

**VITA**  
**KATE C. MILLER**

**ADDRESS:** Department of Geological Sciences, University Of Texas at El Paso, El Paso, TX 79968-0555. Phone: 915-747-5424, Fax: 915-747-5073. E-mail: miller@utep.edu.

**EDUCATION:**

- 1991 Ph.D., Geophysics, **Stanford University**, Stanford, California. Dissertation: *Structure and Tectonics of Central California from Seismic Reflection Data*, Advisor: George A. Thompson.
- 1988 M.S., Geophysics, **Stanford University**, Stanford, California.
- 1982 A.B., magna cum laude, Geological and Geophysical Sciences, **Princeton University**, Princeton, New Jersey. Thesis: *The Paleomagnetism of Precambrian Kimberlites from India*, Advisor: Robert Hargraves.

**ACADEMIC APPOINTMENTS:**

- 9/02- **Professor**, University of Texas at El Paso, El Paso, Texas.
- 9/98-8/02 **Associate Professor**, University of Texas at El Paso, El Paso, Texas.
- 9/93-8/98 **Assistant Professor**, University of Texas at El Paso, El Paso, Texas.
- 1/92-8/93 **Visiting Assistant Professor**, University of Texas at El Paso, El Paso, Texas.
- 9/91-12/91 **Research Specialist**, University of Texas at El Paso, El Paso, Texas.

**ADMINISTRATIVE EXPERIENCE:**

- 9/04-5/08 **Associate Dean**, College of Science, University of Texas at El Paso
- 1/99-8/04 **Department Chair**, Department of Geological Sciences, University of Texas at El Paso
- 9/98-12/98 **Interim Department Chair**, Department of Geological Sciences, University of Texas at El Paso

**OTHER PROFESSIONAL EMPLOYMENT:**

- 1/87-8/91 **Research and Teaching Assistant**, Stanford University, Stanford, California.
- 6/88-9/88 **Summer Geophysicist**, Amoco Production Co., New Orleans, Louisiana.
- 6/87-9/87
- 6/84-9/86 **Exploration Geophysicist**, Amoco Production Co., New Orleans, Louisiana.
- 8/82-6/84 **Development Geologist**, Amoco Production Co., New Orleans, Louisiana.

**HONORS**

- 2001 University of Texas System Chancellor's Council Award for Teaching Excellence
- 1997 Fellow of the Geological Society of America

1982 Elected to Sigma Xi

### **PROFESSIONAL SOCIETY MEMBERSHIP**

American Geophysical Union, American Association of Petroleum Geologists, European Association of Geoscientists and Engineers, Geological Society of America, Society of Exploration Geophysicists.

**Licensure:** Texas Professional Geoscientist License No. 4605, Geophysics

### **COURSES TAUGHT**

#### *Undergraduate:*

Introduction to Historical Geology, Introduction to Earth Science I & II, Geology for Engineers, Exploration Geophysics: Seismic Methods

#### *Graduate:*

Geophysical Applications of Digital Signal Processing, Plate Tectonics, Seismic Reflection Data Processing, Seismic Reflection Data Interpretation, Modeling and Inversion of Wide-Angle Seismic Data, Geophysical Framework of North America, Applications of Inverse Theory (team taught), Advanced Seismology (team taught)

### **STUDENT MENTORING**

*Graduate Student Advisees: (degree completed):* D. Adams, Ph.D. 1995; M. Averill, Ph.D., 2007; W. Belzer, M.S. 1999; J. Chang, M.S., 1994; J. C. Chang, M.S. 2008; O. Dena, Ph.D., 2008; B. Elebiju, M.S., 2005; T. Eshete, Ph.D., 2001; B. Hiatt, M.S. 2000; F. Kilbride, Ph.D. 2000; T. Maciejewski, M.S. 1996; T. O'Donnell, M.S. 1998; D. Popovich, M.S. 2002; K. Schramm, M.S., 2004; C. Snelson, M.S., 1998, Ph.D. 2001; D. Smith M.S., 2002; J. Whitelaw, Ph.D., 1996.

*Undergraduate Advisees (degree completed):* J. Arellano, B. Drenth, T. O'Donnell, B. Reno, M. Sandoval

*Current Advisees:* S. Carley

### **PROFESSIONAL ACTIVITIES**

Member, External Advisory Council, Southern California Earthquake Center (2005-present)

Member, Planning Committee, Incorporated Research Institutions in Seismology (IRIS) 2007-present

Member, Board of Directors, IRIS 2003-2005

Panelist, NSF Earth Sciences Instrumentation and Facilities Program (2007), NSF Earthscope Program (2003-04), NSF GeoTeach Program (2006), NSF PIRE Program (2005); NSF Continental Dynamics Program (2008-present)

Member, IRIS - PASSCAL Standing Committee, 1998-2001

Panelist, National Earthquake Hazards Reduction Program of the U. S. Geological Survey, 1996.

Technical Session Chair on a regular basis at professional meetings including, the fall meeting of the AGU, the annual GSA meeting, and sectional GSA and AAPG meetings.

Invited speaker for seminar series including presentations at University of Texas at Austin, New Mexico State University, New Mexico Tech, University of New Mexico, University of Washington, UTEP Physics Department, Texas Tech, UTEP Environmental Science and Engineering Program

Reviewer of ca. 5 manuscripts per year for a variety of journals including Tectonics, Journal of Geophysical Research, Geophysics, Geophysical Review Letters, Tectonophysics, GSA Today, Geological Society of America Bulletin, Canadian Journal of Earth Science, Geophysical Journal International.

Regular reviewer of grant proposals, primarily for the National Science Foundation and NASA.

## GRANTS AND CONTRACTS

<u>Role</u>	<u>Granting Agency</u>	<u>Project Title</u>	<u>Award Amount*</u>	<u>Duration</u>
PI (w/ Erslev et al.)	NSF (EarthScope)	Collaborative Research: Formation of Basement-involved Foreland Arches: An Integrated EarthScope Experiment	\$580,879*	3/09-2/12
PI (w/ Hagedorn, Johnson)	NSF (EHR)	Track 1, GK-12 Partnership for Exploring the Environment on the U.S.-Mexico Border	\$1,780,908	01/06-1/10
Prin. Invest. (w/ Hagedorn, Langford, Velasco)	NSF (GEO)	Track 2: Pathways - A Geoscience Network for Training and Recruitment of Future Earth Scientists in El Paso	\$1,149,733	6/05-5/10
PI	ADP Inc.	MaST (Math and Science Teachers) Academy	\$600,000	11/06-10/09
Co-PI (w/ Andronicos et al.)	NSF (Continental Dynamics)	BATHOLITHS: Generation and Evolution of Crust in Continental Magmatic Arcs	\$407,547*	9/03-8/08
PI	Shell Oil	Support for Pathways Summer Program	\$75,000	2/05-2/10
PI (w/ Harder)	IRIS (NSF)	PASSCAL Seismic Instrument Facility	\$84,500 - \$199,000 annually	12/98-6/09
Co-PI w/ Keller, Harder	NSF	Upgrade of a Pool of Highly Portable Seismic Recorders for Use by the Seismological Community	\$430,000	6/05-5/08
Co-PI (w/ Starks)	NASA	Supporting Science Outreach in a Digital Media Environment	\$75,000	3/04-11/06
PI (w/ Doser, Keller)	THECB	STAR Award For Seismic Instrumentation	\$200,000	6/05-2/06
Prin. Invest.	Landmark Graphics Corporation	Landmark University Grant (in-kind grant for hydrocarbon exploration solutions software)	\$5,517,050	6/01-6/10
Co-PI (w/ Velasco, Keller,	DoD (ARO)	Seismic Instrumentation for Solidifying Research Capabilities in Defenses and	\$200,000	11/04-10/05

<u>Role</u>	<u>Granting Agency</u>	<u>Project Title</u>	<u>Award Amount*</u>	<u>Duration</u>
Doser)		Earthquake Science & Education		
Prin. Invest. (w/ Velasco)	NSF (INT)	US-Bhutan Workshop: Seismotectonics and its Relationship to Natural Hazards in the Bhutanese Himalaya	\$6,900	6/03-5/04
Prin. Invest. (w/ Andronicos, Langford)	NSF (GEO)	Building Pathways into the Geosciences for an Hispanic Community of Learners in El Paso	\$380,200	1/02-12/05
Co-PI (w/ Karlstrom et al.)	NSF (Continental Dynamics)	Collaborative Research: Lithospheric Structure and Evolution of the Rocky Mountains: Phase 2	\$62,996*	9/02-8/04
Prin. Invest. (w/ Barnes)	THECB-ARP	Geophysical and Petrological View of Magmatic Contribution to Intracontinental Growth: Rio Grande Rift	\$112,350*	1/02-8/04
Prin. Invest. (w/ Velasco)	DOE (LANL)	Deployment of a Temporary Seismic Array in Bhutan	\$146,101	11/01-10/04
Prin. Invest. (w/ Keller, Doser, Harder)	NSF (IF)	Upgrade to Geophysical Computing at the University of Texas at El Paso	\$99,580	9/01-8/04
Co-PI (w/ Keller)	NSF (INT)	CELEBRATION 2000: A Seismic Investigation of Lithospheric Structure in the TESZ/Carpathian Mountains Region	\$64,440	5/00-5/04
Co-PI (w/ Karlstrom, Keller, et al.)	NSF (Continental Dynamics)	Collaborative Research: Lithospheric Structure and Evolution of the Rocky Mountains - beginning Phase 2 Geodynamic Processes	\$79,929	5/01-9/03
Prin. Invest. (w/ Keller, Doser, Harder)	NSF (IF)	Upgrade to Geophysical Computing at the University of Texas at El Paso	\$99,580	9/01-8/04
Prin. Invest. (w/ Velasco)	NSF (INT)	US-Bhutan Workshop: Seismotectonics and its Relationship to Natural Hazards in the Bhutanese Himalaya	\$6,900	6/03-5/04
Prin. Invest.	IRIS (NSF)	Undergraduate Summer Internship in Seismology at UTEP	\$11,300	5/02-12/02
Prin. Invest. (w/ C. Barnes)	THECB-ARP	Formation and Evolution of Proterozoic Crust in West Texas and Eastern New Mexico	\$39,488*	1/00-1/02
Prin. Invest.	HiCREST (DOE)	Scholarship for Jackie Arellano	\$5,000	9/99-8/00
Prin. Invest.	NSF (INT)	Seismotectonics and Structure of the Bhutanese Himalaya	\$5,500	6/01-5/02

<u>Role</u>	<u>Granting Agency</u>	<u>Project Title</u>	<u>Award Amount*</u>	<u>Duration</u>
Prin. Invest.	USGS	Controlled-Source Study of the Structure of the Seattle and Tacoma Basins - SHIPS (Seismic Hazards Investigations of Puget Sound) 99: Collaborative Research (USGS, OSU, UTEP)	\$150,000*	2/99-2/01
Co-PI. (w/ Keller, Harder)	TLLRWA	Seismic and Gravity Surveys for Fault Delineation, Sierra Blanca, Texas	\$60,000	9/98-8/99
Co-PI (w/ Harder)	Allied Signal Technical Services	Seismic Survey of the NASA White Sands Test Facility	\$75,000	7/98-12/98
Co-PI. (w/ Keller)	NSF (MRI)	Acquisition of a Pool of Highly Portable Seismic Recorders for Use by the Seismological Community	\$583,600	7/98-7/00
Prin. Invest.	USGS	COLLABORATIVE RESEARCH: (UTEP/OSU/USGS/UBC/UW/ U. Victoria/PGC): Seismic Hazards Investigations of Puget Sound (SHIPS)	\$39,693*	2/98-2/99
Co-PI (w/ Karlstrom et al.)	NSF (Continental Dynamics)	Collaborative Research: Lithosphere Structure and Evolution of the Rocky Mountain Transect of the Western U.S.: An Integrated Geological and Geophysical Investigation	\$538,790	10/97-9/01
Prin. Invest. (w/ Keller)	USGS	COLLABORATIVE RESEARCH: A High Resolution Seismic Refraction and Reflection Survey of the Washington Study Corridor	\$138,303*	4/95-9/97
Co-PI (w/ Harder)	Tierra Engr.	Gravity and Seismic Surveys of the Holloman AFB, New Mexico	\$21,077	10/97-9/01
Co-PI (w/ Harder)	U. S. Army	Shallow Geophysical Surveys for Geothermal Resources, MacGregor Range, Fort Bliss, New Mexico	\$70,000	9/94-9/96
Co-PI. (w/ Doser, Keller, Harder)	U.S. Air Force Res.	Development of a Lithospheric Model and Geophysical Data Base for North Africa	\$152,433	10/95-9/97
Co-PI (w/ Keller)	THECB (ATP)	Development and Testing of a New 3-D Seismic Recorder: A University-Industry Collaboration	\$334,305	1/96-12/97
Co-PI (w/ Keller & Doser)	U.S. Air Force Res.	Lithospheric Profiles in the Southwestern U.S. using Nevada Test Site Sources	\$544,891	8/92-7/95
Co-PI (w/ Keller & Doser)	U.S. Air Force Res. AASERT Program	Lithospheric Profiles in the Southwestern U.S. using Nevada Test Site Sources	\$113,065	9/93-9/96
Prin. Invest.	EPA (CERM)	Potential Role of Controlled-Source	\$19,700	5/95-8/95

<u>Role</u>	<u>Granting Agency</u>	<u>Project Title</u>	<u>Award Amount*</u>	<u>Duration</u>
		Fluid Flow and Contaminant Migration in Arid Regions		
Prin. Invest.	NASA	Evaluation of Seismic Data for NASA Johnson Space Center, White Sands Test Facility	\$16,379	6/95-9/95
Prin. Invest.	URI (UTEP)	Seismic Reflection Data Processing in West Texas and Eastern New Mexico	\$1,500	11/94-8/95
Prin. Invest.	URI	Seismic Reflection Investigation of the Continental Crust in West Texas and Eastern New Mexico	\$3,000	2/94-8/94
Co-Invest (w/ Keller & Doser)	U.S. Air Force Res.	Instrumentation for Seismic Data Acquisition and Analysis	\$174,801	9/93-9/94
Prin. Invest.	Am. Chem. Soc.	Deep Penetration Seismic Reflection Studies of the California Borderland	\$21,000	9/92-12/94
Prin. Invest. (w/ Moss & Whitelaw)	Tx. Bur. Econ. Geol.	Geophysical and Geohydrologic Studies of the Eagle Flat Region	\$33,833	5/92-8/92
Co-PI (w/ Keller)	USGS	Collaboration with the USGS Deep Continental Studies Group on The North Deployment of the Pacific Northwest Refraction Experiment	\$102,201*	9/91-8/93

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\*Dollar amount denotes UTEP portion of multi-institutional grant.

## **PUBLICATIONS:**

- Miller, K. C., T. Carrick, C. Martínez-Sussmann, R. Levine, C. L. Andronicos, R. P. Langford, 2007, *Effectiveness of a Summer Experience for Inspiring Interest in Geoscience Among Hispanic-American High School Students*, Journal of Geoscience Education, v. 55, pp. 596-603.
- Averill, M.G., K. C. Miller, G. R. Keller, V. Kreinovich, R. Araiza, S. A. Starks, 2007, Using expert knowledge in solving the seismic inverse problem, International Journal of Approximate Reasoning, v. 45, pp. 564-587.
- Velasco, A. A., V. L. Gee, C. A. Rowe, D. Grujic, L. S. Hollister, D. Hernandez, K. C. Miller, T. Tobgay, M. Fort, and S. Harder, 2007, Using Small, Temporary Seismic Networks for Investigating Tectonic Deformation: Brittle Deformation and Evidence for Strike-Slip Faulting in Bhutan, *Seism. Res. Lett.*, v. 78, p. 446-453, DOI: 10.1785/gssrl.78.4.446.
- J. M. Hamblcock, C. L. Andronicos, K. C. Miller, C. G. Barnes, M-H. Ren, M. G. Averill, and E. Y. Anthony, 2007, *A Composite Geologic and Seismic Profile Beneath The Southern Rio Grande Rift, New Mexico, Based on Xenolith Mineralogy, Temperature, and Pressure*, Tectonophysics, v. 442, pp. 14-48, doi:10.1016/j.tecto.2007.04.006.
- Snelson, C. M., T. M. Brocher, K. C. Miller, T. L. Pratt, and A. M. Tréhu, 2007, *Seismic Amplification Within the Seattle Basin, Washington State: Insights from SHIPS Seismic Tomography Experiments*, Bull. Seism. Soc. Am., v. 97, pp. 1432-1448, doi: 10.1785/0120050204.

- Averill, M.G., G. R. Keller, K.C. Miller, P Sroda, T. Bond, and A. Velasco, 2006, Data fusion in geophysics: Seismic tomography and crustal structure in Poland as an example, in Sinha, A.K., ed., *Geoinformatics: Geological Society of America Special Paper 397*, doi: 10.1130/2005.2397(11).
- Snelson, C. M., G. R. Keller, K. C. Miller, H.-M. Rumpel, and C. Prodehl, 2005, Regional crustal structure derived from the CD-ROM 99 seismic refraction/wide-angle reflection profile: The lower crust and upper mantle, in Lithospheric Structure and Evolution of the Rocky Mountain Region, K. E. Karlstrom, and G. R. Keller, eds., Am. Geop. Un. Monograph 154, pp. 271-292.*
- Magnani, M. B., A. Levander, K. C. Miller, T. Eshete, and K. E. Karlstrom, 2005, *Seismic investigation of the Yavapai-Mazatzal transition zone and the Jemez Lineament, northeastern New Mexico*, in *Lithospheric Structure and Evolution of the Rocky Mountain Region*, K. E. Karlstrom, and G. R. Keller, eds., Am. Geop. Un. Monograph 154, pp. 227-238.
- Amarante, J. F. A., S. A. Kelley, M. T. Heizler, M. Barnes, K. C. Miller, and E. Y. Anthony, 2005, *Characterization and age of the Mesoproterozoic Debaca sequence in the Tucumcari basin, New Mexico*, in *Lithospheric Structure and Evolution of the Rocky Mountain Region*, K. E. Karlstrom, and G. R. Keller, eds., Am. Geop. Un. Monograph 154, pp. 185-200.
- Keller, G. R., K. E. Karlstrom, M. L. Williams, K. C. Miller, C. L. Andronicos, A. Levander, C. M. Snelson, and C. Prodehl, 2005, *The dynamic nature of the continental crust-mantle boundary: Crustal evolution in the Southern Rocky Mountain region as an example*, in *Lithospheric Structure and Evolution of the Rocky Mountain Region*, K. E. Karlstrom, and G. R. Keller, eds., Am. Geop. Un. Monograph 154 pp. 403-420.
- Magnani, M. B., K. C. Miller, A. Levander, and K. E. Karlstrom, 2004, *The Yavapai-Mazatzal boundary: a long-lived assembly structure in the lithosphere of southwestern North America*, *Geol. Soc. Am. Bull.*, v. 116, pp. 1137-1142.
- Grad, M., S. L. Jensen, G. R. Keller, A. Guterch, H. Thybo, T. Janik, T. Tiira, J. Yliniemi, U. Luosto, G. Motuza and V. Nasedkin, W. Czuba, E. Gaczynski, P. Sroda, K. C. Miller, M. Wilde-Piörko, K. Komminaho, J. Jacyna, and L. Korabliova, 2003, *Crustal structure of the Trans-European suture zone region along POLONAISE'97 seismic profile P4*, *Journal of Geophysical Research*, v. 108, doi:10.1029/2003JB002426.
- Pratt, T. L., T. M. Brocher, C. S. Weaver, K. C. Miller, A. M. Trehu, K. C. Creager, R. S. Crosson, and C. M. Snelson, 2003, *Amplification of seismic waves by the Seattle basin, northwestern U. S.*, *Bulletin of the Seismological Society of America*, v. 93, pp. 533-545.
- Miller, K. C., 2002, *Geophysical Evidence for Miocene Extension and Mafic Magmatic Addition in the California Continental Borderland*, *Geological Society of America Bulletin*, v. 114, pp. 497-512.
- Grad, M., G. R. Keller, H. Thybo, A. Guterch, W. Czuba, T. Janik, P. Sroda, K. C. Miller, S. Jensen, U. Luosto, T. Tiira, J. Yliniemi, and C. E. Lund, *Lower lithospheric structure beneath the Trans-European suture zone from POLONAISE'97 seismic profiles*, 2002, *Tectonophysics*, v. 360, pp.153-168.
- Belzer, W. L., K. C. Miller, and S. Harder, 2002, Shallow Geophysical Study of the Grapevine Canyon Area, Eastern Tularosa Basin: Implications For Groundwater Resources*, *New Mexico Geological Society Guidebook 52*, pp. 79-84.
- Gorman, A.R., R.M. Clowes, R.M. Ellis, T.J. Henstock. G.D. Spence, G.R. Keller, A.R. Levander, C.M. Snelson, M.J.A. Burianyk, E.R. Kanasewich, I. Asudeh, Z. Hajnal and K.C. Miller, 2002, *Deep Probe*

- *Imaging the roots of western North America*, Canadian Journal of Earth Sciences, v. 39, pp. 375-398.
- O'Donnell, T. M. Jr., K. C. Miller, and J. C. Witcher, 2001, *A Seismic and Gravity Study of the McGregor Geothermal System, Southern New Mexico*, Geophysics, v. 66, pp.1002-1014.
- Brocher, T. M., T. E. Parsons, R. J. Blakely, N. I. Christensen, M. A. R. E. Fisher, Wells, U. S. ten Brink, T. L. Pratt, R. S. Crosson, K. C. Creager, N. P. Symons, L. A. Preston, Van T. Wagoner, K. C. Miller, C. M. Snelson, A. M. Trehu, V. E. Langenheim, G. D. Spence, K. Ramachandran, R. D. Hyndman, D. C. Mosher, B. C. Zelt, C. S. Weaver, 2001, *Upper crustal structure in Puget Lowland, Washington; results from the 1998 seismic hazards investigation in Puget Sound*, Journal of Geophysical Research, v. 106, pp. 13,541-13,564.
- Shearer, D. L., and K. C. Miller, 2000, *Implications of Recent Geophysical Studies of The Big Hatchet Mountains Area, Southwestern New Mexico*, New Mexico Geological Society Guidebook 51, pp. 71-74.
- Brocher, T. M., T. L. Pratt, K. C. Creager, R. S. Crosson, W. P. Steele, C. S. Weaver, A. D. Frankel, A. M. Trehu, C. M. Snelson, K. C. Miller, and S. H. Harder, 2000, *Urban Seismic Experiments Investigate Seattle Fault and Basin*, EOS Trans. Am. Geophys. Un., v. 81, no. 46, pp. 545-551.
- Sroda, P., W. Czuba, A. Guterch, M. Grad, H. Thybo, G. R. Keller, K. C. Miller, T. Tiira, U. Luosto, J. Yliniemi, G. Motuza, V. Nasedkin, 1999, *P- and S- velocity model of the southwestern margin of the Precambrian East European Craton; Polonaise '97, profile P3*, Tectonophysics, v. 314, pp. 193-217.
- Jensen, S. L., T. Janik, H. Thybo, M. Grad, E. Gaczynski, A. Guterch, G. R. Keller, and K. C. Miller, 1999, *Seismic structure of the Palaeozoic Platform along POLONAISE'97 profile P1 in northwestern Poland*, Tectonophysics, v. 314, pp. 123-143.
- Guterch, A., M. Grad, H. Thybo, G. R. Keller, W. Czuba, E. Gaczynski, T. Janik, R. Materzok, P. Sroda, M. Wilde-Pioorko, S. L. Jensen, S. Harder, K. C. Miller, A. Schulze, K. Schuster, K. Komminaho, U. Luosto, T. Tiira, J. Yliniemi, G. Motuza, V. Nasedkin, and C. E. Lund, 1999, *POLONAISE '97; an international seismic experiment between Precambrian and Variscan Europe in Poland*, Tectonophysics, v. 314, pp.101-121.
- Fisher, M. A., T. M. Brocher, R. D. Hyndman, A. M. Trehu, C. S. Weaver, K. C. Creager, R. S. Crosson, T. Parsons, A. K. Cooper, D. Mosher, G. Spence, B. C. Zelt, P. T. Hammer, U. tenBrink, T. L. Pratt, K. C. Miller, J. R. Childs, G. R. Cochrane, S. Chopra, and R. Walia, 1999, *Seismic survey probes urban earthquake hazards in Pacific Northwest*, EOS, v. 80, pp. 13-17.
- Miller, K. C., and Meltzer, A. S., 1999, *Structure and tectonic of the offshore central Santa Maria and Santa Lucia Basins, California: Results from the PG&E/EDGE seismic reflection survey*, U. S. Geological Survey Bulletin 1995, Evolution of Sedimentary Basins - Onshore Oil and Gas Investigations - Santa Maria Province.
- Chang, J.-Y., K. C. Miller, and G. R. Keller, 1999, *Seismic expression of late Cretaceous to Recent structure in southwestern New Mexico*, Rocky Mountain Geology, v. 34, pp. 131-148.
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- C. M. Snelson, T. J. Henstock, G. R. Keller, K. C. Miller, and A. Levander, 1998, *Crust and uppermost mantle structure along the Deep Probe profile*, Rocky Mountain Geology, v. 2, pp. 181-198.

- Guterch, A., M. Grad, H. Thybo, G. R. Keller, and K. C. Miller, 1998, *Seismic Experiment Spreads across Poland*, EOS, v. 79, pp. 302-305.
- Henstock, T. J., A. Levander, G. R. Keller, *C. M. Snelson*, K. C. Miller, S. H. Harder, A. R. Gorman, R. M. Clowes, M. J. A. Burianyk, E. D. Humphreys, 1998, *Probing the Archean and Proterozoic lithosphere of western North America*, GSA Today, v. 8, no. 7, pp. 1-5.
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- Miller, K. C., G. R. Keller, *J. M. Gridley*, J. Luetgert, W. Mooney, and H. Thybo, 1997, *Crustal Structure Along the West Flank of the Cascades, Western Washington*, J. Geophys. Res., v. 102, pp. 17,857-17,873.
- Miller, K. C., and Meltzer, A. S., 1999, *Structure and tectonic of the offshore central Santa Maria and Santa Lucia Basins, California: Results from the PG&E/EDGE seismic reflection survey*, U. S. Geological Survey Bulletin 1995, Evolution of Sedimentary Basins - Onshore Oil and Gas Investigations - Santa Maria Province.
- Adams, D. C.*, K. C. Miller, and H. Kargi, 1997, *Reconciling physical properties with surface seismic data from a layered mafic intrusion*, Tectonophysics, v. 271, pp. 59-74.
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- Wernicke, B., R. Clayton, M. Ducea, C. H. Jones, S. Park, S. Ruppert, J. Saleeby, J. K. Snow, L. Squires, M. Flidner, G. Jiracek, R. Keller, S. Klemperer, J. Luetgert, P. Malin, K. Miller, W. Mooney, H. Oliver, and R. Phinney, 1996, *Origin of high mountains in the continents: The southern Sierra Nevada*, Science, v. 271, pp. 190-193.
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## PRESENTATIONS (LAST FIVE YEARS)

- Dena, O., K. C. Miller, and U. ten Brink, 2008, Crustal Structure of Northern Lake Baikal, Russia, 13<sup>th</sup> International Symposium on Deep Seismic Profiling of the Continents and Their Margins, Helsinki Finland, June.
- Averill, M. G., A. A. Velasco, V. Y. Kreinovich, and K. C. Miller, 2007, *New Technique for Assessing Velocity Uncertainty in Seismic Refraction Tomography*, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S23B-1386.
- Miller, K. C., M. G. Averill, and C. G. Barnes, 2007, *Crustal Structure of the Southern Rio Grande Rift Defined by Wide Angle Reflection Data*, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T41A-0359.
- Chang, J. C., and K. C. Miller, 2007, Regional Significance of Lower-Crustal Reflectivity in the California Continental Borderland, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract S33A-1038.
- Barnes, C. G., K. C. Miller, A. W. Snoke, A. Yoshinobu, C. M. Snelson, C. Frost, and R. Metcalf, 2007, *Imaging Accreted Terranes at the Cascadia Margin: The Klamath Mountains Province of California and Oregon*, Geol. Soc. Am. Abstracts with Programs, v. 39, no. 6, p. 612.
- Hamblock, J. M., C. L. Andronicos, K. C. Miller, C. G. Barnes, M. Ren, M. G. Averill, and E. Y. Anthony, 2007, *A Composite Geologic And Seismic Profile Of The Lithosphere Beneath The Potrillo Volcanic Field, Southern Rio Grande Rift, New Mexico*, Geological Society of America Abstracts with Programs, v. 39, no. 6, p. 363.
- Barnes, C. G., K. C. Miller, A. W. Snoke, and G. R. Keller, 2007, *Processes of Terrane Accretion and Modification: The Klamath Mountains of Cascadia*, talked presented at the EarthScope National Meeting, Monterey, California, March.
- Miller, K. C., J. Kennedy, E. Hagedorn, and M. E. Harper, 2007, *GK-12 Partnership for Exploring the Environment on the U.S. – Mexico Border*, poster presentation at annual GK-12 conference, Washington D.C., March.
- Miller, K. C., 2006, *The Geoframe Midcontinent Transect: An Opportunity to Study the Effects of the ~1.4 Ga Magmatic Event on the Lithospheric Evolution of the Continent*, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract: T43C-1657.
- Miller, K. C., 2006, *GK-12 Partnership for Exploring the Environment on the U.S. Mexico Border: A First Look*, GSA Abstracts with Programs Vol. 38, No. 7.
- Feig, A., and K. C. Miller, 2006, *Conceptualization of the Scientific Method and Self-Identity Among Geoscience Graduate Students*, GSA Abstracts with Programs Vol. 38, No. 7.
- Miller, K. C. A. A. Velasco, C. L. Andronicos, R. P. Langford, T. L. Carrick, 2005, *Providing the Pathway to Success for Graduate Education: Undergraduate Research*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract ED31B-1204.
- Miller, K. C., 2005, *A geophysical overview of the transition from the Rocky Mountains to the Great Plains; implications for the link between Precambrian structure and the modern craton*, 2005 South-Central Section 39th Annual Meeting Abstracts with Programs - Geological Society of America, vol. 37, no. 3, pp.14.
- Averill, M. G., K. C. Miller, G. Randy Keller, V. Kreinovich, R. Araiza, S. A. Starks, 2005, *Using Expert*

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- Andronicos, C. L., Miller, K. C., Langford, R. P., and Carrick, T. L., 2004, *Providing Research Experiences to Minority Undergraduates: The Pathway to Success in Graduate Education?*, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract ED23A-0089.
- Miller, K. C., T. Carrick, C. Andronicos, R. Langford, Martinez-Sussman, C., and R. Levine, 2004, *Can Participation in a Summer Program Significantly Increase Interest in Geoscience Among Hispanic High School Students?*, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract ED21D-05.
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- Elebiju, O. O., Miller, K. C., and C. L. Andronicos, 2004, *The Precambrian Structure of the Estancia Basin, Central New Mexico: New Seismic Images of the Mazatzal Province*, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T23B-0579.
- Levander, A., Magnani, M. B., Dueker, K., and K. Miller, 2004, *Paleo-Subduction and Modern Basalt Extrusion Structures in the Southern Rocky Mountains: Multi-Band Images from the CD-ROM Experiment*, Annual Meeting of the Geological Society of America, Denver, CO.
- Miller, K. C., M. G. Averill, and S. Harder, 2004, *The Potrillo Volcanic Field Seismic Experiment, southern Rio Grande Rift: New Refraction Results from a Classic Continental Rift*, 11<sup>th</sup> International Symposium on Deep Structure of the Continents and Their Margins, Mont Tremblant, Quebec.
- Kurashimo, E., T. Iwasaki, T. Idaka, T. Kawamura, T. Moriya, K. Ito, T. Shibutani, H. Miyamachi, H. Sato, K. Miller, S. Harder, T. Ito, Y. Kaneda, M. Onishi, 2003, *Configuration of the Subducting Philippine Sea Plate and the Crustal and Upper Mantle Structure Beneath the southwestern Japan arc, Revealed by Seismic Refraction/Wide-angle Reflection Profiling*, Eos Trans. AGU, 84(46), Fall Meet. Suppl., Abstract S31F-0823.
- Averill, M. G., K. C. Miller, S. H. Harder, 2003, *Crustal Seismic Investigation of the Southern Rio Grande Rift at the Potrillo Volcanic Field, Southern New Mexico*, Eos Trans. AGU, 84(46), Fall Meet. Suppl., Abstract T31E-0878.
- Velasco, A. A., K. C. Miller, L. S. Hollister, 2003, *Results from a Temporary Seismic Network in Bhutan*, Eos Trans. AGU, 84(46), Fall Meet. Suppl., Abstract S21F-0398.
- Kilbride, F. E. A. and K. C. Miller, 2003, *Calculation and Implications of Poisson's ratio for upper crustal structure and composition in the southwest Cascades, Washington*, Annual Meeting of the Geological Society of America, Seattle, paper no. 263-5.
- Snelson, C. M., K. C. Miller, T. M. Brocher, and T. L. Pratt, *Insights on amplification in the Seattle basin from the "Dry" and "Kingdome" SHIPS seismic refraction experiments*, Annual Meeting of the Geological Society of America, Seattle, paper no. 263-8.
- K. C. Miller, 2003, *Seismic Signature of Mafic Magmatic Underplating*, 10th International Symposium on Deep Seismic Profiling of Continents and Their Margins, Taupo, New Zealand, January.

## **UNIVERSITY ACTIVITIES**

Search Committee Member, Director of Corporate and Foundation Relations, 2008-2009  
Search Committee Chair, Assistant Professor – Petroleum Geosciences –2008-2009  
University Faculty Mentoring Program Task Force, 2008.  
NSF ADVANCE Institutional Advisory Board, 2004-2008.  
Provost's Ad Hoc Committee on Incorporating Education Activities into Promotion and Tenure Criteria, 2006-2007.  
Provost's Ad Hoc Committee on Graduate Stipends 2006.  
Search Committee, College Administrative Officer, 2006.  
Centennial Research Task Force, 2004-2005.  
University Compliance Committee, 2001-2003.  
University Distinguished Achievement Awards Committee, 2001.  
Physics Chair Search Committee, 1999.  
Center for Environmental Resource Management Director Search Committee, 1999.  
Faculty Senate Member, 1994-1996  
William L. Staley Student Research Grant Selection Committee, 1995-1998  
Faculty Senate Committee on Information Technology 1997-1999, served as Vice-Chair, 1998-1999  
Faculty Senate Committee on Admissions and Academic Standards 1994-1997; served as Committee Secretary, 1995-1996; Vice-Chair, 1996-1997  
MIE B. S. Environmental Science Committee, Chair, 1999-2000  
MIE Curriculum Committee, 1997  
NRTS Faculty Liaison and Web Page Manager, 1995 - 1998  
Department Undergraduate Advisor, 1995 - 1998  
Department Undergraduate Curriculum Committee, 1997-1998  
Department Scholarship Committee, 1993 - 1998  
Department Computer Committee, 1993 - Present  
Department Graduate Seminar Coordinator, 1993 – 1994; 2005-2006.