

## Curriculum Vitae: Anne S. Meltzer

Department of Earth & Environmental Sciences  
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### EDUCATION:

Ph.D. 1989, Geology and Geophysics, Rice University, Houston, Texas.  
Dissertation: Crustal structure and tectonic evolution: Central California  
M.S. 1982, Geology, University of North Carolina - Chapel Hill, N.C.  
Thesis: Scattering of earthquake waves beneath SCARLET, Southern California  
B.S. 1980, Geology, Guilford College, Greensboro, N.C.

### PROFESSIONAL EXPERIENCE:

2001-pres. Professor, Earth & Environmental Sciences, Lehigh University, Bethlehem, PA  
2004-2011 Dean, College of Arts and Sciences, Lehigh University, Bethlehem, PA  
2002-2004 Chair, Earth & Environmental Sciences, Lehigh University, Bethlehem, PA  
1999-2002 Director LEO (Lehigh Earth Observatory)  
1995-2001 Associate Professor, Earth & Environmental Sciences, Lehigh University, Bethlehem, PA  
1990-1995 Assistant Professor, Earth & Environmental Sciences, Lehigh University, Bethlehem, PA  
1989-1990 Sr. Research Geologist, Exxon Production Research Co., Houston, TX.  
1988-1989 Post-Doctoral Research Associate, Rice University, Houston, TX.  
1982-1985 Geophysicist, Gulf Research and Development Company, Houston, TX.

### FELLOWSHIPS AND AWARDS:

Deming Lewis Award: Recognizing faculty who have significantly influenced the educational experience of the 10th year class.  
Week's Visiting Professorship in Geology and Geophysics. University of Wisconsin  
Lehigh University: Class of '61 Professorship  
Rice University: Keck Fellowship, Leroy Caleb Gibbon Award in Geology, Outstanding Student Award - Houston Geologic Society  
UNC-CH: Graduate Fellowship, McCarthy Fellowship for summer study in Geophysics  
Guilford College: Dana Scholarship, Guilford Honor Society, graduated with High Honors and Departmental Honors

### RESEARCH INTERESTS:

Physical properties and seismic response  
High-resolution seismic imaging  
Tectonic evolution of convergent margin systems  
Feedback between tectonics and surficial processes  
Earthquake physics and rupture processes

### PROFESSIONAL SOCIETIES:

American Geophysical Union  
Geological Society of America

Seismological Society of America

**SIGNIFICANT FIELD EXPERIENCE:**

- 1983 Wide-angle sonobuoy profiling offshore Southern CA: experiment design, data acquisition, and analysis.
- 1984 Wide-angle sonobuoy profiling offshore Central and Northern CA: experiment design, data acquisition, and analysis.
- 1986 Marine multichannel reflection profiling offshore Central CA: experiment design, data acquisition, and analysis.
- 1991 Wide-angle field experiment, Savannah River, South Carolina: SGR preparation deployment, and recovery.
- 1991 Multichannel high-resolution reflection profiling and VSP profiling, Newark Rift Basin.
- 1992 Multichannel high-resolution refraction and reflection profiling, Pocono Lakes PA.
- 1993 Multichannel high-resolution refraction and reflection profiling, Puerto Rico.
- 1993 Wide-angle field experiment, Mendocino Triple Junction, California: IRIS REFTEK preparation deployment, and recovery.
- 1994 Marine multichannel reflection profiling offshore Northern CA: experiment design, data acquisition, and analysis.
- 1995 Multichannel high-resolution seismic reflection and ground penetrating radar profiling, Puerto Rico.
- 1995-6 Nanga Parbat - Pakistan. Deployment of 60 broadband and short period seismic stations to record local and regional earthquakes at the Nanga Parbat massif.
- 1996-7 GPR Profiling, shallow lake sediments, NE PA.
- 2002 High Resolution Reflection Profiling, InterAndean Valley Ecuador.
- 2002 Namche Barwa Tibet Pilot Project.
- 2003-4 Namche Barwa Seismic Experiment - Deployment of 70 broadband and short period seismic stations to record local and regional earthquakes in Eastern Tibet.
- 2004 High-resolution seismic and GPR profiling, InterAndean Valley Ecuador.
- 2010 CHAMP – Chile Maule Earthquake Aftershock Deployment.
- 2011 Mineral VA Earthquake Aftershock Deployment.

**PUBLICATIONS: Articles and Reports, n=44; Abstracts and Conference Proceedings, n=122**

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*Papers Published in Professional Journals: n=29*

- Wolin, Emily, Seth Stein, Frank Pazzaglia, Anne Meltzer, Alan Kafka, *in press*, Mineral, Virginia, earthquake illustrates seismicity of a passive-aggressive margin, *Geophysical Research Letters*, 39, LXXXXX, doi:10.1029/2011GL050310, 2012.
- Li, Chang, Robert D. van der Hilst, Anne S. Meltzer, E. Robert Engdahl, 2008, Subduction of the Indian lithosphere beneath the Tibetan Plateau and Burma, *Earth and Planetary Science Letters*, 274, 157-168.
- S. Sol, A. Meltzer, R. Bürgmann, R. D. Van der Hilst, R. King, Z. Chen, P. Koons, E. Lev, Y. P. Liu, B., P. K. Zeitler, X. Zhang, J. Zhang, B. Zurek 2007, Geodynamics of the southeastern Tibetan plateau from seismic anisotropy and geodesy *Geology*, 35, 563-566.
- Meltzer, A.S., 2003. EarthScope: Opportunities and challenges for earth-science research and education, *The Leading Edge*, 22, 268-271.
- Gulick, S. P. S., A. S. Meltzer, S.H. Clarke, 2002. Effect of the northward-migrating Mendocino Triple Junction on the Eel River forearc basin, California: Structural Evolution,, GSA

- Bulletin, 114, 1505-1519.
- Gulick, S. P. S., A. S. Meltzer, S.H. Clarke, 2002. Effect of the northward-migrating Mendocino Triple Junction on the Eel River forearc basin, California: Part 1. Stratigraphic Development, GSA Bulletin. 114,178-191.
- Koons, P.O., Chamberlain, C.P., Zeitler, P.K., Craw, D., Meltzer, A.S., Park, S., 2002, Crustal Reworking at Nanga Parbat: Mechanical Links Between River Erosion and Metamorphism, American Journal of Science, 302, 749-773.
- Chamberlain, C.P., Koons, P.O., Meltzer, A.S., Park, S.K., Draw, D., Zeitler, P., Poage, M.A., 2002, Overview of hydrothermal activity associated with active orogenesis and metamorphism: Nanga Parbat, Pakistan Himalaya, American Journal of Science, 302, 726-748.
- Meltzer, A.S., Sarker, G.L., Seeber, L., Armbruster, B., Beaudoin, B., 2001, Seismic characterization of an Active Metamorphic Massif, Nanga Parbat, Pakistan, Himalaya, Geology, 29, 651-654.
- Meltzer, A.S., Christensen, N.I., Long, C., 2001, Crustal Anisotropy: Implications for crustal velocity structure and shear-wave splitting, , GRL, 28, 2129-2132.
- Gulick, S. P. S., A. S. Meltzer, T. Henstock, A. Levander, 2001, Internal deformation of the southern Gorda plate: Fragmentation of a weak plate near the Mendocino triple junction, Geology, 29, 691-694.
- Zeitler, P. K., P. O. Koons, M. Bishop, C. P. Chamberlain, D. Craw, M. Edwards, S. Hamidullah, M. Q. Jan, M. A. Khan, M. U. K. Khattak, W. Kidd, R. Mackie, A. Meltzer, S. Park, A. Pecher, M. Poage, G. Sarker, D. Schneider, L. Seeber, J. Shroder, 2001, "Crustal Reworking at Nanga Parbat, Pakistan: Evidence for erosional focusing of crustal strain.", Tectonics, 20, 712-728.
- Zeitler, P. K., A. S. Meltzer, P. Koons, D. Craw, B. Hallet, C. P. Chamberlain, W. Kidd, S. Park, L. Seeber, M. Bishop, J. Shroder, 2001, Erosion, Himalayan Geodynamics, and the Geology of Metamorphism., GSA Today, 11, 4-8.
- Meltzer, Anne Roberta Rudnick , Peter Zeitler, Alan Levander, Gene Humphreys, Karl Karlstrom, Göran Ekström, Rick Carlson, Tim Dixon, Michael Gurnis, Peter Shearer, Rob van der Hilst, 1999, The USArray Initiative, GSA Today, 9, 8-10.
- Levander, A., Humphries, E.D., Ekstrom, E., Meltzer, A.S., Shearer, P.M., 1999, Proposed project would give unprecedented look under North America, EOS, 80, 245, 250-251.
- Miller, K.C., and A.S. Meltzer, 1999, Structure and Tectonics of the Central Offshore Santa Maria and Santa Lucia Basins, California: Results from the PG&E/EDGE Seismic Reflection Survey, US Geological Survey: Z1-Z12.
- Gulick, P.S., Meltzer, Anne S., Clarke, S.H., 1998, Seismic Structure of the Southern Cascadia Subduction Zone and Accretionary Prism North of the Mendocino Triple Junction, Journal of Geophysical Research, 103, 27207-27222.
- Godfry, N.J., Meltzer, A.S., Klemperer, S.L., Trehu, A., Leitner, B., Clarke, S.H., Ondrus, A., 1998, Evolution of the Gorda Escarpment, San Andreas fault and Mendocino triple junction from multichannel seismic data collected across the northern Vizcaino block, offshore northern California, Journal of Geophysical Research, 103, 23813-23825.
- Levander, A., Henstock, T., Meltzer, A., Beaudoin, B., Trehu, A., Klemperer, S., Lendl, C., 1998, Fluids in the lower crust following Mendocino triple junction migration: Active basaltic intrusion?, Geology, 26, 171-174.
- Godfry, N.J., Beaudoin, B.C., Klemperer, S.L., Levander, A.R., Luetgert, J.H., Meltzer, A.S., Mooney, W.D., Trehu, A.M., 1997, Ophiolitic basement to the Great Valley forearc basin, California, from seismic and gravity data; implications for crustal growth at the North

- American continental margin, GSA Bulletin, 109, 1536-1562.
- Beaudoin, B.C., Godfry, N., Klemperer, S., Lendl, C., Trehu, A., Henstock, T., Levander, A., Holl, J., Meltzer, A., Luetgert, J.H., Mooney, W.D., 1996, The transition from slab to slabless: results from the 1993 Mendocino Triple Junction Seismic Experiment., *Geology*, 24, 195-199.
- Godfry, N., Beaudoin, B., Lendl, C., Meltzer, A., Luetgert, J., 1995, Data Report for the 1993 Mendocino Triple Junction Seismic Experiment, USGS Open-File Rept., 95-275, p.83.
- Henrys, S.A., Levander, A.R., and A.S. Meltzer, 1993, Crustal structure of the offshore southern Santa Maria Basin and Transverse Ranges, Southern California, from deep seismic reflection data, *Journal of Geophysical Research*, 98, 8335-8348.
- Meltzer, A.S., and A. R. Levander, 1991, Deep Crustal Reflection Profiling Offshore Southern Central California, *Journal of Geophysical Research*, v. 96, p. 6475-6491.
- McIntosh, K.D., Reed, D.L., Silver, E.A., and Meltzer, A.S., 1991, Deep structure and basin inversion along the central California continental margin from the EDGE seismic profile RU-3, *Journal of Geophysical Research*, v. 96, p. 6492-6491.
- Meltzer, A.S., A.R. Levander and W. D. Mooney, 1987, Upper Crustal Structure, Livermore Valley, California , *Bulletin of the Seismological Society of America*, v. 77, #5, p 1655-1673.
- R.M. Kieckhefer, Russell, B.J., and A.S. Meltzer, 1987, The development of seismic-refraction techniques in the southern California borderland, in: *Marine Geophysics: a Navy Symposium*, Shor, E.N. and Ebrahimi, C.L. (eds.), Marine Physical Laboratory Rept. MPL-U-42/87, p. 43-51.
- Powell, C. A. and A. S. Meltzer, 1984, Scattering of P- waves beneath SCARLET in Southern California, *Geophysical Research Letters*, vol. 11 No. 5, p. 481-484.

***Professional Papers/Publications:n=4***

- EarthScope Workshop Organizing Committee (Carlson, R., Ellsworth, W., Freymueller, J., Henyey, T., Herring, T., Meltzer, A., Parrish, J., Simons, M., van der Hilst, R., McRaney, J.), EarthScope, Scientific Targets for the World's Largest Observatory Pointed at the Solid Earth, Workshop Report, submitted to NSF EAR Geoscience Division. 56 p. (Meltzer text contributor, report editor along with Rick Carlson).
- The EarthScope Working Group (Henyey, T., Herring, T., Hickman S., Jordan, T., McRaney, J., Meltzer, A., Minster, J., Nielson, D., Rosen, P., Silver, P., Simons, M., Simpson, D., Smith, R., Thatcher, W., Zoback, M.) 2000, EarthScope: A New View into the Earth, the EarthScope Project Plan, 2000, EarthScope Project Plan submitted to NSF EAR Geoscience Division. 36 p. (Meltzer Co-Wrote Project Plan w. EarthScope Working Group Chair, Tom Henyey).
- Romig, P. R., M. Baltuck, D. Butler, S. Danbom, W. Ghiorse, J. Herman, R. Knight, A. Meltzer, J. Mercer, J. Mitchell, F. D. Morgan, G. Olhoeft, K. Pruess, B. Spies, D. Steeples, B. Sternberg, K. Watson. (2000). Seeing into the Earth: Noninvasive Characterization of the Shallow Subsurface for Environmental and Engineering Applications. Washington D.C., National Research Council: 129.
- Meltzer, Anne, Roberta Rudnick , Peter Zeitler, Alan Levander, Gene Humphreys, Karl Karlstrom, Göran Ekström, Rick Carlson, Tim Dixon, Michael Gurnis, Peter Shearer, Rob van der Hilst, 1999, USArray: A synoptic investigation of the structure, dynamics, and evolution of the North American continent, White paper submitted to NSF EAR Geoscience Division. 65 p.

***Articles: n=6***

- Frank Pazzaglia<sup>a</sup>, Anne Meltzer, Claudio Berti, Noel Barstow, Dan McNamara<sup>c</sup> Alena Leeds<sup>c</sup>

Mark Meremonte, Jim Luetgert, John Hole, Martin Chapman, Larry Brown, Won-Young Kim, Stephen Horton, Bob Herrmann, and Seth Stein, in press, Mineral, VA Earthquake Demonstrates the Passive Aggressive Margin of Eastern North America, inSights the EarthScope newsletter, winter 2012.

Russo, R. M., Susan L. Beck, Anne S. Meltzer, Steve W. Roecker, Angela M. Reusch, Aaron Velasco, Carl Ebeling, and Paul M. Bremner, 2011, EarthScope Participates in Open Data Seismic Deployment Following 2010 Chile Earthquake, inSights the EarthScope newsletter, winter 2011, p 1-3.

Beck, Susan, Anne Meltzer, Ray Russo, Steve Roecker, Harley Benz, 2011, International Maule Deployment, IRIS Annual Report, 24-25.

Meltzer, A., Beaudoin, B., Zeitler, P., Schoemann, M., Seeber, L., Armbruster, 1997, A., A Short Walk up a Naked Mountain, IRIS Newsletter, Vol. XVI, #1, p.1-5.

Meltzer, A., and Fowler, J., 1997, Use of PASSCAL Instruments and Data Delivery Policy, IRIS Newsletter, Vol. XVI, #2, p.10.

Meltzer, A., Databases in the Field: A Broader Perspective, 1997, IRIS Newsletter, Vol. XVI, #2, p.11-14.

***Unpublished Technical Memorandum (Gulf Research and Development Company, Exxon Production Research):n=6***

Meltzer, A. S., 1989, Fault Study - Natuna Island Platform, Indonesia.

Fagin, S.W., and A.S. Meltzer, 1989, Structural Analysis of Block IV, Cormorant Field, North Sea.

Meltzer, A.S., R.M. Kieckhefer, and C.P. Yanchak, 1985, Refraction surveys offshore Northern and Central California: data acquisition, analysis, and interpretation.

Russell, B.J., A.S. Meltzer, R.M. Kieckhefer, A.R. Levander, and J.I. Ewing, 1984, Refraction surveys in the Santa Cruz Basin and Patton Ridge: California Borderlands.

Schweller, W.J., Meltzer, A.S., and Collins, B.C., 1984, Seismic stratigraphy of the Santa Cruz Basin, California Borderland.

Russell, B.J., and A.S. Meltzer, 1984, Paleogeographic reconstructions of the California Continental Margin: Part I.

Sanislo, R.B., J.S. Kotcher, and A.S. Meltzer, 1983, Seismic Inversion Interpretation in St. George Basin, Bering Sea.

***Abstracts Published and Conference presentations 2011-2004: n=43***

Anne Meltzer, Harley Benz, Lucy Brown, Raymond M. Russo, Susan L. Beck, Steven W. Roecker, 2011, The Mw=8.8 Maule earthquake aftershock sequence, event catalog and locations, Abstract S11A-2193 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Mallory Morell, Susan L. Beck, Steven W. Roecker, Anne Meltzer, Raymond M. Russo, 2011 Receiver Function Migration of Broadband Seismograms recorded by the International Maule Aftershock Deployment (IMAD) in Central Chile, Abstract S11A-2203 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Olga A. Cabello, Anne Meltzer, Eric A. Sandvol, Hugo Yepes, Mario C. Ruiz, Sergio E. Barrientos, Raymond J. Willemann, 2011, Capacity Building for Sustainable Seismological Networks in the Americas: A Pan-American Advanced Studies Institute on New Frontiers in Seismological Research, Abstract PA13B-1755 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.

Seth A. Stein, Frank J. Pazzaglia, Anne Meltzer, Claudio Berti, Emily Wolin, Alan L. Kafka, 2011, Mineral, Virginia earthquake illustrates seismicity of a passive-aggressive margin Abstract S14B-

- 08 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Lucy E. Brown, Anne Meltzer, 2011, Earthquake location, active faulting, and P-wave velocity structure near a massif in the eastern syntaxis of the Tibetan Plateau, Abstract T53C-05 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Anne Meltzer and Peter Zeitler, 2011, Active Tectonics and Geodynamic Implications of the Namche Barwa Knickpoint, SE Tibet, Abstract presented at International Symposium on Deep Earth Exploration – SinoProbe Workshop, Beijing China, 16-18 Nov.
- Anne Meltzer, 2011, EarthScope USArray Science Results: A Mid-Term Report, Abstract presented at International Symposium on Deep Earth Exploration – SinoProbe Workshop, Beijing China, 16-18 Nov.
- Anne Meltzer, 2011, Building Science Capacity: A Key Component of Sustainable Network Operations, Abstract 11-208 presented at SSA meeting, The 2011 Bi-Lateral Workshop under the Sino-US Earthquake Studies Protocol: Great Earthquakes in the 21st Century and Geodynamics, Chengdu, China, 22-25 April.
- Anne Meltzer, 2001, Signal or noise? Significance of variability in the Himalaya-Tibet System, Abstract presented at The 2011 Bi-Lateral Workshop under the Sino-US Earthquake Studies Protocol: Great Earthquakes in the 21st Century and Geodynamics, Chengdu, China, 22-25 April.
- Lucy Brown and Anne Meltzer, 2011 Earthquake location, active faults, and upper crustal structure near Namche Barwa in the eastern syntaxis of the Tibetan Plateau, Abstract presented at The 2011 Bi-Lateral Workshop under the Sino-US Earthquake Studies Protocol: Great Earthquakes in the 21st Century and Geodynamics, Chengdu, China, 22-25 April.
- Anne Meltzer, Sergio Barrientos, Noel Barsto, Olga Cabell, Karen Fischer, Art Lerner-Lam, Andy Nyblade, Eric Sandvol, Niyazi Türkelli, and Ray Willemann, 2001, Geophysical infrastructure, seismological research, and earthquake hazard assessment: Bridging the gap, Geophysical Research Abstracts Vol. 13, EGU General Assembly 2011.
- Zeitler, P., Meltzer, A., 2010, Deformation Processes In SE Tibet: How Coupled Are The Surface And The Deeper Lithosphere?, Abstract T53D-05 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Meltzer, A., Beck, S, Roecker, S, Russo, R, Simpson, D, Barrientos, S, Comte, D, Pardo, M, Ruiz, J, Aranda, C, Slad, G, Greschke, B, Barstow, N, Bonnet, B, Reusch, A, Bataille, K, Cabello, O, Velasco, A, Ebeling, C, Tilmann, F, Vilotte, J, Rietbrock, A, Heit, B, Schurr, B, Lange, D, 2010, IRIS Community Response to the Great Chile Earthquake of 2010, Abstract G33A-0811, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Hanna, A.C., Weeraratne, D.S., Meltzer, A.S., 2008, Surface Wave Velocity Structure of the Western Himalayan Syntaxis, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract T53B-1923.
- Meltzer, AS, Zeitler, PK, 2010, Signal or noise? Significance of variability in the Himalaya-Tibet system, 25<sup>th</sup> Himalaya-Karakoram-Tibet Workshop, San Francisco, 7-10 June.
- Lerner-Lam, A., Aster, R., Beck, S., Ekstrom, G., Fischer, K., Meltzer, A., Nyblade, A., Sandvol, E., Willemann, R., 2008, Linking International Development Actors to Geophysical Infrastructure: Exploring an IRIS Community Role in Bridging a Communications Gap, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract PA13B-1343.
- Nyblade, A., Aster, R., Beck, S., Ekstrom, G., Fischer, K., Lerner-Lam, A., Meltzer, A., Willemann, R.J., 2008, Leveraging Educational, Research and Facility Expertise to Improve Global Seismic Monitoring: Preparing a Guide on Sustainable Networks, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract PA13B-1344.
- Anne Meltzer, Brian Zurek, Stephane Sol, Lucy Brown, 2008, Lateral heterogeneity in lithospheric structure in SE Tibet, 23<sup>rd</sup> Himalaya-Karakoram-Tibet Workshop, Leh, India, August 8-10, 2008.

- Peter Zeitler, Anne Meltzer, Brian Zurek, Lucy Brown, Noah Finnegan, Bernard Hallet, Page Chamberlain, William Kidd, and Peter Koons, 2008, Surface-tectonic coupling at the Namche Barwa – Gyala Peri massif and geologic hazards associated with a proposed dam on the Yarlung-Tsangpo river in SE Tibet, 23<sup>rd</sup> Himalaya-Karakoram-Tibet Workshop, Leh, India, August 8-10, 2008.
- Zurek, B, Meltzer, A, Sol, S, 2007, Metamorphism and deformation of the lower crust and crust-mantle interface at the eastern syntaxis of Tibet derived from converted seismic waves, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T22C-05.
- Sol, S, Meltzer, A, Zurek, B, 2007, Changes in the kinematics of deformation and lithospheric structure revealed from seismic anisotropy in southeastern Tibetan plateau, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T31B-0466.
- Brown, L, Meltzer, A, Noble, T, Sol, S, Zurek, B, 2007, Seismicity in the eastern Himalayan syntaxis, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T43B-1354.
- Van der Hilst, RD, Li, C, Yao, H, Sun, R, Meltzer, AS, 2007, Crust and Upper Mantle Structure Beneath Tibet and SW China From Seismic Tomography and Array Analysis, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T22D-06.
- Yao, H, van der Hilst, RD, Meltzer, A, 2007, Shear Velocity Structure and Anisotropy in the Crust and Upper Mantle Beneath SE Tibet From Ambient Noise and Teleseismic Surface Wave Array Tomography, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T22D-07.
- Zeitler, PK, Meltzer, AS, Hallet, B, Kidd, WS, Koons, PO, 2007, Geologic Hazards Associated With a Proposed Dam on the Yarlung-Tsangpo River in SE Tibet, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract H11C-0644.
- Meltzer, A. Meltzer, S. Sol, B. Zurek, L. Brown, A. Ault, P. Zeitler, L. Yuping, J. Zhang, 2007 Links Between Lithospheric Structure and Topography SE Tibet, 22<sup>nd</sup> Himalaya-Karakoram-Tibet Workshop, Hong Kong, May 22-25, 2007.
- Ault, A, Meltzer, AS, 2006, Rivers Draining Eastern Tibet: Geomorphologic Description and Inferences, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T23B-0481.
- Koons, PO, Barker, A, Pavlis, TL, Liu, Y, Sol, S, Zeitler, P, Meltzer, A, 2006, Vorticity, Erosion, and Crust:Mantle Coupling at Plate Corners in South East Alaska and South East Tibet, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T32B-07.
- Sol, S, Meltzer, A, Zurek, B, Zeitler, P, Zhang, X, Zhang, J, 2006, Seismicity and Active Deformation in Southeastern Tibet, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T23B-0479.
- Yao, H, Van der Hilst, RD, Beghein, C, Meltzer, A, 2006, Crust and Upper Mantle Structure Beneath Southeastern Tibet from Ambient Seismic Noise Tomography and Surface Wave Two-Station Analysis, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T53F-03.
- Christensen, NI, Okaya, D, Meltzer, A, 2006, The Nature of Crustal Seismic Anisotropy: Constraints From Field and Rock Physics Observations, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T52B-03.
- Zurek, B, Meltzer, A, Sol, S, Zeitler, P, Zhang, X, Zhang, J, 2006, The lithospheric architecture of the eastern Himalayan syntaxis from 3-D teleseismic receiver function imaging, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T23B-0477.
- Meltzer, A, Sol, S, Zurek, B, Ault, A, Zeitler, P, Liu, Y, Zhang, J, 2006, Links Between Lithospheric Structure and Topography SE Tibet, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T32B-01.
- Van der Hilst, RD, Li, C, Yao, H, Lev, E, Xu, L, Meltzer, A, 2006, Crust and Upper Mantle Structure Beneath Tibet and SW China From Seismic Tomography and Array Analysis, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T53F-08.

- Li, C, Sun, R, van der Hilst, R, Meltzer, A, Engdahl, R, 2006, The Mantle Structure beneath SE Asia from P-wave Tomography, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T54C-03.
- Zurek, BD, Meltzer, A, Sol, S, Zhang, X, Zhang, J, 2005, Measurements of crustal thickness and Poisson's ratio in southeastern Tibet from receiver functions, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract T41A-1283.
- Ault, AL, Meltzer, AS, Kidd, WS, 2005, Identification of a large-scale, N-S extensional feature in southeastern Tibet, using NASA SRTM data, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract T52A-05.
- Sol, S, Meltzer, A, Zurek, B, Zhang, X, Zhang, J, 2005, Clockwise Rotation of Upper-Mantle Strain and Crust-Mantle Coupling Beneath the Eastern Syntaxis Tibet, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract T41A-1280.
- Zeitler, PK, Meltzer, AS, Koons, PO, Sol, ST, Zurek, BD, Ault, AL, 2005, Boundary Conditions for the Geodynamic Evolution of Southeastern Tibet, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract T52A-06.
- Zurek, BD, Meltzer, A, Sol, S, Zhang, X, Zhang, J, 2004, Lithospheric structure of the Eastern Syntaxis of Tibet using receiver functions, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T31A-1277.
- Zeitler, PK, Meltzer, AS, Koons, PO, Edwards, M. Lidd, WS, Chamberlain, P, 2004, Co-Anatectic Crustal Failure in the Absence of Geophysically Detectable Partial Melt, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T53D-04.
- Meltzer, A, Sol, S, Zurek, B, Xuanyang, Z, Jianlong, Z, Yuping, L, Koons, P, 2004, Crustal Deformation and Mantle Flow: The Eastern Syntaxis Seismic Experiment, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T31A-1278.
- Sol, S, Meltzer, A, Zurek, B, Zhang, X, Zhang, J, 2004, Insight into the lithospheric structure and deformation in Eastern Tibet from splitting and travelttime variations of core phases, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T31A-1279.

***Abstracts Published and Conference presentations 1985-2003: n=79***

32 additional first authored abstracts published 1985-2003. 47 additional abstracts published with students and colleagues 1985-2003.

**FILM:**

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Nanga Parbat, Naked Mountain. Independent documentary film, produced by Earth Images with support from the National Science Foundation, marketed by Bullfrog Films ([www.bullfrogfilms.com](http://www.bullfrogfilms.com)). Won Certificate of Merit, Chicago International Television Awards. Film reveals the excitement of scientific exploration and discovery associated with basic research. Broadcast in Europe and in the U.S. on numerous PBS stations. Received significant airplay post September 2001, particularly in Europe. This was followed in 2002 with airplay in the U.S.

**INVITED LECTURES:**

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International Symposium on Deep Earth Exploration, Beijing China (2011): Active Tectonics and Geodynamic Implications of the Namche Barwa Knickpoint, SE Tibet



International Symposium on Deep Earth Exploration, Beijing China (2011): EarthScope USArray Science Results: A Mid-Term Report

Seismological Society of America (2011): Building Science Capacity: A Key Component of Sustainable Network Operations

University of Western Ontario (2003): Beyond Isostasy: A tale of Two Indentor Corners

EarthScope Complimentary Geophysics Workshop (2003): USArray Data Products

American Association for the Advancement of Science (2002): The Dynamic Earth: Insights from Multi-Scale Imaging

Penn State (2002): Beyond Isostasy: A tale of Two Indentor Corners

Stonybrook (2001): Seismic characterization of an active metamorphic massif, Nanga Parbat, Pakistan Himalaya.

National Research Council (2001): Review of EarthScope, EarthScope/USArray presentation.

IRIS Annual Workshop (2001): Crustal Anisotropy, Implication for Crustal Structure and Shear-Wave Splitting.

Rochester Polytechnical Institute (2001): Seismic characterization of an active metamorphic massif, Nanga Parbat, Pakistan Himalaya.

University of Wisconsin (2000): Crustal Reworking During Orogeny: An active System Himalayan Perspective

University of Wisconsin (2000): Structural and Stratigraphic Signatures Associated with Triple Junction Migration

Harvard (1999): Crustal Reworking During Orogeny: An active System Himalayan Perspective

Purdue (1999): Crustal Reworking During Orogeny: An active System Himalayan Perspective

GSA Town Meeting (1999): The USArray Initiative.

Princeton (1998): Crustal Reworking During Orogeny: An active System Himalayan Perspective

GSA Penrose Conference (1998): The Transition From Subduction To Transform Regime: Structural And Stratigraphic Signatures Associated With Triple Junction Migration Offshore Northern California

IRIS Annual Meeting (1998): Introduction to High-Resolution Imaging Session

IRIS Annual Meeting (1997): The Nanga Parbat Seismic Experiment

Cornell University (1997): The Nanga Parbat Seismic Experiment

University of Delaware (1995)

State University of New York (SUNY) – Binghamton (1994)

Temple University (1993)

University of Pennsylvania (1992)

GSA Penrose Conference (1990): Transpressional structures in the offshore California transform margin.

**EXTERNAL GRANTS: \$14.1 MILLION TOTAL, \$13.1 MILLION IN RESEARCH, \$1 MILLION IN FACILITIES AND CURRICULUM DEVELOPMENT**

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**RESEARCH GRANTS: \$13.1 million total**

EarthScope RAPID: Geodetic and Seismological Response to the Mineral VA Earthquake, 23 August 2010, NSF EarthScope Program, \$28,330.

Collaborative Research: Lhasa Block Top to Bottom--Lithospheric Evolution of Asia's Leading Edge, NSF Continental Dynamics Program, \$3.0 million project total, \$1.1 million to Lehigh.

Collaborative Research - Intracontinental Deformation and Surface Uplift: Geodynamic

Evolution of the Hangay Dome, Mongolia, Central Asia, NSF Continental Dynamics Program, \$2.5 million project total, \$1.5 million to Lehigh.

Collaborative Research: Analysis of Seismicity Associated with the Mw=8.8 2010 Maule Earthquake and Implications for Subduction Processes, NSF Geophysics, \$540K total, \$168K to Lehigh.

Collaborative Research: Mapping Crustal Tectonic Structure Using Seismic Anisotropy, NSF Geophysics Program, \$380,000 total, \$121,130 to Lehigh.

Collaborative Research: Geodynamics of Indentor Corners, NSF EAR, Continental Dynamics, \$2,200,000 total program, \$1,200,000 to Lehigh. \$403,000 additional supplement award. Project total \$2.6 million, \$1.6 million to Lehigh.

Strain Partitioning and Active Faulting During Oblique Convergence, Northern Andes. NSG Geophysics Program, \$38,000.

Collaborative Research: Crustal Reworking During Orogeny: An Active System Himalayan Perspective, NSF Continental Dynamics Program, \$2,100,000 project total, \$1,100,000 for Lehigh.

Collaborative Research: Lithospheric Evolution in Response to Triple Junction Migration: Seismic Images of the Mendocino Triple Junction Region, NSF Continental Dynamics Program, \$1,400,000 total, \$395,000 for Lehigh.

Facility Upgrade: Seismology Laboratory at Lehigh University, NSF Instrumentation and Facilities Program, \$104,950

Characterization of Strike-slip deformation: Northern San Andreas Fault System, AMOCO Production Company, \$19,500

Collaborative Research: Crustal Reworking During Orogeny: An Active System Himalayan Perspective, Nanga Parbat Newton's Apple Television Segment, NSF, EAR Continental Dynamics/Informal Science Education Supplement, \$49,657.

Fault Structure and Earthquake Potential Lajas Valley, SW Puerto Rico, U.S. Geological Survey Earthquake Hazards Reduction Program. \$63,700

Collaborative Research: An integrated Seismic Experiment Across a Continental Rift: The Newark Basin, NSF Continental Dynamics Program. \$83,568

Improvement in Geophysics Curricula: Acquisition of a Multichannel Seismograph, NSF ILLI (Instrumentation and Laboratory Improvement) Program. \$47,648

Establishment of a facility for seismic data analysis, NSF Instrumentation and Facilities Program. \$56,590

Crustal Structure and Rock Properties Offshore Central California from Combined Vertical Incidence and Wide-Angle Seismic Data, Petroleum Research Fund. \$18,000

Pocono Comparative Lake Program - Seed Grant Proposal: Geologic Structure at Lake Lacawac. \$2000

Crustal Structure Beneath Santa Maria Basin and the Central California Transform Margin, NSF, Marine Geology and Geophysics. \$50,054

**FACILITIES AND CURRICULUM DEVELOPMENT GRANTS: \$1 million total**

Implementing a New Learning Paradigm in Earth and Environmental Sciences at Lehigh University: LEO, The Lehigh Earth Observatory, Keck Foundation (for renovations, facilities, staff positions, undergraduate research funds and stipends), \$ 564,000.

Lehigh Earth Observatory (LEO) Environmental Data Center - Promoting Regional Assessment, Coordination, Planning, and Management of Our Natural Resources, William Penn Foundation (for technical staff position, undergraduate research funds and stipends), \$180,000.

Implementing a New Learning Paradigm in Earth and Environmental Sciences at Lehigh University: LEO, The Lehigh Earth Observatory , Culpeper Foundation (for equipment and instrumentation, technical staff position, faculty development), \$200,000.

LEO, The Lehigh Earth Observatory: A proposal for Curriculum Development, AT&T Foundation's Industrial Ecology Initiative (for student research funds and stipends), \$25,000.

Establishment of a broadband seismic station A Lehigh Earth Observatory Module in Support of the Integrated Learning Experience Initiative, Lehigh Learning Innovations Committee, \$50,000.

## **PROFESSIONAL SERVICES AND ACTIVITIES:**

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Chair IRIS USArray Advisory Committee (2012-pres) Provide advice to the IRIS Board of Directors and IRIS President on the performance of the USArray component of EarthScope. Monitor the operation and evolution of the USArray facility, and review the contributions of IRIS core programs (DMS, E&O, GSN and PASSCAL) to the successful implementation of USArray and the science goals of EarthScope.

Southern California Earthquake Center (SCEC) Advisory Council (2009-pres) Provide advice to SCEC Director and Board of Directors.

Chair IRIS Committee for International Development Seismology (2008-2011) develop partnerships and collaborations that build infrastructure and human capacity in low- and middle-income countries for seismological and related research, education and training, hazard mitigation, and resource exploration.

Co-Convener AGU Special Session: Lessons Learned from the 2010 Maule Earthquake (2011)

Chair, NSF EarthScope Facility Management Review (2011).

Invited Participant, adhoc NSF Subcommittee on Recompensation Large Facilities (2011).

Co-Organizer: NSF Sponsored Pan-American Advanced Studies Institute on New Frontiers in Seismological Research: Sustainable Networks, Earthquake Source Parameters, and Earth Structure (2011).

Co-organizer: NSF sponsored workshop: Future directions for NSF-sponsored geoscience research in the Himalaya/Tibet (2010).

Chair NSF EarthScope Facilities Review (2007).

Chair, EarthScope Program Committee (2005-2008) – Committee established to foster and facilitate integrated research, education, outreach activities, and broad community engagement in EarthScope. Oversaw transition to current EarthScope Steering Committee structure.

EarthScope Science and Education Committee (2002-2005) - Federal Advisory Committee Appointed by the National Science Foundation to provide oversight and guidance for EarthScope. Includes new research and education program within the Earth Sciences Division of the Geosciences Directorate and the first MREFC facilities in the Earth Sciences, \$200 million in instrumentation and projected growth to \$10 million in research funding.

IRIS Planning Committee (2002-2004) - Provides long range strategic planning for the IRIS Consortium.

Member Margins Steering Committee (2001-2003) - Steering Committee for National Science Foundation Geosciences Directorate, Ocean Sciences Division, Margin Program. Provides guidance to NSF and serves as conduit for community input to the NSF Margins Program.

NSF Continental Dynamic Panel (2002-2007) - Review panel for the National Science Foundation Geosciences Directorate, Earth Science Division, Continental Dynamics Panel

Member Northeast USGS Advanced National Seismic System Implementation Committee (2001-2002).

Chair IRIS Executive Committee, Chair IRIS Board of Directors (1999-2001) – IRIS is a 96 member academic consortium funded by the National Science Foundation to operate and maintain national instrument facilities and data archives to facilitate and support research needs in seismology. Duties as chair include working with the IRIS President, and IRIS Standing Committees on behalf of member institutions to help develop and promote the program, develop budgets, set priorities and policy. Term included developing IRIS 5-year proposal renewal to NSF, \$75 million over 5 years. Term also included development of USArray and EarthScope, the first MREFC (Major Research Equipment and Facilities Construction) project for the Earth Sciences. The MREFC account is a special account at the NSF (appears as a separate line item in the congressional budget) to fund substantial new research facilities (Polar Observatories, Radio Telescopes, etc.). Efforts culminated in a successful MREFC project funded by congress at \$200 million for facilities and establishment of a new EarthScope Research program at NSF with the Geosciences Directorate. Research program expected to grow to \$13 million/year. I currently serve on the Federal Advisory Committee appointed by the NSF to oversee project execution.

Coordinator USArray Steering Committee (1999-2002) – work with USArray Steering Committee, broader Earth Science committee, EarthScope Working Group and NSF to help articulate and develop the USArray component of EarthScope. Includes organizing two workshops for community input, writing and production of USArray White Paper for NSF, attending numerous planning meetings.

Member EarthScope Executive Committee (1999-2002) - work with EarthScope Working group and NSF to help develop the EarthScope Initiative. Includes: participating in town meetings, generating editorial comments for publication, development of material for congressional briefings, and numerous meetings with NSF program managers and division directors. This effort culminated in a \$76 million request by NSF EAR to the NSF MRE account this year for phase I facilities (USArray and SAFOD). The request was approved by NSF, the National Science Board, and the OMB and has been included in the Presidents budget request to Congress.

IRIS PASSCAL Standing Committee (member 1993-1999, Chair of Committee 1996-1999) - this committee works with the IRIS PASSCAL program manager to oversee the Programs for Array Studies within IRIS. This includes setting program priorities, helping develop budgets and policy. Significant tasks included helping to write IRIS 2000 proposal to NSF (submitted 1995) successfully securing \$60 million of NSF funding for a five year period. Review and restructuring of PASSCAL Instrument Center.

Member of NSF Instrumentation and Facilities Panel, spring 1999

Reviewer for NSF Ocean Sciences Ocean Bottom Seismometer Instrument Pool: MRI (Major Research Instrumentation) Facility.

National Academy of Sciences - National Research Council Panel Member of SITE Committee (Seeing into the Earth). Charged to evaluate and recommend research directions using geophysical techniques for imaging and characterizing the near surface (upper 100 m) of the earth for engineering and environmental applications. Helped write NRC report, published 2000.

Co-Convener of Eastern Section Meeting of the Seismological Society of America, 1998

Geology Editorial Board (1996-1998)

Co-Convener AGU Special Session, Imaging and wave propagation in the shallow (< 1 km) subsurface, 1995.

Co-Convener AGU Special Session, Mendocino Triple Junction., 1994.

ILIAD Advisory Committee - select themes and invited participants to attend NSF/Air Force Office of Scientific Research sponsored workshop designed to bring together scientists involved in continental dynamics research, helped develop and write science and science implementation plan to complement the NSF Continental Dynamics 2020 Report, and to assess the technical resources and organization required to conduct large-scale seismic investigations of the continental lithosphere.

Served on the National Science Foundation SBIR (Small Business Innovation Research) Panel, September 1991.

Served on the NSF ILI (Instrumentation and Laboratory Improvement) Panel, January 1992.

Numerous papers reviewed for: Journal of Geophysical Research, Geophysical Research Letters, Bulletin of the Geological Society of America, Geology, Geophysics, Bulletin of the Seismological Society of America, Earth and Planetary Science Letters.

Numerous proposals reviewed for the National Science Foundation:

Earth Sciences Division (5 different programs): Continental Dynamics, Tectonics, Geophysics, Instrumentation and Facilities, International Programs.

Ocean Sciences Division: Marine Geology and Geophysics.

Reviewer for U.S. Geological Survey, NEHRP, Earthquake Hazards Reduction Program, and reviewer for establishing new program guidelines.

Reviewer for Petroleum Research Fund

Abstract(s) Review for Geological Society of America - Geophysics and Tectonophysics Division, 1993 Annual Meeting

## **RESEARCH SUPERVISED:**

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### ***Undergraduate Research:***

Dave Kinney: Seismic study of the upper crustal structure of Outer Santa Cruz Basin, offshore Central California.

Jon Rohrer: Subsurface structure and stratigraphy of Lake Lacawac, Wayne County, PA.

Joe Knezvic: Geologic structure of Pine Lake New York from shallow seismic profiling.

Lillian Soto: Seismic Refraction Study of the Lajas Valley, Southwestern Puerto Rico

Jason Faberman: Electro-Stratigraphy and regional climate change Lake Lacawac, Wayne County, PA.

Nick Scala: Growth and development of an anticline in the Pt. Arena Basin, Offshore Northern CA.

Supervised numerous LEO internships (primary supervisor for over 20 students) on various projects ranging from environmental writing, to IT development, to water quality analysis, to seismology and earthquake hazards.

### ***Graduate Research:***

Greg Baker: An examination of Triassic Cyclostratigraphy in the Newark Basin from Shallow Seismic Profiles and Geophysical Logs

Tina Dietrich: Characterization of Faults Offshore Southwest Puerto Rico

Amy Ondrus: The San Andreas Fault Zone offshore Northern California

Erika Hammar-Klose: A high-resolution geophysical investigation of the Mount Bethel Fens complex, Mt. Bethel, PA

Tom Dalton (co-advised): Quaternary Sedimentation History from coring and GPR data, Lake Lacawac  
Michael Schoemann: Fault Structure and Earthquake Potential Lajas Valley, SW Puerto Rico  
Sean Gulick: Seismic Studies of the Cascadia Subduction Zone, Accretionary Prism, and Eel River Basin near the Mendocino Triple Junction  
Nick Scala: Fold growth and fault fold interaction along the Northern San Andreas Fault System.  
Yen Tang: Holocene Climate Change, Evidence from Sediment Distribution Imaged by GPR Techniques  
Vincent Carbone: GPR Studies of Groundwater Contamination  
Chris Call: Geophysical Imaging of faulting, InterAndean Valley Ecuador  
Amanda Ault: Coupling Between Tectonic and Surface Processes: Case Studies Based on the Eastern Himalayan Syntaxis Tibet  
Brian Zurek: The Evolution and Modification of Continental Lithosphere, Dynamics of 'Indentor Corners' and Imaging the Lithosphere across the Eastern Syntaxis of Tibet  
Tsering Dhundup: Morpho-Tectonic Analysis of the Tsona-Chusum Rift, Tibet  
Lucy Brown: Seismicity and Lithospheric Deformation, Eastern Syntaxis Tibet

***Post Doctoral Research:***

Stéphane Sol: Eastern Tibet Seismic Experiment  
Golam Sarker: Nanga Parbat Seismic Experiment  
Bruce Beaudoin: Nanga Parbat Seismic Experiment

**COLLEGE AND UNIVERSITY SERVICE:**

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Internal Advisory Committee – Lehigh NSF ADVANCE  
Environmental Building Committee, Chair, guided preparation of Building Plan for new environmental building  
EI Director Search Committee  
EI Steering Committee  
Environmental Initiative Task Force, Chair, guided preparation of 2020 proposal in the area of environment. Coordinated development of cross college multidisciplinary 2020 proposal in the area of the Environment. Coordinated discussions and contributions from 25 member faculty and staff task force. Produced 2020 proposal integrating education and research. Proposal includes recommendations for organizational and administrative structure, research foci, new degree and certificate programs. Worked of developing budget models with Deans of CAS and RCEAS.  
Student Life Policy Review Committee: appointed by the President to prepare report to the Board of Trustees  
Academic Standards for Environment and Ecology content and Environmental Education Committee  
Research Advisory Group – Faculty Committee providing advice to VP Research  
Director LEO: Multi-disciplinary experiential learning experiences, included summer internship program. First Director, Established organizational structure, hired and supervised two staff members, worked with development on fund raising (wrote 3 successful Foundation proposals for staff, facilities, and program support), met with Foundation Representatives for initial project review and assessment (pre-funding), site visits (during

project), responsible for oversight, implementation, and final reporting on foundation supported projects), ran summer internship program (~20-25 students per year).  
University Computer Workstation review and high performance computing  
Rhodes Scholar Committee  
College of Education – Faculty Search, Technology Based Teacher Education  
Prepared white paper on Supporting Cross College Curricular Initiatives with Todd Watkins and John Oaks, (white paper requested by Provost)  
College of Arts and Sciences Tenure and Promotion Committee  
Ad Hoc Integrated Learning Experiences Steering Committee  
Hughes liaison to BASD, Clearview Elementary School  
University Graduate Research Committee  
Search Committee - Vice Provost for Information Resources  
Commission on Diversity, Affirmative Action/Equal Opportunity Subcommission  
Search Committee - Dean College of Engineering and Applied Science  
University Faculty Development Committee  
WISE (Women In Science and Engineering) Committee  
C.H.O.I.C.E.S. participant (program for female middle school students interested in science)  
Participant in STAR program (program for high-school students interested in science)  
Participant Faculty focus group on academic advising  
Participated in University undergraduate recruitment efforts  
Review committee for Graduate Fellowships  
Nominated by University and attended the American Association of Higher Education: Forum on Exemplary Teaching  
AA/EO representative to College Tenure and Promotion Committee

### **COURSES TAUGHT:**

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EES 3: Global Environmental Change  
EES 21: Introduction to Earth Material & Processes  
EES 90 : Freshman Seminar: Searching for an Environmental Ethic  
EES 90 : Freshman Seminar: Disasters, Natural and Human Induced, Implications and Consequences.  
EES 96: Introduction to Environmental Science: Systems and Solutions  
EES 201: Seismology: the Earth and the Environment  
EES 293: Internships in Earth and Environmental Sciences  
EES 301: Introductory Geophysics  
EES 303: Active Tectonics  
EES 308: Seismic Data Analysis  
EES 398: Earth Science for Educators  
EES 407: Seismology  
EES 426: Tectonic Processes  
SMC 050, 250: South Mountain College Investigations

### **BRIEF SYNOPSIS OF ACCOMPLISHMENTS AS DEAN:**

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Over a seven-year period worked collaboratively with faculty and staff in the college to enhance research and scholarship and to provide exceptional new opportunities for our students.

Developed important new programs, strengthened investments in previous successful initiatives, and shored-up support for arts and sciences academic core. Made investments in academic and research infrastructure and support. Academic lead on major new construction project. Hired over fifty exceptional new faculty growing CAS faculty by ten percent. Improved work environment for staff and provided more effective support for faculty and departments. Established college-wide learning outcomes, enhanced graduate programs through assessment and investments in more competitive stipends and summer fellowships, and more fully integrated interdisciplinary programs into the fabric of the college. Established faculty oversight for learning outcomes assessment, international academic programs, and the first-year experience. Developed and implemented new technologies to simplify the administration and management of day-to-day operations. Improved outreach and communication through complete redesign of web presence, and publication of *Acumen* to better communicate the strength and contributions of CAS to Lehigh and the broader community. Increased financial support for CAS activities from generous donors, foundations, and grant agencies.