismological studies of the central and northern Queen Charlotte fault system, (Doser, PI) $42,837