

Publications

1. Gunderson, K.L., Guzofski, C. (2022), An approach for quantifying structural interpretation uncertainty. AAPG Bulletin, 106(8), 1547-1556.
2. Gunderson, K.L., Zhang, Z., Payne, B. (2022), Machine learning applications to seismic structural interpretation: Philosophy, progress, pitfalls, & potential. AAPG Bulletin, 106(11), 2187-2202.
3. Anastasio, D.J., Teletzke, A.L., Kodama, K.P., Parés, J.M., Gunderson, K.L., (2020) Geologic evolution of the Peña flexure, Southwestern Pyrenees mountain front, Spain, Journal of Structural Geology, doi: <https://doi.org/10.1016/j.jsg.2019.103969>
4. Gunderson, K.L., Holmes, R.C., Loisel, J., (2020) Recent digital technology trends in geoscience teaching, and practice. GSA Today, v. 30 <https://doi.org/10.1130/GSATG404GW.1>
5. Gunderson, K.L., Huffman, K.A., (2019), Teaching structural geology techniques for applied subsurface interpretation and characterization, In Teaching Methodologies in Structural Geology and Tectonics, ed. by S. Mukherjee, p.123-157, published by Springer Geology, Singapore.
6. Gunderson, K.L., Anastasio, D.J., Pazzaglia, F.J., Kodama, K.P., (2018), Intrinsically unsteady blind thrust faulting, Tectonics, 37. <https://doi.org/10.1029/2017TC004917>
7. Spencer, C.J., Gunderson, K.L., Hoiland, C.W., (2017), Earth Science Outreach Using an Integrated Social Media Platform, GSA Today, v. 27, Groundwork article
8. Negri, A., Sabbatini, A., Capozzi, R., Gunderson, K., Picotti, V., Ponza, A., Pazzaglia, F.J., (2014), Biostratigraphy as a Tool to Validate High-Resolution OSL, CRN, and Sequence-Stratigraphic Data, Strati 2013 First International Congress of Stratigraphy: At the Cutting Edge of Stratigraphy, Rocha, R., Pais, J., Kullberg, J.C., Finney, S. (Eds.), p. 1139-1142
9. 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, v.126, no.3-4, p. 532-552
10. Gunderson, K.L., Anastasio, D.J., Pazzaglia, F.J., Picotti, V., (2013), Fault slip rate variability on 104-105 yr time scales for a blind thrust fault, Northern Apennines, Italy, Tectonophysics, Vol. 608, P. 356-365
11. Gunderson, K.L., Kodama, K.P., Anastasio, D.J., Pazzaglia, F.J., (2012), Rock-Magnetic Cyclostratigraphy for the Late Pliocene-Early Pleistocene Stirone Section, Northern Apennine Mountain Front, Italy, Geological Society, London, Special Publications v.373, doi:10.1144/SP373.8
12. McBride, J.H., Stephenson, W.J., Thompson, T.J., Harper, M.P., Eipert, A.A., Hoopes, J.C., Tingey, D.G., Keach, R.W., II, Okojie-Ayoro, A.O., Gunderson, K.L., Meirovitz, C.D., Hicks, T.C., Spencer, C.J., Yaede, J.R., and Worley, D.M., (2008), A geophysical investigation of shallow deformation along an anomalous section of the Wasatch fault zone, Utah, USA: Special Issue in Honor of Dr. James E. Slosson Environmental & Engineering Geoscience, v. 14, p. 183-197.

Patents

1. Cheng, S., Zhang, Z., Gunderson, K.L., Cardona, R., (2022), Systems and methods for identifying subsurface features as a function of position in a subsurface volume of interest. United States Patent #US11733424B2
2. Gunderson, K.L., Guzofski, C.A., (2022), System and method for subsurface structural interpretation. United States. Patent #W0201302566A1

Conference Publications with Published Abstracts

1. Fisher, J., Gallen, S. Gunderson, K.L., Pazzaglia, F., 2020, A record of base level fall from data-driven linear inversion of fluvial topography and its comparison to fault slip at the mountain front, Northern Apennines, Italy, GSA Annual meeting, 2020
2. Gunderson, K.L., Zhang, Z., Cheng, S., 2019, Machine Learning Applications to Structural Geology: Philosophy, Progress, and Pitfalls, GSA Annual Meeting, Abstract #134-14
3. Anastasio, D.J., Gunderson, K.L., Pazzaglia, F.J., Kodama, K.P., 2017, Intrinsic and Extrinsic Controls On Unsteady Deformation Rates, Northern Apennine Mountains, Italy, AGU Fall Meeting
4. Spencer, C.J., Hoiland, C.W., Gunderson, K.L., 2016, TravelingGeologist: an online platform for dissemination of earth science to the masses. AGU Fall meeting, Abstract #142664
5. Gunderson, K.L., Anastasio, D.J., Pazzaglia, F.J., 2012, Determining the causes of fault slip rate variability for Northern Apennine thrusts on intermediate timescales. AGU Fall meeting, Paper T41E-07
6. Gunderson, K.L., Pazzaglia, F.J., Anastasio, D.J., Ponza, A., Frankel, K.L., Kodama, K.P., Berti, C., Picotti, V., 2012, Unraveling tectonic and climatic controls on synorogenic growth strata, Northern Apennines, Italy, Geological Society of America fall meeting, Paper # 68-11
7. Gunderson, K.L., Pazzaglia, F.J., Anastasio, D.J., Kodama, K.P., Frankel, K., Ponza, A., Berti, C., Smith, D., 2012, Unsteady Deformation of Northern Apennine Thrusts on Orbital Timescales, GSA Penrose Meeting: Deformation, Fluid Flow, and Mass Transfer in the Forearc of Convergent Margins
8. Gunderson, K.L., Anastasio, D.J., Pazzaglia, F.J., 2011, Milankovitch time-scale record of unsteady fault slip, Salsomaggiore thrust, Northern Apennines, Italy, AGU Fall meeting 2012, Abstract # T44A-05
9. Pazzaglia, F.J., Berti, C. McKeon, R., Gunderson, K.L., and Semmens, K.A., 2011, Tectonic Geomorphology and Earthscope in Eastern North America, Geological Society of America Abstracts with Programs, Vol. 43, No. 5, p.363
10. Gunderson, K.L., Pazzaglia, F.J., Anastasio, D.J., Kodama, K.P., Frankel, K.L., Ponza, A., Berti, C., Smith, D., Tanen, B., and O'Neill, M., 2011, Along-strike partitioning of shortening on thrust-related folds, Northern Apennine mountain front, Italy, European Geoscience Union Spring Meeting, Abstract #5291
11. Gunderson, K.L., Anastasio, D.J., Kodama, K.P., Pazzaglia, F.J., 2009, Unsteady fold growth at Milankovitch time scales encoded in marine growth strata, Salsomaggiore Anticline, Italy, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 184

12. Gunderson, K.L., Kodama, K.P., Anastasio, D.J., Pazzaglia, F.J., 2009, Milankovitch orbital cycles encoded by diagenetic iron sulfides in Neogene sediments, Stirone River section, Northern Apennines, Italy, American Geophysical Union, Fall Meeting 2009, abstract #GP43B-0854