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Department of Earth & Environmental Sciences

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EDUCATION:

- Ph. D.** 1988 **The Johns Hopkins University**, Baltimore, MD, Department of Earth & Planetary Sciences, Dissertation– Thrusting, Halotectonics, and Sedimentation in the External Sierra, Southern Pyrenees, Spain. First Reader, D. G. DePaor, Second Reader, J. R. Hossack.
- M. A.** 1984 **The Johns Hopkins University**, Baltimore, MD, Department of Earth & Planetary Sciences, Advisor, D. Elliott (deceased).
- A. B.** 1980 **Franklin and Marshall College**, Lancaster, PA, Biology Major, Thesis–Fluorescence Studies of Membrane Phospholipid Phase Separations in Warm and Cool Climate Plants Utilizing the Membrane Probe trans–Parinaric Acid. Advisor, C. Pike. Geology Major completed 1981.

CURRENT POSITIONS:

Chairman, Department of Earth & Environmental Sciences, Lehigh University, Bethlehem, PA (2013 – present)

Professor, Department of Earth & Environmental Sciences, Lehigh University, Bethlehem, PA (2007 - present).

Professional Geologist, Commonwealth of Pennsylvania, PG-002337-G (1995 - present)

Current Research Activities:

My current projects focus on the recovery of high-resolution deformation rates from folds and faults. These data serve to inform our evolving ideas on what modulates rates of deformation. We continue to explore the roll surface processes play in localizing deformation and varying deformation rates as well as other internal controls such as mechanical or geometric strength changes. The research is typically empirical and occurs in both active and ancient orogens. Recent projects have been in the Apennines, Italy, Pyrenees, Spain, Betic Cordillera, Spain, and U.S. Rockies. Some projects involve paleomagnetic and cyclostratigraphic age models and others involve landscape evolution or structural modeling. With students I am working on kinematics and rates of fault-related folding recorded by growth strata in the Pyrenees. I am part of an international group working on tectonics and landscape evolution in the Betic Cordillera, Spain. I am also involved in science curriculum development projects focusing on tectonics, climate change, and energy.

Employment History:

Professor, Department of Earth and Environmental Sciences, Lehigh University (2007-present)

Visiting Professor, Departamento de Ciencias de la Terra, Universidad de Zaragoza (2010-2011).

International Scholar, Instituto Geologico y Minero de España, Oficina de Zaragoza, Spain (2010-2011).

Associate Professor (1993 - 2007), Assistant Professor (1986 - 1993), Department of Earth & Environmental Sciences, Lehigh University, Bethlehem, PA.

Graduate Fellowship, Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD (1983-1985).

Summer Research Geologist, Tectonics and Basin Analysis Group, ARCO Oil and Gas Company, Plano, TX. (1983).

HONORS AND AWARDS

Fellowships:

Geologic Society of America Fellowship 2010

Amoco Foundation Fellowship academic years 1984-85, 1983-84, 1982-83 Johns Hopkins University

Gilman Fellowship academic year 1981-82 Johns Hopkins University

Dr. J. Brian Eby Fellowship academic year 1981-82 Johns Hopkins University

Robert Balk Fellowship academic year 1981-82 Johns Hopkins University

Commendations:

Editor's commendation 1992 *Geological Society of American Bulletin*.

PUBLICATIONS: (*denotes student advisee)

Book Chapters:

Bodzin, A., **Anastasio, D.**, Sahagian, D. 2015. Using Web GIS to promote geospatial thinking and reasoning skills. Chapter 11 in K. Finson & J. Pedersen (Eds.) *Application of Visual Data in K-16 Science Classrooms*. Charlotte, NC: Information Age Publishing. Pp. 263-284.

Bodzin, A.M., **Anastasio, D.**, Kulo*, V. Designing Google Earth Activities for Learning Earth and Environmental Science. 2014. Chapter 13 pp. 213-232. In: MaKinster, J., Trautmann, N., & Barnett, M., Editors. *Teaching Science and Investigating Environmental Issues with Geospatial Technology: Designing Effective Professional Development for Teachers*. Dordrecht, Netherlands: Springer. 353 p. 46 illus. ISBN: 978-90-481-3930-9 (print) 978-90-481-3931-6 (online).

Kulo, V., Bodzin, A., McKeon, R., **Anastasio, D.**, Peffer, T., Sahagian, D. 2013. The Isle of Navitas: Towards a better understanding of energy and decision-making using GIS. In *Learning Environments: Technologies, Challenges and Impact Assessment*. (pp. 49-66). Hauppauge, NY: Nova Science Publishers.

Articles in Refereed Journals: (*student advisee)

Bodzin, A., Anastasio, D, Sahagian, D. Henry Burrows*, J. 2016 [in press] .A Curriculum-linked Professional Development Approach to Support Teacher's Adoption of WebGIS Tectonics Investigations. In Association of Computing in Education Special Issue-Geospatial manuscript 151260.

Anastasio, D.J., Pares, J.M., Kodama, K.P., Troy*, J., Pueyo, E.M., 2015. Synsedimentary Deformation at Pico del Aguila, Spain, Recovered From AMS Data. In *Palaeomagnetism in Fold and Thrust Belts: New Perspectives*. Special Volume 425 Geological Society of London. Emilio L. Pueyo, Francesca Cifelli, Aviva J. Sussman and Belen Oliva-Urcia, Editors. <http://doi.org/10.1144/SP425.8>

Bodzin, A., **Anastasio, D.**, Sahagian, D., Peffer, T., Dempsey*, C., and Steelman, R. (2014). Investigating climate change understandings of urban middle school students. *Journal of Geoscience Education*, 62(3), 417-430.

Gunderson*, K.L., Pazzaglia, F.J., Picotti, V, **Anastasio, D.J.**, Kodama, K.P., Rittenour, T., Frankel,

K.F., Ponza, A., Berti, C., Negri, A., Sabbatini, A., 2014. Unraveling tectonic and climatic controls on synorogenic stratigraphy. *Geological Society of America Bulletin*. Published online January 24 2014 as doi:10.1130/B30902.1 print v.126.3-4 (Mar 2014): 532-552.

Bodzin, A.M., **Anastasio, D.J.**, Sahagian, D., Peffer, T., Dempsey*, D., Steelman-Couch, R. in press. Investigating Climate Change Understandings of Urban Middle Level Students. *Journal of Geological Education* MS#-13-042R, Outcomes from Climate Literate Literacy Efforts theme issue summer 2014.

Gunderson*, K.L., **Anastasio, D.J.**, Pazzaglia, F.J., Picotti, V., 2013. Fault slip rate variability on 10^4 - 10^5 yr timescales for the Salsomaggiore blind thrust fault, Northern Apennines, Italy. *Tectonophysics*, <http://dx.doi.org/10.1016/j.tecto.2013.09.01>.

Gillette, B., Dempsey, C., Bodzin, A., **Anastasio, D.**, Sahagian, D., Cirucci, L. 2013. Authors response to comments. Investigating Future Climate Scenarios: Who Will Be Affected By Sea Level Rise? *LETTERS Science Scope*. [online serial] March 2013; v. 36 (7):6-7.

Hinnov, L.A., Kodama, K.P., **Anastasio, D.** Latta*, D.K., Elrick, M., 2013. Global Milankovitch Cycles Recorded by Rock Magnetism in the Shallow Marine Cretaceous Cupido Formation, NE Mexico. In: Magnetic methods and timing of Geologic Processes L. Jovane, E. Herrero-Barrera, L. Hinnov, B. Housen, editors. Geological Society of London Special Publication 373; 325-340. <http://dx.doi.org/10.1144/SP373.20>.

Burrows*, J., Bodzin, A., **Anastasio, D.**, Sahagian, D., Bressler*, D., Cirucci, L., Rutzmoser, S., Teletzke*, A. 2013. Using Web GIS to Enhance Tectonics Learning and Geospatial Thinking. *Science Scope*, v.13, n.12, 29-37.

Dempsey* C., Bodzin, A.M., **Anastasio, D.J.**, Sahagian, D., Cirucci, L., 2012. Investigating Future Climate Scenarios: Who Will Be Affected By Sea Level Rise? *Science Scope*. December, 2012, p. 44-53.

Gunderson*, K.L., Kodama, K.P., **Anastasio, D.J.**, Pazzaglia, F.J. 2012. New Rock Magnetic Cyclostratigraphy for Miocene-Quaternary Strata, Northern Apennine Thrust Front. In: Magnetic methods and timing of Geologic Processes. L. Jovane, E. Herrero-Barrera, L. Hinnov, B. Housen editors. Geological Society of London. Special Publication 373; 309-323. <http://dx.doi.org/10.1144/SP373.8>.

Kulo*, V., Bodzin, A., McKeon*, R., Cirucci, L., Anastasio, D., Sahagian, D. and Peffer*, T. 2012. The Isle of Navitas: Planning for energy use with Web GIS. *Science Scope* 36(20) 30-37.

Dempsey*, C., Bodzin, A., Cirucci, L., **Anastasio, D.** and Sahagian, D. 2012. Reconstructing environmental change using lake varves as a climate proxy. *Science Scope* v. 35, n. 7, 42-47.

Anastasio, D.J., Pazzaglia, F.J., Majerowicz*, C.M., Regalla*, C.A., 2010. Late Pleistocene-Holocene ruptures of the Lima Reservoir fault, SW Montana. *Journal of Structural Geology*, v. 32, p. 1996-2008. DOI: 10.1016/j.jsg.2010.08.012.

Kodama, K.P., **Anastasio, D.J.**, Newton*, M.L., Pares, J.M., Hinnov, L.A. 2010. High-resolution rock magnetic cyclostratigraphy in an Eocene flysch, Spanish Pyrenees.

Geochemistry, Geophysics, Geosystems, v. 11 p. 1-22 QOAA07 doi: 10.1029/2010GC003069.

Wilson*, L.F., Pazzaglia, F.J., **Anastasio, D.J.** 2009. A fluvial record of active fault-propagation folding, Salsomaggiore anticline, northern Apennines, Italy. *Journal of Geophysical Research-Solid Earth* v. 114 p. 1-23, B08403, doi:10.1029/2008JB005984

Regalla*, C.A., **Anastasio, D.J.**, Pazzaglia, F.J. 2007, Characterization of the Monument Hill Fault System and implication for tectonics of the Red Rock Valley, Southwestern Montana. *Journal of Structural Geology*, v. 29, p. 1339-1352.

Latta*, D.K., and **Anastasio, D.J.**, 2007, Multiple scales of mechanical stratification And décollement fold kinematics, Sierra Madre Oriental foreland, northeast Mexico. *Journal of Structural Geology*, v. 29, p. 1241-1255.

Anastasio, D.J. 2006 Web-Based Inquiry. In: Vignettes for a Design Guide for Undergraduate Earth System Science Education, editor M. Ruzik. A Design Guide for Undergraduate Earth System Science Education, Universities Space Research Association- National Aeronautics and Space Administration.

Volume: <http://www.essedesignguide.org/>.

Paper: <http://esse21.usra.edu/designguide/finalvignettes/vig-anastasio.pdf>

Rygel* A. C., **Anastasio, D.J.**, Bebout, G.E., 2006 Syntectonic fluid-rock interactions along the Sevier thrust Belt, Tendoy Mountains, Southwest Montana. *Geofluids*, v. 6 n.6, p. 1-14. Electronically published *Geofluids* May 24, 2006, doi: 10.1111/j.1468-8123.2006.00146.x. Print publication November 2006.

Bodzin, A.M., **Anastasio, D.J.**, 2006 Using Web-based GIS For Earth and Environmental Systems Education, *Journal of Geological Education*, In: Special Issue "Symphony of the Spheres: Recent Advances in Earth System Science Education", editors, Rankey, G. and Ruzek, M. v. 54, n. 3, 295-300.

Latta* D. K., **Anastasio, D.J.**, Hinnov, L.A., Elrick, M., Kodama, K.P., 2006 A magnetic record of Milankovitch rhythms in lithologically noncyclic marine carbonates. *Geology* v. 34, n. 1, p. 29-32.

Harkins*, N., **Anastasio, D.J.**, Pazzaglia, F.J., 2005 Tectonic geomorphology of the Red Rock fault, insights into segmentation and landscape evolution of a developing range front normal fault. *Journal of Structural Geology*, v. 27, p. 1925-1939.

Anastasio, D.J., Bebout, G.E., Holl*, J.E., 2004 Extra-basinal fluid infiltration, mass transfer, and volume strain during folding; insights from the Idaho-Montana thrust belt. *American Journal of Science*, v. 304, p. 333-369.

Bebout, G.E., **Anastasio, D.J.**, Holl*, J.E. 2001 Synorogenic Crustal Fluid Infiltration in the Idaho-Montana Thrust Belt. *Geophysical Research Letters*. November 15, 2001, v. 28 n. 22, p. 4293-4298.

Anastasio, D.J., Holl*, J.E. 2001 Transverse fold evolution in the External Sierra, southern Pyrenees, Spain. Paul Hancock Memorial Issue, *Journal of Structural Geology*, 23, 379-392.

Anastasio, D.J., Latta*, D.K. 2000 Land-Use Debate. In: Great Ideas for Teaching Geoscience,

Journal of Geologic Education, (S. Semkin, ed.) v. **48** p. 593. (5 websites including National Association of Geology Teachers, Digital Library of Earth Science Education, Teach the Earth SERC.Carleton.edu/introgeo/)

Davidson*, S., **Anastasio, D. J.**, Holl*, J. E., Bebout, G. E., 1998 Volume loss and Metasomatism During Cleavage Formation in Carbonate Rocks. *Journal of Structural Geology*, v. **20**, no. 6, p. 707-727.

Anastasio, D. J., Fisher, D. M., Messina*, T. A., Holl*, J. E., 1997 Kinematics of Décollement folding in the Lost River Range, Idaho. *Journal of Structural Geology*, v. **19**, nos. 3/4. p. 355-368.
Holl*, J. E.,

Anastasio, D. J. 1995 Cleavage Development within a Foreland Fold and Thrust Belt, Southern Pyrenees, Spain. *Journal of Structural Geology*, v. **17** no. 3, p. 357-369.

Holl*, J.E., **Anastasio, D.J.** 1995 Kinematics around a large-scale oblique ramp, southern Pyrenees, Spain. *Tectonics* v. **14** no. 5. p. 1368-1379.

Hedlund, C. A. *, **Anastasio, D. J.**, Fisher, D. M., 1994 Kinematics of Fault-Related Folding in a Duplex, Lost River Range, Idaho, U.S.A. *Journal of Structural Geology* v. **16** no. 4, p.571-584.

Fisher, D. M., **Anastasio, D. J.**, 1994 Kinematic Analysis of a Large-Scale Leading Edge Fold, Lost River Range, Idaho *Journal of Structural Geology*, v. **16**, no. 3. p. 333-354.

Anastasio, D.J., Myers, P.B., Jr. 1993 The Great Valley to Valley and Ridge Transition in Lehigh Tunnel No. 2, Northeast Extension, Pennsylvania Turnpike. *Northeastern Geology* v. **15**. no. 1. p. 3-17.

Holl*, J.E. and **Anastasio, D.J.** 1993 Paleomagnetically Derived Folding Rates, Southern Pyrenees, Spain. *Geology*, v. **13**. no. 3. p. 271-274.

Holl*, J. E., **Anastasio, D.J.**, 1992 Deformation of a Foreland Carbonate Thrust System, Sawtooth Range, Montana. *Bulletin of the Geological Society of America*, v. **104**, p. 944-953.

Anastasio, D. J. 1992 Structural Evolution of the External Sierra, Spanish Pyrenees. In: *The Structural Geology of Fold and Thrust Belts* Johns Hopkins University Press, S. Mitra and G.W. (eds.) p. 239-251.

Anastasio, D.J. 1988 Geometry of Emergent Thrust Faults, Southern Pyrenees, Spain. In: The Art of Geology, Moores, E.M. and Wahl, F.F. (eds.), *Geological Society of America, Special Paper* No. 225, p. 35.

DePaor, D.G., **Anastasio, D.J.** 1987 The External Sierra: A Case History in the Advance and Retreat of Mountains. *National Geographic Research* v. **3**. p. 199-209.

Refereed Book Chapters Prepublication

Bodzin, A., Anastasio, D, Sahagian, D. Henry Burrows, J. 2016.A Curriculum-linked Professional Development Approach to Support Teacher's Adoption of WebGIS Tectonics Investigations, paper no. 151260. Contemporary Issues in Technology and Teacher Education, Special Issue Geospatial

Technology in Teacher Education
Refereed Articles Prepublication

In Review:

Teletzke*, A.L., **Anastasio, D.J.**, Kodama, K.P., Parés, J.M.C., in prep. Tectonic and sedimentary evolution of the southwest Pyrenees mountain front, Spain. *Bulletin Geological Society of America*.

Bodzin A.M., **Anastasio, D.J.**, Sharif*, R., Rutzmoser, S., in review A Web GIS Plate Tectonics Simulation to Promote Geospatial Thinking. *Journal of Geologic Education*. 22 manuscript pages.

Carrigan*, J.H., **Anastasio, D.J.**, Kodama K.P., Parés, J.M., in review. Fault-related fold kinematics recorded by terrestrial growth strata, Sant Llorenç de Morunys, Pyrenees Mountains, NE Spain. *Journal of Structural Geology*. 56 manuscript pages plus supplemental material.

Manuscripts In Preparation:

Anastasio, D.J., Latta*, D.L., Harkins*, N.L., Idleman, B.D., in prep. Deformation and synorogenic sedimentation in the Sevier hinterland, Idaho: Coeval compression and extension during the Paleogene.

Anastasio, D.J., Kodama, K.P., Pares, J.M., Hinnov, L.A. in prep. Non-steady deformation revealed by Milankovitch modulated growth strata, south Pyrenean thrust front, Spain. To be submitted to *Geology*.

Refereed and Published Geologic Maps: (*student advisee)

Majerowicz*, C.N., Troy*, J.K., **Anastasio, D.J.**, Pazzaglia, F.J., 2010. Bedrock and Surficial Geologic Map of the Lima Dam 7.5' Quadrangle, Beaverhead County, Southwest Montana. *Montana Bureau of Mines and Geology* EDMAP 7, 17 p. 2 sheets, scale 1:24,000.
http://www.mbm.mtech.edu/stmap_edmap.htm.

Majerowicz*, C.N., Anderson*, L.D., **Anastasio, D.J.**, Pazzaglia, F.J. in 2007. Bedrock and Surficial map of the Henry's Gulch 7.5' Quadrangle, Montana *Montana Bureau of Mines and Geology*. Open File Report 563, scale 1:24,000, text 20p. 1 pl. http://www.mbm.mtech.edu/stmap_edmap.htm.

Regalla*, C.A., Reyman*, D., **Anastasio, D.J.**, Pazzaglia, F.J. 2006 Bedrock and Surficial map of the Red Rock 7.5' Quadrangle, Montana *Montana Bureau of Mines and Geology*, Open File Report 533, scale 1:24,000, text 20p. 1 pl. http://www.mbm.mtech.edu/stmap_edmap.htm.

Newton*, M., Regalla*, C., **Anastasio, D.J.** 2005, Bedrock and Surficial Geologic Map of the Monument Hill 7.5' Quadrangle, Southwest Montana. *Montana Bureau of Mines and Geology*, Open File Report 517, scale 1:24,000, text 14p. 2pl. http://www.mbm.mtech.edu/stmap_edmap.htm.

Harkins*, N., Newton*, M., **Anastasio, D.J.**, Pazzaglia, F.J., 2004. Bedrock and surficial Geologic Map of the Caboose Canyon 7.5 Minute Quadrangle, southwest Montana. *Montana Bureau of Mines and Geology*, Open File Report 494, scale 1:24,000, Report 14p. 2pl.
http://www.mbm.mtech.edu/stmap_edmap.htm.

Harkins*, N., Latta*, D.K., **Anastasio, D.J.**, 2004. Surficial and Bedrock Geologic Map of the Dixon Mountain 7.5 Minute Quadrangle, Montana. *Montana Bureau of Mines and Geology*, Open File Report 495, scale 1:24,000, Report 12p. 2pl. http://www.mbm.mtech.edu/stmap_edmap.htm.

Refereed and Published Abstracts:

Anastasio, D. Kodama, K., Parés, J., Hinnov, L. 2015. Incremental folding rates determined with 10^{4-5} year time resolutions along the Pyrenean thrust front Spain. *EOS Transactions. Fall Meeting Supplement, American Geophysical Union.*

Carrigan*, J.H., **Anastasio, D.J.**, Parés, Kodama, K.P. 2015. Fault propagation fold kinematics recovered from terrestrial growth strata with 20-kyr time resolution, Sant Llorenç de Morunys, Pyrenees, Spain. *Geologic Society of America Abstracts with Program*, Baltimore, MD. v. 47. n. 6.

Anastasio, D.J., Bodzin, A., Sharif*, R. Rutzmoser, S. 2015. Geospatial thinking and reasoning enhanced in a structural geology and tectonics course using web GIS. *Geological Society of America Abstract with Program*. v. 47. n. 6. Baltimore, MD

Sharif, R*, **Anastasio, D.**, Rutzmoser, S., Bodzin, A. 2015. Geospatial thinking and reasoning enhanced in a structural geology and tectonics course using Web-GIS, as validated by content experts. Geological Society of America Abstract for NE Section meeting March 2015 v. 47.

Bodzin, A., **Anastasio, D.**, Sahagian, D. 2015. Using Web GIS to promote geospatial thinking and reasoning skills. Paper presented at the 2015 Association for Science Teacher Education (ASTE) Annual Meeting in Portland, OR.

Carrigan*, J.M, Parés, J.M., **Anastasio, D.J.**, 2014. Recovering the unsteadiness of deformation with 10^4 yr resolution over 2.5×10^6 yrs, SE Pyrenees, Spain. Geological Society of America Abstract with Program. v. 46. n. 6., paper 319-6, Vancouver, BC, Canada. October 2014.

Parés, J.M., Carrigan*, D.J., **Anastasio, D.J.** 2014. Unsteadiness of Deformation in Growth Strata From Magnetostratigraphy and Cyclostratigraphy, SE Pyrenees, Spain. [Invited] Americal Geophysical Union Fall Meeting Abstract GP21B-03. San Francisco, CA. December 2014.

Repasch, M., **Anastasio, D.J.**, Carrigan*, J., Parés, J.M. 2014. Fold kinematics resolved along the Spanish Pyrenees mountain front Sant Llorenç de Morunys. 2014. Geological Society of America Abstracts with programs. V. 46. n.6, paper 86-4, Vancouver, BC Canada October 2014.

Anastasio, D., Acuta, L., Rutzmoser, S., Sahagian, D., Bodzin, A.M.2014. Geologic Society of America Abstracts with programs, v. 46, n. 6, paper 151-11. Vancouver, BC, Canada, October

Bodzin, A., **Anastasio, D.**, Sahagian, D. 2014. Promoting spatial thinking with Web-based geospatial technologies. Poster presented at the 2014 NSF Discovery Research K12 Meeting in Washington, DC.

Berti, C., **Anastasio, D.J.**, Pazzaglia, F.J., Brocard, G.Y., Moodie*, A, Pares, J.M., Soto, J.I. 2014. Drainage network reorganization and divide migration in response to active tectonics in the Betics Range, Spain. Geologic Society of America Annual Meeting, Abstracts with Program, v. 46 n. 6 paper 272-12, Vancouver, BC, October 22, 2014.

Valletta, R. Brocard, G., Willenbring, J., Pazzaglia, F, Berti, C., **Anastasio, D.** 10Be-26Al exposure dating of river captures and basin avulsion in the Betic Cordilleras or Spain. Abstract with Program, Eastern Geomorphology Conference, Bethlehem, PA, May 1, 2014.

Parés, J.M., Anastasio,D.J., Kodama, K.P. 2014. Anisotropy of Magnetic Susceptibility (AMS) unlocks synsedimentary deformation kinematics at Pico del Aguila, Pyrenees, Spain. 14th Castle Meeting Évora, Portugal. August 31-September 6, 2014. <https://www.fc.ul.pt/pt/conferencia/14th-castle-meeting/list-abstracts>.

Pueyo, E.L., Ramón, M.J. and the Geokin3DPyr group (*) 2014. Paleomagnetic database in the Pyrenees: an assessment. Abstract. 24^e Réunion des Sciences de la Terre, Pau France. (*)Almar, Y., **Anastasio, D.**, Beamud, E., Briz, J.L., Casas, A.M., Calvín, P., Calvo, M., Costa, E., Fernández, O., Garcés, M., Gil-Imaz, A., Gil-Peña, I., Hernández, R., Izquierdo-Lavall, E., Kodama, K.P., Larrasoaña, J.C., Lewis, C.J., López, G., Mochales, T., Navas, J., Oliva-Urcia, B., Oliván, C., Pérez-Rivarés, J., Sánchez, E., San Miguel, G., Parés, J.M., Pocoví, A., Pueyo-Anchuela, O., Ramajo, J., Rodríguez-Pintó, A., Silva-Casal, R., Soto, R., Sussman, A. J., Teletzke, A.L.,Vidal, O., Villalaín J.J.

Pares, J.M., Repasch*, M., **Anastasio, D.J.**, Carrigan*, J. 2014. AMS-related shortening recorded in redbeds from growth strata, Pyrenees. European Geophysical Union, General Assembly, Abstract EGU2014-10183. Vienna, Austria.

Anastasio, D.J., Bodzin, A., Sahagian, D.L., Scott Rutzmoser. 2013. Teaching Tectonics to Undergraduates with Web GIS. *American Geophysical Union*, Fall Meeting Abstract ED13C-0787.

Anastasio, D.J., Parés, J., Carrigan*, J., 2013. High-Resolution Thrust Front Reconstruction Using Terrestrial Growth Strata, Pyrenees, Spain. *American Geophysical Union*. Fall Meeting Abstract GP43A-1195.

Cirucci, L., Teletzke*, A., Bodzin, A., **Anastasio, D.**, Sahagian, D., Rutzmoser, S., and Bressler*, D. (April, 2013). Investigating Tectonics with Web GIS. Presentation to be presented at the 2013 National Science Teachers Association (NSTA) National Conference on Science Education in San Antonio, TX.

Bodzin, Cirucci, Dempsey*, **Anastasio**, Sahagian, Bressler*. (April, 2013). Investigating climate change issues with Google Earth and Web-based activities. Presentation to be presented at the 2013 National Science Teachers Association (NSTA) National Conference on Science Education in San Antonio, TX.

Bodzin, A., Telezke*, A., Cirucci, L., Bressler*, D., **Anastasio, D.**, Sahagian, D., Rutzmoser, S., and Burrows*, J., (January, 2013). Using Web GIS to support the teaching and learning of tectonics. Experiential session to be presented at the 2013 Association for Science Teacher Education (ASTE) Annual Meeting in Charleston, SC.

Dempsey*, C., Bodzin, A., Peffer*, T., **Anastasio, D.**, Sahagian, D., Cirucci, L., and Bressler*, D. (January, 2013). Environmental Literacy and Inquiry: The climate change curriculum. Experiential session to be presented at the 2013 Association for Science Teacher Education (ASTE) Annual Meeting in Charleston, SC.

Bodzin, A., Cirucci, L., **Anastasio, D.**, Sahagian, D., Bressler, D., Burrows*, J., and Rutzmoser, S., 2013. Integrating Web GIS in Earth science curriculum to investigate tectonics. Presentation presented at the 2013 *National Science Teachers Association (NSTA) Regional Conference on Science Education* in Charlotte, NC.

Cirucci, L., Teletzke*, A., Bodzin, A., **Anastasio, D.**, Sahagian, D., Rutzmoser, S., and Bressler, D. (April, 2013). Investigating Tectonics with Web GIS. Presentation presented at the 2013 *National Science Teachers Association (NSTA) National Conference on Science Education* in San Antonio, TX.

Bodzin, A., Cirucci, L., Dempsey*, **Anastasio, D.**, Sahagian, D., Bressler, D. 2013. Investigating climate change issues with Google Earth and Web-based activities. Presentation presented at the 2013 *National Science Teachers Association (NSTA) National Conference on Science Education* in San Antonio, TX.

Bodzin, A., Teletzke*, A., Cirucci, L., Bressler, D., **Anastasio, D.**, Sahagian, D., Rutzmoser, S., and Burrows, J., 2013. Using Web GIS to support the teaching and learning of tectonics. Experiential session presented at the 2013 *Association for Science Teacher Education (ASTE) Annual Meeting* in Charleston, SC.

Dempsey*, C., Bodzin, A., Peffer, T., **Anastasio, D.**, Sahagian, D., Cirucci, L., and Bressler, D. 2013. Environmental Literacy and Inquiry: The climate change curriculum. Experiential session presented at the 2013 *Association for Science Teacher Education (ASTE) Annual Meeting* in Charleston, SC.

Gunderson*, K., **Anastasio, D.**, Pazzaglia, F. 2012 Determining the causes of fault slip rate variability of Northern Apennine thrusts on intermediate timescales. *American Geophysical Union, Fall Meeting Abstract: T41E-07.*

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Earth System Science Education at Lehigh University. <http://www.ei.lehigh.edu/esse/>. **Anastasio, D.**, Bodzin, A., Ramage, J., Cascione, J., Yu, J., Cascione, J. & Heydenberk, E. (2007). I am the co-Principal Investigator on this project and member of the instructional design team. External validation: NASA Science Mission Directorate - Earth Science Education Products and National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE).

Carbon Cycle. <http://www.ei.lehigh.edu/esse/carbon/>. **Anastasio, D.**, Bodzin, A., Ramage, J., Cascione*, J., & Heydenberk, E. (2007). Principal Investigator on this project and member of the instructional design team. External validation: NASA/USRA Earth System Science Education Design Guide for Undergraduate Earth System Science Education. Link Published In: A Design Guide for Undergraduate Earth System Science Education-A web-based resource for Teaching Earth System Science. Editors, M. Ruzik, J. Arron, as *Exemplary Learning Modules*: <http://essedesignguide.org/toolkit/>.

Remote Sensing. <http://www.ei.lehigh.edu/esse/rs/>. **Anastasio, D.**, Bodzin, A., Ramage, J., Cascione*, J., Cascione*, J. & Heydenberk, E. (2007). Principal Investigator on this project and member of the instructional design team. External validation: NASA/USRA Earth System Science Education Design Guide for Undergraduate Earth System Science Education.

Pennsylvania Sprawl: Case study, introduces students to the application of remote sensing for the study of changing landuse patterns using an example of farmland lost to urbanization. <http://www.ei.lehigh.edu/esse/cases/llws>.

Melting Glaciers: Case Study, introduces students to the application of remote sensing for the study of environmental change within a tropical alpine glacier. <http://www.ei.lehigh.edu/esse/cases/peru>.

Tectonics. <http://www.ei.lehigh.edu/eli/tectonics/>. Bodzin, A., **Anastasio, D.J.**, Sahagian, D., 2010-2011. **Tectonics** is a collection of 7 middle school curricular enhancement activities that utilize web GIS.

Non-Refereed Publications:

Anastasio, D.J., Erslev, E.A., Fisher, D.M. 1997 Preface, Special Issue Fault-Related Folding. *Journal of Structural Geology* v. **19**. no. 3/4. p. v-vi.

Anastasio, D.J., Erslev, E.A., Fisher, D.M. 1996. Penrose Conference Report: Fault-Related Folding, *GSA Today*, v. **6**. p. 14-15.

M. Withjack, R.W. Schlische, P.E. Olsen, M.L. Malinconico, V. Levin, **D. Anastasio**, C. Sequeira. 2011.

Early Post-Rift Deformation on the Rifted Margin of Eastern North America: Relationship to Breakup and the Early Stages of Seafloor Spreading. EarthScope-GeoPRISMS Science Workshop for Eastern North America, Lehigh University, October 27-29, 2011. White Paper Volume <http://www.geoprisms.org/index.php/pastmeetings/enam-oct2011.html?id=174>

Thomas, **D. Anastasio**, C. Bailey, G. Blackmer, J. Crespi, A. Gates, P. Karabinos, K. Klepeis, N. McQuarrie, P. Sak, M. Williams, D. Wise, 2011. Evolution of continental crust through two Wilson cycles in ENAM. EarthScope-GeoPRISMS Science Workshop for Eastern North America, Lehigh University, October 27-29, 2011. White Paper Volume <http://www.geoprisms.org/index.php/pastmeetings/enam-oct2011.html?id=174> W.

Unpublished Thesis, Dissertation, and Company Reports:

Anastasio, D.J. 1998, The Jaca Basin, Spanish Pyrenees. Anschutz Overseas Petroleum Corp.

Anastasio, D.J., Myers, P.B., Jr. 1991. Summary Report: Geological Investigations Through Pennsylvania Lehigh Tunnel No. 2. Newburg, Walker, Rogers, Slatington, PA 16pp plus 326 page appendix.

Anastasio, D.J. 1987 Thrusting, Halotectonics, and Sedimentation in the External Sierra, Southern Pyrenees, Spain, [Ph.D. Dissertation] Johns Hopkins University, Baltimore, MD. 181p.

Anastasio, D.J. 1983 Deformation Features Associated with the Initiation and Propagation of Thrust Faults. ARCO Oil and Gas Company Research Report, No. RR83-74, 110pp.

Anastasio, D.J. 1980 Fluorescence Studies of Membrane Phospholipid Phase Separations in Warm and Cool Climate Plants Utilizing the Membrane Probe trans-Parinaric Acid [Baccalaureate Thesis] Franklin and Marshall College, Lancaster, PA 36p.

RESEARCH FUNDING AND TRAINING GRANTS:

Pending Research Grants:

Socio-Environmental Science Investigations (SESI) Using the Geospatial Curriculum Approach with Web GIS. **National Science Foundation** Lead PI Alec Bodzin, CoPIs D. Anastasio, T. Hammond, B. Holland. Request: \$ 1,199,794. 7/1/2016-6/30/2019.

Timing of Orogenic Response to Subduction Rollback, Betic Cordillera, Spain. **National Science Foundation** Lead PI **D. Anastasio**. CoPI C. Berti. Request \$ 296,806. 8/1/2016- 7/31/2018.

High-Resolution Dating of Paleoarcheological Sites in the Guadix-Baza Basin, Southern Spain. Committee for Research and Exploration, **National Geographic Society Waitt Grant Program**. PI **D. Anastasio**, May 2016-May 2017, (\$). *This Proposal*.

Active Research Grants:

Expired Research Grants:

- Promoting Spatial Thinking with Web-based Geospatial Technologies **National Science Foundation**, Lead PI: Alec Bodzin, COPIs **D. Anastasio** and D. Sahagian, July 2011-June 2014, with 1 year no cost extension, (\$438,161).
- Understanding Continental Collision in the Betic Cordillera, Spain. **National Science Foundation**, September 2012-August 2014 with 1 year no cost extension. PI **D. Anastasio**. (\$28,539).
- Quantification of Unsteady Fault Slip and Fold Growth, Apennine Front, Italy. **National Science Foundation**. September 2008-August 2013, **Lead PI: D. Anastasio**, Co-PI F.J. Pazzaglia, K.P. Kodama (\$302,551).
- 4D Geometry and Kinematics of Geological Structures: High-resolution Deformation Rates from Climate Cycles in Syntectonic Strata. **Departamento Ciencia, Tecnologia y Universidad, Gobierno de Aragon, Spain** Lead PI: **D. Anastasio** July 2010-December 2010 (\$14,505).
- Web-enhanced Environmental Literacy and Inquiry Modules (WELIM) for Middle School Learners **Toyota USA Foundation** June 2008-June 2011 Lead PI: A. Bodzin, CoPIs: **D. Anastasio** and D. Sahagian (\$317,778).
- Predicting Reservoir Properties in Carbonates, Sierra Madre Oriental, Mexico **Petroleum Industry Consortium (Doughtie Exploration Co., Anchutz Corporation, Gulf Coast Geological Societies)** (total \$4,250).
- Collaborative Research: High-Resolution Deformation Rates, Spain **National Science Foundation** EAR-0409077. **Lead PI: D. Anastasio**, Co-PI K. Kodama, August 2004-July 2008, (\$152,052), Collaborative proposal (\$42,589) from J. Pares (University of Michigan) and Sub-award UNAVCO, Inc. (\$4,000). Supplement, to EAR-0409077 Amendment 003 June 2005-July 2007 (\$12,765).
- Centennial Tectonic Belt in Southwestern Montana, Lima Dam 7.5' Quadrangle **DOI-United States Geological Survey-EDMAP**. June 2007-July 2008, **Lead PI: D. Anastasio** CoPI F.J. Pazzaglia (\$13,769).
- Collaborative Research: Milankovitch-Scale Time Resolution in Growth Strata to Determine Rates and Kinematics of Folding **National Science Foundation** Grant EAR-0230053 **Lead PI: D. Anastasio**, Co-PI K. Kodama, January 2003-December 2006, (\$143,450), Collaborative proposal \$20,000 from M. Elrick (UNM).
- Centennial Seismic Belt in Southwestern Montana, Henry Gulch 7.5' Quadrangle. **DOI-United States Geological Survey, EDMAP**, **Lead PI: D. Anastasio**, CoPI: F. Pazzaglia, June 2006-May 2007 (\$14,729).
- Where is the Missing Carbon? Multidisciplinary Web-Based-Inquiry Modules for Earth System Science Instruction. **Universities Space Research Association/National Aeronautics and Space Administration**. Prime Agency NASA, grant NNG04GA82G, USRA/ESSE21 sub-agreement 05121-16. Earth System Science Education for the 21st Century Program, **Lead PI: D. Anastasio**, Co-PIs: L. Windham, A. Bodzin, October 2004-July 2007 (\$69,735). Supplement: Remote Sensing

- Educational Module, Web-Based-Inquiry Modules for Earth System Science Instruction., **Universities Space Research Association/National Aeronautics and Space Administration**. Prime Agency NASA, grant NNG04GA82G, USRA/ESSE21 sub-agreement 05121-16. Earth System Science Education for the 21st Century Program, Supplement **Lead PI: D. Anastasio**, Co-PIs: A. Bodzin, Joan Ramage, Zicheng Yu, October 2005-July 2007 (\$23,060).
- Active Tectonics Along the Eastern Margin of the Red Rock Graben, Red Rock 7.5' Quadrangle, Montana. Contract Number 05HQAG0015. **DOI-United States Geological Survey, EDMAP, Lead PI: D. Anastasio**, CoPI: F. Pazzaglia June 2005-May 2006 (\$14,987).
- Quaternary History of the Monument Ridge Fault System, Monument Hill 7.5' Quadrangle, Montana **DOI-United States Geological Survey, Lead PI: D. Anastasio**, CoPI: F. Pazzaglia **EDMAP**, 02HQAG0081, June 2004-May 2005 (\$13,000).
- Fluvial Response to Tectonism, Caboose Canyon Quadrangle, MT, **Lead PI: D. Anastasio**, CoPI: F. Pazzaglia (**DOI-United States Geological Survey, EDMAP**, Contract Number 02HQAG0081, June 2002-May 2003 (\$14,973).
- Synorogenic Fluid-Rock Interaction in the Dixon Mountain Quadrangle, Montana, **DOI-United States Geological Survey, EDMAP**, Contract Number 01HQAG0188, June 2001-May 2002 (\$14,927).
- Volume Strain, Mass Transfer, and Fabric Development in Carbonates (G.E. Bebout Co-P.I.) - **National Science Foundation**, grant no. EAR-9316809, July 1994 - June 1997 (\$130,000).
- Fold Kinematics in Thrust Belts -**UNOCAL Science & Technology Division**, June - August 1993, (\$2,000).
- Growth of Faults: Implications for Fold Development in Mountain Ranges Lead PI D. Anastasio D. Fisher Penn State Univ. -**National Geographic Society**, grant no. 4738-92, June 1992 - May 1993. (\$12,770).
- Collaborative Research: Folding Processes in Thrust Belts: Lost River Range, Idaho-**National Science Foundation**, grant no. EAR-9017334, January 1991 - December 1993, (\$70,705). D. Fisher Penn State Univ. collaborative proposal for (\$70,000).
- Geologic Investigations through Pennsylvania Turnpike Lehigh Tunnel No. 2 Lead PI D. Anastasio, Co-PI P.B. Myers **Newburg, Walker, Rogers, joint venture contractors**, May 1989-May 1991, (\$132,290).
- Halotectonics and Thrusting Processes in the Spanish Pyrenees - **National Science Foundation**, grant no. EAR- 8816335, April 1989 - March 1991, (\$80,580).
- Conference Grants:**
- Conference Support: Continental Deformation and Mountain Building, Ullapool, Northwest Scotland, EES, CAS, **Lehigh University** May 2007 (\$1,800).
- Conference Support: Reinvention Center: Incorporating Research into Undergraduate Education: The Value Added. Washington, DC, CAS, **Lehigh University** November 2004 (\$500).

Conference Support: RETREAT Meeting, Portnova, Italy March 2005 **NSF-EAR 0207980** (\$1,000).

Field Conference Support: Tectono-stratigraphic evolution of northeast Mexico, **Gulf Coast Affiliated Geologic Societies**, October 2000 (\$1,625).

Conference Support: Ray Price Symposium and Field Trip: Canadian Cordillera. **GeoCanada 2000** Millennium Geoscience Summit, Calgary, Canada., May 2000. (\$700C). and Travel Grant, President and Provost's Faculty Development Fund **Lehigh University** (\$1,300).

Conference Support for Penrose Conference on Fault-Related Folding, **National Science Foundation**, grant no. EAR-9508578, April 1995-March 1997 (\$6,000).

Conference Support for Penrose Conference on Fault-Related Folding August 1995. (D. Fisher Co-P.I.) **GSA Penrose Foundation** (\$4,000), **ARCO Exploration & Production Tech** (\$1,000), **Chevron Corporation** (\$1,000), **Exxon Production Research** (\$1,000), **Husky Oil Operations** (\$1,000), **Mobil Exploration & Producing Technical Center** (\$1,000), **Mobil Oil Canada** (\$1,000), **Morrison Petroleum** (\$1,000), **Texaco E&P Technology Department** (\$1,000), (Total \$11,000).

Innovative Course Design in Geosciences, Williamsburg, VA, Faculty Development Office, **Lehigh University** April 1997 (\$400).

Institutional / Equipment Grants:

Lehigh University

Start-Up Funds:

Research \$15,000

Laboratory and Office Renovations \$35,000

Research Grants:

Backstop Funding: High-Resolution Thrust Front Reconstruction Using Terrestrial Growth Strata, Pyrenees, Spain. Faculty Research Grant, **Lehigh University PI Anastasio**. April 2012-November 2012 (\$3,000)

High Resolution Dating to Reconstruct Climate Change and Tectonics. Faculty Innovation Grant, **Lehigh University** Lead PI: **D. Anastasio** CoPI: K. Kodama June 2010-November 2011 (\$17,625).

Research Planning Visit, Sierra Madre Oriental, Mexico, Faculty Research Grant, **Lehigh University**, October 2000 (\$1,300)

Rocky Mountain Deformation, Idaho, Faculty Research Grant, **Lehigh University**, July 1997-June 1998 (\$1,200).

Deformation Structures and Dynamics of Mountain Building, Faculty Research Grant, **Lehigh University** December 1992 - June 1993 (\$1,000).

Partial (6.7%) cost-share of a research-grade petrographic microscope and photomicrographic system - Environmental Studies Center, **Lehigh University**, April 1990, (\$1,000).

Processes of Fault Propagation and Folding within Blind Thrust Anticlines of the Lost River Range, Idaho - Faculty Research Grant, **Lehigh University**, June - August 1989, (\$1,000).

Tectonics and Sedimentation in the Central Rocky Mountains, Idaho and Montana during the Antler and Sevier Orogenic -Faculty Research Grant, **Lehigh University**, June - August 1988 (\$1,000).

Instructional Grants:

Experiential Learning and faculty-underclassmen interaction in EES 21 and EES 31. **Hewlett Foundation-CAS Lehigh University**, January 1998-May 1999 **Lead PI Anastasio**, CoPIs Kodama, Morris, Hargreaves (\$11,000).

Predocctoral Student Research Grants External:

Geological Structure of an Emergent Thrust Front, Southern Pyrenees, Spain

Lead PI: D. Anastasio, CoPI: D. DePaor, **National Geographic Society**, June 1985 - May 1986, (\$5,016).

Thrusting, Diapirism and Synorogenic Sedimentation during the Tertiary of the Southern Pyrenees, Spain

May - August 1985

-**Chevron Overseas Petroleum Company** (\$4,000).

-**BP Petroleum Development Limited** (\$3,316).

-**American Association of Petroleum Geologists** (\$800).

-**Sigma Xi** (\$600).

Travel Support to Attend Thrusting and Deformation Conference, Toulouse, France, **French Research Council [CNRS]**, May 1984 (\$200).

Finite Strain Along the Western Slope of the Blue Ridge Anticlinorium, Maryland and Virginia, **Geological Society of America**, 1984 (\$800).

Predicting Three-Dimensional Geometries of Kink Bands and Relating this to the Mechanics of Kink Fold Formation and Fracture Density **Geological Society of America**, 1982 (\$800).

Predocctoral Research Grants, Institutional:

Johns Hopkins University

Thrusting, Diapirism and Synorogenic Sedimentation during the Tertiary of the Southern Pyrenees, Spain,

May - August 1985 (\$500)

-**D. Elliott Field Grant, Johns Hopkins University** (\$500).

May - August 1984 (\$1,250)

-**Chevron Field Grant, Johns Hopkins University** (\$680).

-**Waters' Field Grant, Johns Hopkins University** (\$269).

-**D. Elliott Field Grant, Johns Hopkins University** (\$160).

-**Corning Fieldwork Grant, Johns Hopkins University** (\$141).

CONTRACT / CONSULTING WORK:

Pompey Coal Company, Jessup, PA, 1998-1999, coal reserve assessment

Anschutz Overseas Company, Denver, CO, 1997-1999, petroleum reservoir analysis, structural and stratigraphic studies, Jaca Basin, Pyrenees field seminar.

Dames and Moore, Inc., Latham, NY, 1994, geologic study associated with ground-/surface water contamination project.

Newburg, Walker, Rogers, Joint Venture Contractors, Slatington, PA, 1989 – 1991, geologic and geotechnical studies associated with PA turnpike tunnel construction.

Dames and Moore, Inc., Willow Grove, PA, 1988-1989, fracture/discontinuity analyses associated with various groundwater development and contaminant mitigation projects.

Urwiler and Walter, Inc., Sumneytown, PA, 1988, above-ground fuel tank permitting project.

R.E. Wright Associates, Inc., Earth Resources Consultants, Harrisburg, PA. 1981, strip-mine reclamation and groundwater development projects completed as an undergraduate intern.

EDITOR FOR SCHOLARLY PUBLICATIONS:

Guest Editor, *Journal of Structural Geology* Special Issue: Fault-Related Folding, 1997 v. **19**. nos. 3/4, 602pp.

SCHOLARLY PRESENTATIONS:**Invited Presentations:**

2015

-La Importancia de les Serres de Busa-Bastets, I Santuari de Lord en el Mon Cientific, A La Biblioteca Municipal de St Llorenç de Mornuys, Spain, May 23, 2015.

2014

-Topical Session GP21B American Geophysical Union, San Francisco, CA

2013

-Geosciences Colloquium, Department of Geosciences, Penn State University, State College PA, November 12, 2013

2012

-Department of Earth and Environmental Sciences, University of Rochester, Rochester NY, February 3, 2012.

-2012 Internal Awards Symposium: Facilitating new research and collaborations, Lehigh University

2011

-Great Teaching, Great Learning Symposium. Department of Earth and Environment. Franklin and Marshall College, Lancaster, PA, March 4, 2011

-Botstiber Scholars Lecture, Lehigh University, Bethlehem, PA February 24, 2011.

2010

-Departamento Ciencias de la Tierra, Universidad de Granada, Granada, Spain, December 13, 2010.

<http://www.ugr.es/~agcasco/tierra/>

- Departamento Ciencias de la Tierra, Universidad de Zaragoza, Zaragoza, Spain, November 15, 2010
- Departamento de Fisica, Universidad de Burgos, Escuela Politécnica Superior, and centro nacional de investigación sobre la evolution humana, (CENIEH), Burgos, Spain, October 27, 2010
- ENI, Milan, Italy May 17, 2010
- MARGINS Successor Program Planning Meeting, February 10, 2010, San Antonio, TX

2009

- Department of Geological Sciences, University of Iowa, November 5, 2009, Iowa City, IO

2008

- Department of Geological Sciences, Rutgers University, October 15, 2008, New Brunswick, NJ

2007

- Departamento Ciencias de la Tierra, Universidad de Zaragoza, Zaragoza, Spain, October 16, 2007
- Department of Geological Sciences, University of Wisconsin, Milwaukee, November 29, 2007
- Continental Dynamics RETREAT Workshop, Lehigh University, October 1, 2007
- Global Citizenship Seminar, Lehigh University, March 26, 2007

2006

- Geologic Systems Inc, Boulder, CO, July 10, 2006.
- Department of Earth & Environmental Sciences, Lehigh University, March 3, 2006.
- Department of Geosciences, Penn State University, April 14, 2006.

2005

- Department of Earth & Planetary Sciences, University of New Mexico, January 11, 2005.
- NSF Continental Dynamics RETREAT Workshop, Portnova, Italy March 2005
- Earth System Science Education for the 21st Century, Fairbanks, AK, August 3-8, 2005.

2004

- R.W. Bromery Lecture, Department of Earth & Planetary Sciences, Johns Hopkins University, October 11, 2004
- Whence the Mountains, Whence the Mountains, New Developments in the Tectonic Evolution of Orogenic Belts: Celebrating the Dynamic Career of Raymond A. Price at the 50-year Mark, Geological Society of America, Annual Meeting, Denver, CO, November 5, 2004.
- Friend of the Lehigh University Libraries, Lehigh University, October 2004.
- Earth System Science Education for the 21st Century, Monterrey, CA, July 20-25, 2004.

2003

- Friends of the Lehigh University Libraries, Lehigh University, October 21, 2003.
- Department of Geosciences, Franklin and Marshall College, Lancaster, PA, March 14, 2003.
- Department of Geological Sciences, University of Binghamton, Binghamton, NY, May 9, 2003.

2001

- Rheological Effects of Fluid-Rock Interactions at Depth: From Experimental Constraints to Interpretations of Field Observations, Theme Session, Geological Society of America, Annual Meeting, Boston, MA, November 5, 2001.
- Department of Geology and Environmental Geosciences, Lafayette College, Easton, PA, January 31, 2001.

2000

- Ray Price Symposium and Field Trip: Canadian Cordillera, GeoCanada2000, Millennium Geoscience Summit, May 30, 2000, Calgary, Canada.
- Department of Geology and Environmental Geosciences, Lafayette College, Easton PA, March 8, 2000.

1999

- Department of Geosciences, Pennsylvania State University, University Park, PA, November 19,

1999.

1998

- Department of Earth Sciences, Montana State University, Bozeman, MT, February 12, 1998.
- Department of Geological Sciences and Environmental Studies, State University of New York at Binghamton, Binghamton, NY, April 17, 1998.

1997

- Exploration Research and Technical Services Division, ARCO Exploration and Production Technology, Plano, TX, August 19, 1997
- Departments of Geology and Environmental Studies, Dickinson College, Carlisle, PA, November 21, 1997
- Anschutz Overseas Company, Denver, CO, August 19, 1997
- Geodynamics Lecture Series, Department of Geosciences, Pennsylvania State University, University Park, PA, October 9, 1997

1996

- Department of Earth & Environmental Sciences, Rensselaer Polytechnic Institute
- Department of Geological Sciences, SUNY at Albany, Albany, New York, November 8, 1996
- Department of Geology, Lafayette College, Easton, PA, April 10, 1996
- Materials Research Forum, Lehigh University, Bethlehem, PA, February 16, 1996
- Earth & Environmental Sciences, Lehigh University, Bethlehem, PA, November 14, 1996

1995

- Department of Geological Sciences, Cornell University, Ithaca, NY, April, 1995
- Penrose Conference, Fault-Related Folding, Banff, Alberta, Canada, August 1995
- Department of Geology, Bucknell University, Lewisburg, PA, October, 1995

1993

- Department of Earth & Environmental Sciences, Lehigh University, Bethlehem, PA, February 1993
- Department of Geological Sciences, Cornell University, Ithaca, NY, March 1993

1992

- Penrose Conference: Application of Strain Analysis, from Microstructures to Orogenic Belts, Liscombe Harbour, Nova Scotia, Canada

1991

- Department of Earth & Space Sciences, State University of New York at Stony Brook, Stony Brook, NY
- Penrose Conference: Tectonics and Foreland Basin Sedimentation, Oliana Spain
- Department of Geological Sciences, Franklin and Marshall College, Lancaster, PA

1990

- Department of Geology, Colgate University, Hamilton, NY
- Department of Geosciences, Pennsylvania State University, University Park, PA

1989

- Geological Society of Washington, Washington, D.C.

1988

- Department of Geological Sciences, University of Rochester, Rochester, NY
- Department of Geology and Geophysics, University of Connecticut, Storrs, CT
- Department of Geological Sciences, Brown University, Providence, RI
- Department of Geological Sciences, Rutgers University, Newark, NJ

1987

- Chevron Overseas Petroleum Inc., San Ramon, CA
- Penrose Conference: Construction of Geological Cross Sections in Deformed Terranes, Rosendale, NY

-Department of Geology, Bucknell University, Lewisburg, PA

1986

- Penrose Conference: Synsedimentary Tectonics, Durango, CO
- Department of Geological Sciences, Lehigh University, Bethlehem, PA
- Shell Development Company, Houston, TX
- Amoco Production Research Company, Tulsa, OK
- Department of Earth & Planetary Sciences, Washington University, St. Louis, MO
- Mobil Research and Development Company, Dallas, TX

1985

- Geological Society of Washington, Washington, D.C.
- BP Petroleum Development of Spain, Ltd., Madrid, Spain
- Chevron Oil Company of Spain, Madrid, Spain
- ENI/ENPSA, Madrid, Spain
- Department of Geology, Franklin and Marshall College, Lancaster, PA

1984

- ARCO Oil and Gas Company, Dallas, TX

Volunteered Presentations

Referred Published Abstracts associated with each.

2015

- National GSA-talk, Baltimore, MD
- Fall AGU-talk, San Francisco, CA

2014

- National GSA-talk, Vancouver, B.C. Canada
- Fall AGU-invited paper, San Francisco, CA

2013

- Fall AGU two posters, San Francisco, CA

2012

- Fall AGU-poster and paper, San Francisco, CA

2011

- Fall AGU-2 posters, San Francisco, CA

2009

- Fall AGU-poster, San Francisco, CA
- National GSA-poster, Portland, OR

2008

- Fall AGU-talk, San Francisco, CA

2007

- Fall AGU-poster, San Francisco, CA
- Aurthur Holmes Meeting, Geological Society of London-talk, Ullapool, Scotland
- Annual AAPG Convention-poster, invited, San Antonio, TX

2006

- National GSA-talk Philadelphia, PA
- Fall AGU-poster, San Francisco, CA

2005

- National GSA-talk Salt Lake City, UT
- Fall AGU-poster, San Francisco, CA

2004

- National GSA-talk, Denver, CO

2002

- National GSA-talk, Denver, CO
- Rocky Mountain GSA-poster, Cedar City, Utah

2001

- National GSA-talk, Boston, MA

1998

- National GSA-talk, Toronto, ON, Canada

1997

- National GSA-talk, Salt Lake City, UT

1996

- National GSA-talk
- Spring AGU-poster, Baltimore, MD

1994

- National GSA-talk, Seattle, WA

1993

- National GSA-talk, Boston, MA

1992

- National GSA-talk, Cincinnati, OH
- NE GSA-poster, Harrisburg, PA
- Spring AGU-talk, Montreal, Canada

1991

- National GSA-talk, San Diego, CA

1989

- Fall AGU-talk, San Francisco, CA

1988

- National GSA-talk, Denver, CO
- Spring AGU -talk, Baltimore, MD
- AAPG, Mediterranean Basins Conference-talk, Nice France

1986

- National GSA-poster, San Antonio, TX

1985

- National GSA-talk, Orlando, FL

1984

- Tectonic Studies Group, Geological Society of London, December meeting-poster

ORGANIZED OR CHAIRED SESSIONS / CONFERENCES:

2009

- Convener with F. Pazzaglia, Theme session for Geological Society of America Conference, Portland, OR. Steady and unsteady deformation of folds and faults: insights to tectonic, surficial, and coupled processes.

2003

- Convener with M. Fischer, Theme session for Geological Society of America Conference, Seattle, WA. Structure and Stratigraphy: New Perspectives on Lithotectonic Processes.

1996

- Session Chairperson: Geological Society of America: Structural Geology I: Faulting.

1995

- Convener with D. Fischer and E. Erslev, 5 day, Geological Society of America Penrose Conference on Fault-Related Folding, Banff, Alberta, Canada.

1991

- Session Chairperson National Geological Society of America Conference: Folds, Faults, and Fabrics.

1988

- Session Chairperson: American Association of Petroleum Geologists Western Mediterranean Basins Conference: Thrust and Foreland Tectonics and Traps, Nice France.
- Session Chairperson: National Geological Society of America Conference: Thin Skin and Accretionary Structures and Pluton Emplacement, Denver, CO.

TEACHING AND RESEARCH ADVISING:

List of Courses Taught at Lehigh University, (Current Offerings (number of times offered))

Undergraduate Courses Taught at Lehigh University

ARTS 1 Choices and Decisions, 1 credit hour [First Year Advising] (2)

EES 4 Science of Environmental Issues 1 credit hour (5)

First Year Seminars:

EES 90 Time Warp, 3 credit hours (1)

EES 90 Dynamic Earth, 3 credit hours (1)

EES 90 Shaping the Earth, 3 credit hours (1)

EES 90 Historic Stones of Bethlehem, PA, 3 credit hours (1)

EES 21 Introduction to Planet Earth 3 credit hours (26)

EES 22 Exploring Earth, 1 credit hour, (4)

EES 223 (123) Structural Geology and Tectonics, 4 credit hours (24)

EES 284 Research Seminar, 1 credit hour (2)

EES 310 Introduction to Plate Tectonics, 3 credit hours (1)

EES 318 Genesis of Carbonate Rocks, 3 credit hours (2)

EES 324 Structural Analysis, 3 credit hours (1)

EES 326 Geological Evolution of North America, 4 credit hours (13)

EES 334 Geosphere, Structure and Evolution 3,4 credit hours (1)

EES 341 Field Geology (Field Methods in EES), 6 credit hours (26)

EES380 Senior Seminar in Earth & Environmental Sciences (Natural and Artificial Borders)(1)

Graduate Courses Taught at Lehigh University

EES 426 Tectonic Processes, 3 credit hours (1)

EES 427 Orogenic Belts (Thrust Belts), 3 credit hours (13)

EES 428 Stress and Strain in Rocks, 3 credit hours (7)

EES 493 Advanced Topics in Tectonics: Deformation of Sedimentary Rocks, 3 credit hours (1)

EES 494 Topics in Tectonic Processes: Tectonics and Erosion, 3 credit hours (1)

EES 497 Petrology Seminar: Metamorphism in High Strain Zones, 3 credit hours (1)

EES 498 Thrust Belts (1)

Additional Education Activities

- Teacher Professional Development Sessions, Bethlehem Area School District, Middle School Science Teachers, April 4 and September 23, 2012
- NSF Undergraduate faculty enhancement workshop on Innovative Teaching and Course Design

- in the Geosciences, Williamsburg, VA, June, 1997.
- Reinvention Conference, Integrating Research into Undergraduate Education: The value added, Washington, D.C. November, 2004. I subsequently moderated a well-attended Lehigh Faculty Development luncheon on the topic.
- NASA/USRA Conferences on Earth System Science Education, Monterrey, CA 2004, and Fairbanks, AK 2005
- Faculty mentor, Integrated Math And Science Teaching (IMAST); a 3-year Commonwealth Partnership program to develop curricular integration of math and science in primary and secondary schools (1995-1997).
- Lehigh University liaison Discovery Center of Science and Technology, Bethlehem, PA (2000-2002)
- Howard Hughes Bethlehem, PA Area School District-Lehigh University Science Advisor (1991-1998)

RESEARCH ADVISING:(Alumni's initial employer)

Baccalaureate Thesis Supervised (19, 9 completed for Honor's graduation):

Raghida Sharif 2015
 Marisa Repasch 2013-Honors thesis
 Erin Lau 2013
 Shayna Boulton 2012
 Katherine Spevok 2012
 Nick Gava 2009-Honors thesis
 Greg Mortka 2009
 Lauren Anderson 2008-Honors thesis
 Christine Regalla 2004-Honors thesis, Presidential Fellowship, Hewlett Prize, Lemmon Prize.
 Nicholas Castle 2004-Honors thesis.
 Andrew Drabick 2002-ILE project.
 Nathan Harkins 2000-Honors thesis, Hewlett Prize.
 Lynda Lastowka 1998-Honors thesis.
 Linda Molyneux 1998-Honors thesis.
 James Schattin 1998.
 Brandon Brown 1996.
 Scott Davidson 1995-Honors thesis, Hewlett Prize.
 John Nolte 1994.
 James N. Miades 1988.

Post-Baccalaureate Research Supervised

Christine Regalla 2005 (Boston University)

Masters Thesis Supervised (13 completed) (employer if known):

James Carrigan, 2015
 Allison Teletzke, 2012 (Chevron)
 Kellen Gunderson, 2009 (Chevron)
 Joanna Troy, 2008 (ExxonMobil Exploration Co.)
 Christina Majerowicz, 2008 (Hatch Mott MacDonald)
 Luke Wilson, 2008 (ExxonMobil Exploration Co.).
 James Cascione, 2007 (Hovensa, St Croix).
 Michael Newton 2006 (Secor International Inc.), Presidential Fellowship, Hewlett Prize

Larissa Powers-1 semester, withdrew 2004.
 Nathan Harkins 2003 (ExxonMobil).
 Adrienne Johnson 2002 (Department of Environmental Quality, Nebraska).
 Scot Davidson 1996 (Advanced Thin Films, Denver, CO).
 Eric Schleicher 1997 (O'Brien and Gere engineers, Inc.).
 Theresa A. Messina, 1993 (Amerada Hess Co.).
 Christopher A. Hedlund 1992 (Shell Exploration & Production Technology Co.).
 James E. Holl 1990 (ExxonMobil Co.).
 James Kenney-2 semesters, withdrew 1990.
 James Miades-1 semester, withdrew 1988.

Doctoral Dissertations Supervised (3 completed):

James Carrigan in progress
 Kellen Gunderson 2013 (Chevron Corp.)
 Diana K. Latta 2005 (ExxonMobil Co.)
 James E. Holl 1994 (ExxonMobil Co.).

Postdoctoral Mentoring/Visiting Scholar Hosting:

Dr. Josep Parés 2013 (CENIEH)
 Dr. James E. Holl 1995-1996 (ExxonMobil Co.).

Research Committees (not principal advisor)

PhD. Research Committees

University of Granada, Spain
 Idaira Santos Betancor, external examiner
University of Zaragoza, Spain
 Tanya Mochelas 2011
University of Connecticut
 Jonathon Lewis, 1998
Lehigh University-College of Education
 Violet Aloo Kulo 2011
Lehigh University-College of Arts and Sciences
 Daniel Minguez 2014
 Johanna Blake 2013
 Nathan Collins-8 semesters
 David Cuomo-4 semesters
 Ryan McKeon 2012
 Lucy Brown
 Karl Wegmann 2009
 Dario Billardello 2009
 Amanda Ault-8 semesters
 Long Li 2007
 Robert King 2007
 Frank (Yongxiang) Li 2005
 Bang Yeon Kim 2002
 Tan Xiaodong 2001
 Sean Gulick 2000
 Mohamad Riaz, 4 semesters

Mike Schoemann, 4 semesters
 Jeffery Strasser 1996
 Maria Cioppa 1996
 David Winslow 1995
 John Stamatakos 1990

MS Research Committee

Zach Spahn 2011
 Andrea Daman 2009
 Mathew Wendell 2005
 Christopher Call 2004
 Carolyn Brown 2003
 Sarah Gately, withdrew 2003
 Nick Scala 2002
 Jordan Vaughn 2002
 Kurt Frankel 2002
 Sarah Newland 2001
 Jane Grimes 1999
 Erica Hammer Klose 1998
 Amy Ondrus 1997
 Tan Xiaodong 1997
 Brian Altheim 1995
 Elizabeth Sherwood 1994
 Christina Dietrich 1994
 Matthew Podniesinski, time expired 1993
 Jeffery Strasser 1989

BS Honor's Committee (not principal advisor)

Lehigh University

Andrew Moodie 2013
 Kyle Davidson 2012
 Meagan Patrick 2012
 Michel M. Newton 2004
 Andrew Drabick 2001
 Lysa Chizmadia 1997
 Alicia Stanfill 1997
 Lori Warner 1993
 Katrina M. Wroblewski 1989

University of Edinburgh

Neil McMahon 1991
 Scott Patterson 1991

George Washington University

Angela Bee 1990

SERVICE:

Service to Lehigh University

- Research Internal Review Committee

- –Panel Chair, Critical Research Equipment Fund
- Building Monitor S.T.E.P.S. Building
- Appointed member Lehigh Internal Review Committee–advises the VP and Associate Provost for Research on major or internal grant programs
- Appointed Chairperson Lehigh University Commencement Speaker Committee 2010-present
- Elected member Lehigh University Honorary Degree Committee, 2008-10, chairman
- Elected member, Lehigh University Graduate and Research Committee 1990-1993.
- Environmental Education Certification Content Evaluator, Pennsylvania Department of Education, College of Education 2002-2009.
- Earth and Space Science Certification Content Evaluator, Pennsylvania Department of Education, College of Education 2002-2009.
- Curriculum Committee Member, BS Environmental Engineering 2001-present.
- Curriculum Committee Member, BA Environmental Studies 2004-2008.
- Taylor College Fellow 1992-93.

Service to College of Arts and Sciences

- Elected College of Arts and Sciences Representative to the College of Education 2005-06.
- Natural Science Representative, Development Initiatives Panel for CAS 1998.
- Elected Chair, College Policy Committee 1996-1997, lead revision of CAS committee structure.
- Elected Member College Policy Committee 1994-1995.

Service to Department

- Chair of Department (2013-
- Temporary Chair Earth and Environmental Sciences 2007, 2008, 2012
- Department Committees*
- Co-Director Lehigh EES Field camp (2010-2012)
- Graduate Director 1993, 2006-2009
- Member Graduate Instruction Committee, 1987-1988, 1990-91, 1994, 2006-2009.
- Chair, Undergraduate Instruction Committee, 1989-1990, 1991, 2000-2005.
- Member Undergraduate Instruction Committee 1998-1999.
- Member Field Committee 2004-2009.
- EES Computer Committee 1996-1997.
- Associate Graduate Coordinator 1991
- Seminar Series Coordinator 1990-1991.

Department Fieldtrip

- Leader Department Field Trip to the Pyrenees, Spain and France, 12 days 2013
- Co-leader Department Fieldtrip to Iceland 7 days 2002
- Co-Leader Department Fieldtrip to Death Valley 6 days 1999
- Co-Leader Department Fieldtrip to the Florida Keys 12 days 1990
- Co-leader Department Fieldtrip to Newfoundland 12 days 1989
- Leader Department Fieldtrip Southern Appalachians 12 days 1987

Service to Interdisciplinary Programs

- Co-chair (w/Jerry Lennon) Earth and Environmental Science-Civil and Environmental Engineering Curriculum Development Committee 2001-2002.
- Affiliated faculty Environmental Initiative 2004-present
- Education Outreach Committee Environmental Initiative 2004-2010
- Member BA Environmental Studies Curricular committee

Professional Service

Panels:

- NSF Tectonics Research Grants Panel 2010
- NASA Earth System Science Education Research Grants Panel 2005.
- NSF Panel: Investigating Stress on Academic Research 1993.

Proposal referee:

- National Science Foundation, Division of Earth Sciences
 - Tectonics Program, • Hydrologic Sciences Program, •Stratigraphy and Paleontology Program, •International Programs, •Experimental and Theoretical Geophysics Program, •Active Tectonics Program, •Instrumentation Program • Antarctic Geology and Geophysics Program •Collaborations in Mathematical Geosciences Program.
- National Aeronautics and Space Administration
 - Global Climate Change Education
- U.S. Civilian Research and Development Foundation.
- American Chemical Society, Petroleum Research Fund.
- National Geographic Society.

Publication Referee:

- Journals
Frontiers, Editorial Board, Review Editor. Open-access academic journal.

• Geosphere • Journal of Structural Geology • American Journal of Science, • Tectonics • Geological Society of America Bulletin, • Geology • Journal of Geological Society, London • Special Publications Geological Society, London • Pennsylvania Geology • National Geographic Research and Exploration • Journal of Geophysical Research, • Annales Tectonicae • Tectonophysics •The Open Geology Journal • Journal of Geology • Bulletin American Association of Petroleum Geologists

- Books
 - CRC Press, •Johns Hopkins University Press, •Wm. C. Brown Publishers, • John Wiley and Sons, Inc., •Prentice Hall •Cambridge University Press •Geological Society of America Special Papers •Blackwell Publishing • Pearson Higher Education • Oxford University Press, Inc. • Norton Publishing

PROFESSIONAL SOCIETY MEMBERSHIP:

- Geological Society of America, Member Northeastern section, Structural Geology and Tectonics Division, International Division 1986-present.
- American Geophysical Union, Tectonophysics Division 1986- present.
- 25-year Member American Geophysical Union 2011
- Appalachian Tectonic Studies Group 1984-, now disbanded.
- International Association of Structural/Tectonic Geologists 1992 – 2004, association disbanded in 2004.
- Sigma Xi Scientific Society 1999-present, Lehigh University Chapter.
- European Union of Geoscientists 2001-2002.
- Canadian Society of Exploration Geophysicists 2000-2001

ACTIVE RESEARCH COLLABORATORS:

Ken Kodama, paleomagnetist, Lehigh University

Frank Pazzaglia, geomorphologist, Lehigh University

Claudio Berti, geologist, Lehigh University

Josep Parés, structural geologist, paleomagnetist, CENIEH, Spain

Alec Bodzin, science education, Lehigh University

Emilio Pueyo Moyer, paleomagnetist, University of Zaragoza

Dork Sahagian, volcanologist, climate scientist, Lehigh University

Juan Soto, structural geology, geophysics, University of Granada

Gilles Brocard, tectonic geomorphology, University of Pennsylvania