

DEREK E. SAWYER

The Ohio State University | School of Earth Sciences
309 Mendenhall Laboratory | Columbus, OH, 43210
614-292-7243 | sawyer.144@osu.edu
<http://u.osu.edu/basins/>

PROFESSIONAL PREPARATION

Ph.D.	2010	The University of Texas at Austin	Geological Sciences
M.S.	2006	The Pennsylvania State University	Geosciences
B.S.	2002	Eckerd College	Marine Science

PROFESSIONAL POSITIONS

2014- Assistant Professor, School of Earth Sciences, The Ohio State University
2013-2014 Assistant Professor, Dept. of Earth & Environmental Sciences, University of Kentucky
2011-2013 Operations Geologist, ExxonMobil Exploration Co., Houston Texas

PUBLICATIONS (* indicates student or post-doc of D. Sawyer)

Peer-Reviewed Journal Articles (20)

20. *Browning, T.N., **Sawyer, D.E.**, Brooks, G.R., Larson, R.A., Ramos-Scharrón, C., and Canals-Silander, M., (in press), *Widespread Deposition in a Coastal Bay Following Three Major 2017 Hurricanes (Irma, Jose, and Maria)*, Scientific Reports.
19. *Portnov, A., A. E. Cook, M. Heidari, **D.E. Sawyer**, M. Santra, and M. Nikolinakou, *Salt-driven evolution of a gas hydrate reservoir in Green Canyon, Gulf of Mexico*, (in press; preliminary version published online): AAPG Bulletin, doi:10.1306/10151818125.
18. **Sawyer, D.E.**, *Mason, R. A., Cook, A. E., and *Portnov, A., (2019), *Submarine Landslides Induce Massive Waves in Subsea Brine Pools*, Scientific Reports, 9:128, DOI:10.1038/s41598-018-36781-7.
17. *Lenz, B.L., **Sawyer, D.E.**, Phrampus, B., Davenport, K., and Long, A., (2018), *Seismic Imaging of Seafloor Deformation Induced by Impact from Large Submarine Landslide Blocks, Offshore Oregon*, Geosciences, v. 9, no. 10, doi:10.3390/geosciences9010010.
16. Yin, S., Li, J., Ding, W., **Sawyer, D.E.**, Wu, Z., and Tang, Y., (2018), *Sedimentary filling characteristics of the South China Sea oceanic basin, with links to tectonic activity and seafloor spreading*, International Geology Review, DOI: 10.1080/00206814.2018.1522603
15. Hill, J. C., Brothers, D. S., Hornbach, M. J., **Sawyer, D. E.**, Shillington, D. J., and Bécel, A., (2018), *Subsurface controls on the development of the Cape Fear Slide Complex, central US Atlantic Margin*, Geological Society, London, Special Publications, v. 477, doi: <https://doi.org/10.1144/SP477.17>.
14. **Sawyer D. E.**, R. S. Reece, S. P. S. Gulick, and *B. L. Lenz (2017), *Submarine landslide and tsunami hazards offshore southern Alaska: Seismic strengthening versus rapid sedimentation*, Geophysical Research Letters, 44, doi:10.1002/2017GL074537.
13. Wemple, B. C., *Browning, T., Ziegler, A. D., Celi, J., Chun, K. P. (S), Jaramillo, F., Leite, N. K., Ramchunder, S. J., Negishi, J. N., Palomeque, X., and **Sawyer, D.E.**, (2017), *Ecological Disturbances Associated with Roads: Current Knowledge, Research Needs and Management Concerns with Reference to the Tropics*, Ecohydrol., doi: 10.1002/eco.1881.
12. *Hillman, J.T., A.E. Cook, **D.E. Sawyer**, H.M. Kucuk, and D.S. Goldberg, (2017), *The Character and Amplitude of 'Discontinuous' Bottom-Simulating Reflections in Marine Seismic Data*,

- Earth and Planetary Science Letters. 459, 157-169, doi:http://dx.doi.org/10.1016/j.epsl.2016.10.058.
11. *Moore, Z. T., and **D. E. Sawyer**, (2016), *Assessing post-failure mobility of submarine landslides from seismic geomorphology and physical properties of mass transport deposits: an example from seaward of the Kumano Basin, Nankai Trough, offshore Japan*, Marine Geology, Vol. 374, pp. 73-84.
 10. *Browning, T.N., **D.E. Sawyer**, G.R. Brooks, R.A. Larson, B. O'Donnell, J. Hadfield (2016), *Linking Land and Sea: Watershed Evaluation and Mineralogical Distribution of Sediments in Eastern St. John, USVI*, Caribbean Journal of Science, Vol. 49, No. 1, p. 38-56.
 9. **Sawyer, D. E.**, and J. R. DeVore* (2015), *Elevated shear strength of sediments on active margins: Evidence for seismic strengthening*, Geophys. Res. Lett., 42, doi:10.1002/2015GL066603.
 8. Cook, A.E., and **D.E. Sawyer** (2015), *The mud-sand crossover on marine seismic data*, Geophysics, 80(6), A109-A114, doi:10.1190/geo2015-0291.1.
 7. Moore, G.F.; Kanagawa, K.; Strasser, M.; Dugan, B., Maeda, L., Toczko, S., and the IODP Expedition 338 Scientific Party, (2014), *IODP Expedition 338: NanTroSEIZE stage 3: NanTroSEIZE plate boundary deep riser 2. Scientific Drilling*, (17), 1-12. doi:10.5194/sd-17-1-2014. Publication status: Published.
 6. **Sawyer, D.E.**, P.B. Flemings, and M. Nikolinakou, (2014), *Continuous deep-seated slope failure recycles sediments and limits levee height in submarine channels*, Geology, doi:10.1130/G34870.1
 5. **Sawyer, D.E.**, P. B. Flemings, D. Mohrig, and J. Buttles, (2012), *Mudflow Transport Behavior and Deposit Morphology: Role of Shear Stress to Yield Strength Ratio in Subaqueous Experiments*, Marine Geology, 307-310, pp 28-39, doi:10.1016/j.margeo.2012.01.009
 4. **Sawyer, D. E.**, P. B. Flemings, B. Dugan, and J. T. Germaine (2009), *Retrogressive failures recorded in mass transport deposits in the Ursa Basin, Northern Gulf of Mexico*, J. Geophys. Res., 114, B10102, doi:10.1029/2008JB006159.
 3. Flemings, P. B., H. Long, B. Dugan, J. Germaine, C. John, J. H. Behrmann, **D.E. Sawyer**, and IODP Expedition 308 Scientists, (2008), *Pore pressure penetrometers document high overpressure near the seafloor where multiple submarine landslides have occurred on the continental slope, offshore Louisiana, Gulf of Mexico*: Earth and Planetary Science Letters, v. 269, p. 309-324.
 2. **Sawyer, D.E.**, Flemings, P.B., Shipp, R.C., and Winker, C.D., (2007), *Seismic Geomorphology, Lithology, and Evolution of the Late Pleistocene Mars-Ursa Turbidite Region, Mississippi Canyon Area, Northern Gulf of Mexico*, AAPG Bulletin, vol. 91, no. 2, p. 215-234.
 1. Behrmann, J.H.; Flemings, P.B.; John, C.M.; and the IODP Expedition 308 Scientists. (2006). *Rapid Sedimentation, Overpressure, and Focused Fluid Flow, Gulf of Mexico Continental Margin*. Scientific Drilling, (3), 12-17. doi:10.2204/iodp.sd.3.03.2006.

Peer-Reviewed Proceedings and Conference Papers (9)

9. **Sawyer, D.E.**, and *B.N Hodelka, (2015), Chapter 48: *Tiny fossils, big impact: the role of foraminifera-enriched condensed section in arresting the movement of a large retrogressive submarine landslide in the Gulf of Mexico*, in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, 2015.
8. *Akinci, L. and **D.E. Sawyer**, (2015), Chapter 39: *Salt Diapirism and Slope Failure in the Carolina Trough, Eastern North American Margin*, in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, 2015.
7. *Devore, J. and **D.E. Sawyer**, (2015), Chapter 17: *Shear Strength of Siliciclastic Sediments from Passive and Active Margins (0-100 meters below seafloor): Insights into Seismic Strengthening*, in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, 2015.
6. Flemings, P.B., Reece, J.S., Ditkof, J., Atkins, C.C., and **Sawyer, D.**, 2015, Data report: particle size analysis of sediments in the Nankai Trough, IODP Expedition 319 Hole C0009A. In Saffer,

- D., McNeill, L., Byrne, T., Araki, E., Toczko, S., Eguchi, N., Takahashi, K., and the Expedition 319 Scientists, Proc. IODP, 319: Tokyo (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.319.203.2015.
5. *Moore, Z.T., and **D.E. Sawyer**, (2014), *Data report: particle size analysis of sediments in Nankai Trough, IODP Expedition 338, Site C002*, In Strasser, M., Dugan, B., Kanagawa, K., Moore, G.F., Toczko, S., Maeda, L., and the Expedition 338 Scientists, Proceedings of the Integrated Ocean Drilling Program, Volume 338 doi:10.2204/iodp.proc.338.2014.
 4. Yamamoto, Y., and **Sawyer, D.E.**, (2012), *Systematic Variations in the Fabric and Physical Properties of Mass-Transport Deposits in the Ursa Region, Northern Gulf of Mexico*, Ch. 58., Y. Yamada et al. (eds.), Submarine Mass Movements and Their Consequences, Advances in Natural and Technological Hazards Research 31, DOI 10.1007/978-94-007-2162-3_58, p. 649-658.
 3. Urgeles, R., Locat, J., **Sawyer, D.E.**, Flemings, P. B., Dugan, B., and Binh, N.T.T., (2010), *History of Pore Pressure Build Up and Slope Instability in Mud-Dominated Sediments of Ursa Basin, Gulf of Mexico Continental Slope*, In: D.C. Mosher et al. (Editors), Submarine Mass Movements and Their Consequences, Advances in Natural and Technological Hazards Research. Springer, Dordrecht, pp. 179-190.
 2. Moore, J.C., Iturrino, G.J., Flemings, P.B., **Sawyer, D.E.**, (2009), *Data Report: Stress Orientations from Borehole Breakouts, IODP Expedition 308, Ursa Area, Mississippi Fan, Gulf of Mexico*, In Flemings, P.B., John, C. (Eds.), Proc. IODP, 308: College Station, TX (Integrated Ocean Drilling Program Management International, Inc.), doi:10.2204/iodp.proc.308.212.2009.
 1. **Sawyer, D.E.**, Jacoby, R., Flemings, P., and Germaine, J.T., (2008), *Data report: particle size analysis of sediments in the Ursa Basin, IODP Expedition 308 Sites U1324 and U1322, northern Gulf of Mexico*, In Flemings, P.B., Behrmann, J.H., John, C.M., and the Expedition 308 Scientists, Proc. IODP, 308: College Station, TX (Integrated Ocean Drilling Program Management International, Inc.) doi:10.2204/iodp.proc.308.205.2008.

Non Peer-Reviewed Publications

- Flemings, P.B., R. Boswell, T. S. Collett, A. E. Cook, D. Divins, M. Frye, G. Guerin, D. S. Goldberg, A. Malinverno, K. Meazell, J. Morrison, T. Pettigrew, S. C. Philips, M. Santra, **D. E. Sawyer**, W. Shedd, C. Thomas, K. You, 2017, GOM2: Prospecting, Drilling and Sampling Coarse-Grained Hydrate Reservoirs in the Deepwater Gulf of Mexico, Proceedings of the 9th International Conference on Gas Hydrates, Denver, CO, June 25-30, 2017.
- Sawyer, D.E.**, Flemings, P.B., Dugan, B., Shipboard Scientific Party, IODP Expedition 308, (2007), *Lateral Variations in Core, Log, and Seismic Attributes of a Mass Transport Complex in the Ursa Region, IODP Expedition 308, Northern Gulf of Mexico*, Proceedings of the Offshore Technology Conference, Houston, Texas, April 30-May 3, 2007, OTC Paper #19098.
- Dugan, B., Flemings, P.B., **Sawyer, D.E.**, Iturrino, G.J., Moore, J.C., Schneider, J., (2007), *Physical Properties of Stacked Slumps in the Ursa Region, Northern Gulf of Mexico (IODP Expedition 308) Determined from Log, Core, and Seismic Data*, Proceedings of the Offshore Technology Conference, Houston, Texas, April 30-May 3, 2007, OTC Paper #18704.
- Iturrino, G.J, B. E. Dugan, **D.E. Sawyer**, P.B. Flemings, and J.C. Moore, *Interpretation of Downhole Measurements, Deformation Analyses, and Lithologic Characterization in the Ursa Basin, Gulf of Mexico*, Proceedings of the Offshore Technology Conference, Houston, Texas, April 30-May 03, 2007, OTC Paper # 19097.
- Long, H., P.B. Flemings, J. Germaine, B. Dugan, and D.E. Sawyer, (2007), *In-Situ Pore Pressure at IODP Site U1324, Ursa Basin, Gulf of Mexico*, Proceedings of the Offshore Technology Conference, Houston, TX, April 30-May 03, 2007, OTC Paper # 18772.
- Myers, G., C. Winker, B. Dugan, C. Moore, **D.E. Sawyer**, P. Flemings, G. Iturrino, (2007), *Ursa basin explorers shine new light on shallow water flow*, Offshore Engineer, Sept., 88-93.

Flemings, P.B., Germaine, J., Long, H., Dugan, B.D., **Sawyer, D.E.**, Behrmann, J., John, C., and the Shipboard Scientific Party, IODP Expedition 308, (2006), *Measuring Temperature and Pressure with the temperature two Pressure (T2P) Probe in the Ursa Basin, Gulf of Mexico: Development of a New Pressure and Temperature Probe for the IODP*, Offshore Technology Conference Paper # 17957.

FIELD EXPERIENCE

- 2019:** Led class field trip to Guadalupe Mountains, New Mexico and Texas, Mar. 11-16.
- 2017:** Rapid deployment field excursion to St. John, U.S. Virgin Islands following 2017 Hurricanes. Coastal multibeam acoustic sonar surveying in shallow-draft vessel, sediment grab sampling and push coring. Nov. 22-Dec.06.
- 2017:** Multibeam sonar mapping and sediment coring in St. John and St. Croix, U.S. Virgin Islands. Jul. 26-Aug. 02.
- 2017:** Multibeam sonar mapping, Lake Erie, South Bass Island, Sep. 15-17.
- 2014:** Shipboard scientist, *R/V Marcus G. Langseth*, GeoPRISMS Eastern North American Community Seismic Experiment, offshore North Carolina, Sep. 14 – Oct. 23.
- 2014:** Led class field trip to Pine Mountain thrust fault, Cumberland Gap, Tennessee, Apr. 18-19.
- 2010-2012:** Operations Geologist, ExxonMobil Exploration Co., Houston TX. Specialist position in pore pressure prediction, wellsite pressure surveillance (offshore Romania, Black Sea and deepwater Gulf of Mexico), site investigation, engineering geophysical site surveys, and integrated geological and geophysical investigations for deepwater development fields (Gulf of Mexico, Australia, Nigeria). Wellsite operations geologist, pore pressure surveillance and wireline logging deepwater Black Sea exploration well. Wellsite operations geologist and pore pressure surveillance, deepwater Gulf of Mexico exploration well.
- 2005:** Shipboard sedimentologist for Integrated Ocean Drilling Program Expedition 308, northern Gulf of Mexico (6 weeks).
- 2004:** Seismic reflection acquisition cruise, deepwater Gulf of Mexico (1 week).
- 2003:** Shipboard physical properties specialist on Ocean Drilling Program Leg 210, offshore Newfoundland (8 weeks).
- 2000-2002:** Undergraduate research field assistant: I participated in 4 vibra-coring day trips in Tampa Bay, 2 dive operations to ledges in the Gulf of Mexico, 4 multi-beam/side scan sonar/dive-ops cruises in Gulf of Mexico with the University of South Florida and Eckerd College.

COURSES TAUGHT

Courses taught at Ohio State

- Spring, 2019 Energy and Mineral Resources in Society (ES 2210)
- Spring, 2019 Field Stratigraphy in the Guadalupe Mountains (ES 8801-10)
- Fall, 2018 Internship in the Earth Sciences (ES 5191)
- Fall, 2018 Reflection Seismology (ES 5780) Lecture and Lab
- Summer, 2018 Internship in the Earth Sciences (ES 5191)
- Spring, 2018 Energy and Mineral Resources in Society (ES 2210)
- Fall, 2017 Reflection Seismology (ES 5780) Lecture and Lab
- Fall, 2017 Coastal Geology (ES 8801-10)
- Spring, 2017 Energy and Mineral Resources in Society (ES 2210)
- Fall, 2016 Reflection Seismology (ES 5780) Lecture and Lab
- Spring, 2016 Energy and Mineral Resources in Society (ES 2210)
- Fall, 2015 Reflection Seismology (ES 5780) Lecture and Lab
- Fall, 2015 Seminar in Subsurface Interpretation (ES 8860) co-taught with Ann Cook

Spring, 2015 Energy and Mineral Resources in Society (ES 2210)

Courses taught at the University of Kentucky

Spring, 2014 Earth Dynamics (EES 490)
 Spring, 2014 AAPG Imperial Barrel Award (EES 782-008 and EES 395-005)
 Fall, 2013 Seminar in Geological Sciences (EES 570-1)
 Fall, 2013 Seminar in Teaching Geology (EES 570-2)
 Spring, 2013 Petroleum Geology (EES 511)

PROFESSIONAL PRESENTATIONS

(*=graduate student or post-doc of D. Sawyer; **=undergraduate student of D. Sawyer)

Sawyer, D.E., (2019, April), *Earthquakes and Submarine Landslides on Continental Margins: Seismic Strengthening Versus Rapid sedimentation*, seminar presented to Department of Earth and Atmospheric Sciences, Indiana University, April 08, Bloomington, Indiana (Invited, Oral).

Sawyer, D.E., (2019, February), *Waves: examples in earthquakes, tsunamis, and underwater landslides*, Presented at Ohio State STEAM Exchange series, Feb. 21, 2019, Columbus, Ohio (Invited, Oral).

*Browning, T.B. **D. E. Sawyer**, G. B. Brooks, C. Ramos-Scharron, (2019, February), *Widespread Deposition in Coastal St. John, USVI Following Three Major 2017 Hurricane Events (Irma, Jose, and Maria)*, American Society of Limnology and Oceanography, San Juan, Puerto Rico, Feb. 20-25, 2019 (Oral).

Sawyer, D.E., (2019 February), *Earthquakes and Submarine Landslides on Continental Margins*, Van Tuyl Lecture Series, presented to Department of Geology and Geological Engineering, Colorado School of Mines, February 14, Golden, Colorado (Invited, Oral).

Sawyer, D.E., (2019 February), *Retrogressive Submarine Landslides*, seminar presented to Department of Geological Sciences, Colorado School of Mines, February 15, Golden, Colorado (Invited, Oral).

*Portnov, A., A. Cook, U. Majumdar, and **D. E. Sawyer**, (2018, December), *Underexplored gas hydrate reservoirs associated with salt diapirism and turbidite deposition in the Northern Gulf of Mexico*, Dec. 10-14, 2018, Washington DC, American Geophysical Union Fall Meeting, (Poster).

Sawyer, D.E., (2018, May), *Interplay of Salt Tectonics, Gas Hydrates, and Submarine Landslides in the Hypersaline Orca Basin Brine Pool, Gulf of Mexico, Continental Slope*, May 06 – 12, 2018, Victoria, British Columbia, Canada, (Poster).

*Lenz, B.L., **D. E. Sawyer**, B. Phrampus, K. Davenport, and A. Long, (2018, May), *Seismic Imaging of Seafloor Deformation Induced by Impact From Large Submarine Landslide Blocks, Offshore Oregon*, May 06 – 12, 2018, Victoria, British Columbia, Canada, (Poster).

Sawyer, D.E., (2018, March), *Earthquakes and Submarine Landslides on Continental Margins*, seminar presented to Department of Geological Sciences, Ohio University, March 30, Athens, Ohio (Invited, Oral).

Sawyer, D.E., (2018, February), *Marine Slope Stability Hazards, an Industry Perspective*, Gordon Research Conference on Natural Gas Hydrate Systems, Feb. 25 – Mar. 02, 2018, Galveston, Texas, (Invited, Oral).

Sawyer, D.E., *R. Alan Mason, A.E. Cook, *A. Portnov, and *J.I.T Hillman, (2017, December), *Hydrate-bearing Submarine Landslides in the Orca Basin, Walker Ridge, Gulf of Mexico*

- Continental Slope*, abstract # OS42A-02, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Invited, Oral).
- Sawyer, D.E.**, R. Reece, S.P.S. Gulick, and *B. Lenz, (2017, December), *Submarine Landslide Hazards Offshore Southern Alaska: Seismic Strengthening Versus Rapid Sedimentation*, abstract # NH53B-0148, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- *Russell, P., **D. E. Sawyer**, *T. N. Browning, G. Brooks, A. Cook, N. Kinash, (2017, December), *Tsunami Stratigraphy in a Coastal Salt Pond, St. Croix, US Virgin Islands*, abstract # NH23A-0223, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- *Browning, T.N., **D. E. Sawyer**, and *P. Russell, (2017, December), *Illuminating Sediment Transport Pathways From Source to Sink with Multibeam Bathymetry Data: Coral Bay, St. John USVI*, abstract # EP31C-1886, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- *Browning, T. N., **D. E. Sawyer**, and *P. Russell, (2017, December), *Coastal Sediment Distribution Patterns Following Category 5 Hurricanes (Irma and Maria): Pre and Post Hurricane High Resolution Multibeam Surveys of Eastern St. John, US Virgin Islands*, abstract # NH23E-2802, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- Moore, M.T., T. Darrah, A. Cook, **D. E. Sawyer**, S. Phillips, C. Whyte, B. Lary, (2017, December), *The genetic source and timing of hydrocarbon formation in gas hydrate reservoirs in Green Canyon, Block GC955*, abstract # OS44A-03, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Oral).
- Heber, R., N. Kinash, A. Cook, **D. E. Sawyer**, J. Sheets, and J. Johnson, (2017, December), *Mineralogy of Gas Hydrate Bearing Sediment in Green Canyon Block 955 Northern Gulf of Mexico*, abstract # OS53B-1206, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- Kinash, N., A. Cook, **D. E. Sawyer**, and R. Heber, (2017, December), *Recovery and Lithologic Analysis of Sediment from Hole UT-GOM2-1-H002, Green Canyon 955, Northern Gulf of Mexico*, abstract # OS53B-1207, American Geophysical Union Fall Meeting, New Orleans, LA, December 11-15, 2017, (Poster).
- Sawyer, D.E.**, A.E. Cook, R. Alan Mason, and J.I.T Hillman, (2017), *Hydrate-bearing Submarine Landslides in the Orca Basin, Walker Ridge, Gulf of Mexico Continental Slope*, 9th International Conference on Gas Hydrates, Denver, CO, June 25-29, 2017, (Oral).
- Sawyer, D.E.**, A. Cook, and R. Mason, (2017), *Submarine Landsliding into the Orca Basin Brine Pool, Walker Ridge, Gulf of Mexico*, American Association of Petroleum Geologists Annual Convention, Houston, TX, April 02-05, 2017, (Poster).
- Sawyer, D.E.**, and J.R. DeVore*, (2016), *Elevated Shear Strength of Near-Seafl oor Sediments on Active Margins: Evidence for Seismic Strengthening*, American Geophysical Union Fall Meeting, San Francisco, CA, abstract #187943, Dec. 12-16, 2016, (Oral).
- Sawyer, D.E.**, and J.R. DeVore*, (2016), *Evidence for Seismic Strengthening from Undrained Shear Strength Measurements*, Geological Society of America Annual Meeting, Denver, CO, Sep. 25-28, 2016, (Oral).
- **Mason, R.A., and **D. E. Sawyer**, (2016), *Seafl oor Brine Lake Impacted by Submarine Landsliding: An Example from the Orca Basin, Walker Ridge, Northern Gulf of Mexico Continental Slope*, Geological Society of America Annual Meeting, Denver, CO, Sep. 28, 2016, (poster).

- Sawyer, D.E.**, L. Akinci*, M. Nikolinakou, and M. Heidari, (2016), *Hydrates, Salt Diapirism, and Submarine Landsliding at Cape Fear, Offshore, North Carolina, U.S.A.*, Gordon Research Conference, Galveston, TX, Feb. 28 – Mar. 04, (poster).
- *Treiber, K., **D.E. Sawyer**, and A. Cook, (2016), *Geophysical Interpretation of Gas Hydrates in Green Canyon Block 955, Northern Gulf of Mexico, USA*, Gordon Research Conference, Galveston, TX, Feb. 28 – Mar. 04, (poster).
- *Yang, C., A. Cook, and **D.E. Sawyer**, (2016), *Geophysical and Petrophysical Interpretation of the Gas Hydrate Reservoir System at Perdido, North Gulf of Mexico Slope*, Gordon Research Conference, Galveston, TX, Feb. 28 – Mar. 04, (poster).
- Hillman, J.T., A. Cook, and **D. E. Sawyer**, (2016), *Mapping and Characterizing Bottom-Simulating Reflectors in 2D and 3D Seismic Data to Investigate Connections to Lithology and Frequency Dependence*, Gordon Research Conference, Galveston, TX, Feb. 28 – Mar. 04, (poster).
- Sawyer, D.E.**, L. Akinci, M. Nikolinakou, and M. Heidari, (2015), *Links and Feedbacks between Salt Diapirs, Hydrates, and Submarine Landslides: Example from Cape Fear, offshore North Carolina, U.S.A.*, (Poster), Abstract EP23D-0997, AGU Fall Meeting, San Francisco, CA.
- *Browning, T.N., **D. E. Sawyer**, G.R. Brooks, R. A. Larson, B. O'Donnell, J. Hadfield (2015), *Linking Source and Sink: Watershed Evaluation and Mineralogical Distribution of Sediments in Eastern St. John, USVI*, (poster), abstract # 212-4, Geological Society of America, Baltimore, Maryland, Nov.1-4.
- Sawyer, D.E.**, and B.N Hodelka, (2015) *Tiny fossils, big impact: the role of foraminifera-enriched condensed section in arresting the movement of a large retrogressive submarine landslide in the Gulf of Mexico*, in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, Wellington, NZ, (oral).
- *Akinci, L. and **D.E. Sawyer**, (2015), *Salt Diapirism and Slope Failure in the Carolina Trough, Eastern North American Margin*, (oral) in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, Wellington, NZ, (oral).
- *Devore, J. and **D.E. Sawyer**, (2015), *Shear Strength of Siliciclastic Sediments from Passive and Active Margins (0-100 meters below seafloor): Insights into Seismic Strengthening*, in proceedings of the 7th International Symposium on Submarine Mass Movements and Their Consequences, Wellington, NZ, (oral).
- Sawyer, D.E.**, (2015), *New Seismic Imaging of the Eastern North Atlantic Margin Offshore North Carolina and Virginia*, Rice University, Industry-Rice Earth Science Symposium, March 11, 2015, (oral).
- Sawyer, D.E.**, (2015), *The Role of Slope Failures in Geohazards and Continental Margin Morphology*, Coastal Carolina University, Conway, SC, April 02, (oral).
- Sawyer, D.E.**, (2015), *Dynamics of Retrogressive Submarine Landslides*, Texas A&M University, College Station, TX, April 15, (oral).
- Sawyer, D.E.**, and Z.T. Moore, (2014), *Assessing the Relative Mobility of Submarine Landslides from Deposit Morphology and Physical Properties: an Example from Nankai Trough, Offshore Japan*, Abstract OS33A-1044, AGU Fall Meeting, San Francisco, CA, Dec. 17, (poster).
- **Hodelka, B.N., and **D. E. Sawyer**, (2014), *Tiny Fossils, Big Impact: Sedimentology of a Foraminifera-Enriched Detachment Horizon of a Large Retrogressive Submarine Landslide in the Gulf of Mexico*, abstract OS33A-1043, AGU Fall Meeting, San Francisco, CA, Dec. 17, (poster).
- Sawyer, D.E.**, (2014), (Invited), *The Role of Dynamic Sedimentary Systems on Geohazards and Energy Exploration*, The Ohio State University, School of Earth Sciences (oral).
- Sawyer, D. E.**, and Z.T. Moore, (2013), *Dynamics of Submarine Landslides in an Active Margin from Analysis of Particle Size, Cores, and 3D Seismic Data: Site C0021, IODP Expedition 338, Offshore Japan*, abstract T31F-2577, AGU Fall meeting, San Francisco, CA, Dec. 9-13, (Oral).

- Sawyer, D.E.**, and P. B. Flemings, (2013), *Pore Pressure Rebound and Long-Term Instability in Retrogressive Submarine Landslides*, no. 105, 6th International Symposium on Submarine Mass Movements and Their Consequences, Kiel, Germany, Sep. 22-26, (poster).
- *Moore, Z.T., and **D. E. Sawyer**, (2013), *Dynamics of Submarine Landslides in an Active Margin from Analysis of Particle Size, 3D Seismic, and Logs: IODP Expedition 338, Nankai Trough, Offshore Japan*, (Poster), no. 89, 6th International Symposium on Submarine Mass Movements and Their Consequences, Kiel, Germany, Sep. 22-26.
- Sawyer, D. E.**, P. B. Flemings, D. Mohrig, and J. Buttles, (2012), *Post-failure Transport Behavior and Deposit Morphology in Subaqueous Mudflow Experiments: Interpreting Failure Process from Morphology*, (Oral), abstract OS44A-02, AGU Fall Meeting, San Francisco, CA, Dec. 3-7.
- Sawyer, D.E.**, P.B. Flemings, M.A. Nikolinakou (2011), *Growth, Failure, and Erosion of Submarine Channel Levees on the Upper Mississippi Fan, Gulf of Mexico*, (Poster), abstract EP33C-0928, AGU Fall Meeting, San Francisco, CA, Dec. 5-9.
- Sawyer, D.E.** (Invited), P.B. Flemings, B. Dugan, (2010), *Slope Failure on Passive Continental Margins: Insights from IODP Expedition 308, Northern Gulf of Mexico*, (Oral), 18th International Sedimentological Congress, Mendoza, Argentina, Sep. 26-Oct. 01.
- Sawyer, D.E.**, P.B. Flemings, D. Mohrig, J. Buttles, (2009), *An Experimental Study of Pore Pressure in Fine Grained Retrogressive Subaqueous Landslides*, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract NH41C-1269, San Francisco, CA, Dec. 14-19.
- Sawyer, D.E.**, Flemings, P.B., Mohrig, D., (2009), *Subaqueous Landslides in Clay-Rich Systems*, (Poster), 4th International Symposium on Submarine Mass Movements and Their Consequences, Austin, TX, Nov. 7-11.
- Sawyer, D.E.** (Outstanding Student Paper Award), Flemings, P.B., Dugan, B., Germaine, J.T., (2008), *Formation of Debris Flows from Strain Weakening: Examples from the Ursa Basin, Northern Gulf of Mexico*, (Poster), Eos Trans. AGU, 89 (53), Fall Meet. Suppl., Abstract H51F-0910, San Francisco, CA, Dec. 15-19.
- Sawyer, D.E.**, Flemings, P.B., Dugan, B., (2008), *Retrogressive Failure, Seismic Facies, and Densification in MTCs, Ursa Basin, Gulf of Mexico*, (Poster), Geological Society of America, Houston, TX, Oct. 05.
- Sawyer, D.E.**, Flemings, P.B., Dugan, B., (2008), *Retrogressive Failure, Seismic Facies, and Densification in MTCs, Ursa Basin, Gulf of Mexico*, (Oral) 33rd International Geological Congress, Oslo, Norway, Aug. 06-14.
- Sawyer, D.E.**, (2007), *Lateral Variations in Core, Log, and Seismic Attributes of a Mass Transport Complex in the Ursa Region, IODP Exp. 308, Northern Gulf of Mexico*, (Oral) Offshore Technology Conference, Houston, TX, May 02.
- Sawyer, D.E.**, Shipp, C., Flemings, P.B., Behrmann, J., John, C., and the Shipboard Scientific Party, IODP Exp. 308, (2006), *Lateral Variations in Log, Core, and Seismic Attributes of a Mass Transport Deposit in the Mars-Ursa Region, Mississippi Canyon, Northern Gulf of Mexico*, (Poster), American Association of Petroleum Geologists, Annual Convention, Houston, TX, Apr. 9-12.
- Sawyer, D.E.** (Outstanding Student Paper Award), Shipp, C., Flemings, P.B., Behrmann, J., John, C., and the Shipboard Scientific Party, IODP Exp 308, (2005), *Mass Transport Deposits in the Ursa Region: 3-D Seismic Images and Physical Properties from IODP Exp. 308, Sites U1322, U1323, and U1324*, (Oral), Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract OS21A-1510, San Francisco, CA, Dec. 5-9.
- Sawyer, D.E.**, and Flemings, P.B, (2004), *Overpressure, Low Effective Stress, and Slope Failures in the Ursa Region, Deep-Water Gulf of Mexico*, (Poster), Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract OS23B-1308, San Francisco, CA, Dec. 13-17.

FUNDING HISTORY

- 2018-2020 PI, \$130,498, *Collaborative Research: Constraints on sediment physical properties at the Cape Fear and Currituck landslides from velocity analysis of new, open access seismic reflection data*, National Science Foundation.
Co-PI: Columbia University, Lamont-Doherty Earth Observatory
- 2017-2018 PI, \$52,835, *RAPID: Post-Hurricane Irma Erosion and Deposition in Coastal Embayments of Eastern St. John, U.S. Virgin Islands*, National Science Foundation.
Co-PI: none
- 2018-2021 Co-PI, Educational Software Gift, Schlumberger, (\$93M), software, 40 network licenses (PETREL, ECLIPSE, VISAGE, INTERSECT, PETROMOD, TECHLOG)
- 2017-2019 *Shake the Shoe: Connecting Football and Science with the Best Fans in the Land*. Battelle Engineering Technology and Human Affairs (BETHA). \$62,762 total award.
PI: Sawyer, Derek
Co-PI: Ann Cook and Wendy Panero (Ohio State); Mike Brudzinski (Miami University)
- 2016-2018 PI, \$110,000, *Seismicity-Enhanced Compaction in Deepwater Fine-Grained Sediments*, American Chemical Society Petroleum Research Fund, New Doctoral Investigator.
- 2014-2018 Co-PI, DOE, \$84M, “*Deepwater methane hydrate characterization and scientific assessment*,” P. Flemings (PI-UT Austin), Sub-award to Ohio State \$937,151, PI A. Cook; Co-PI D. Sawyer.
- 2015-present Educational Software Grant, IHS Markit software, 40 network licenses (KingdomSuite, AVOPAK, RSA, and LoadPAK).
Software gift-in-kind value: \$2.5M
- 2013-2014 PI, IODP Expedition 338 post-cruise award (\$15,000)
Insight into Submarine Landslide Flow Behavior from Particle Size Analysis and 3D Seismic, Site C0021, IODP Expedition 338
- 2013-2016 Co-PI, Educational Gift, IHS Kingdom Suite Software (\$627,210)

POSTDOCTORAL SCHOLARS SUPERVISED

- 2017 – in progress Dr. Alexey Portnov (co-supervisor)
- 2014 - 2016 Dr. Jess Hillman (co-supervisor). Currently research scientist at GNS, Wellington, New Zealand

STUDENTS SUPERVISED

Doctoral Student (Dissertation Advisor) (2)

- 2015 – Present Browning, Trevor N. Assessing Global Erosional Vulnerability of Tropical Volcanic Islands: Effect of Land Use Change. The Ohio State University, Columbus, Ohio, United States. Graduation Expected 2020.
- 2017 – Present Lenz, Brandi L. Submarine Landslide Formation and Runout Dynamics. The Ohio State University, Columbus, Ohio, United States. Graduation Expected 2022.

Masters Student (Thesis Advisor) (7)

- 2015 – 2017 Russell, Paul. Tsunami Stratigraphy in a Salt Pond on St. Croix, US Virgin Islands. The Ohio State University, Columbus, Ohio, United States.
- 2016 – 2017 Trotter, Bennett. Pore Pressure in the Deep Utica Shale and Point Pleasant Formation. The Ohio State University, Columbus, Ohio, United States. Co-advised with Ann Cook.
- 2015 – 2017 Treiber, Katie. Deepwater Channel Systems in the Orca and Choctaw Basins, Northern Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2016 Yang, Chen. Petrophysical and Geophysical Interpretation of a Potential Gas Hydrate Reservoir at Alaminos Canyon 810, Northern Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States. Co-advised with Ann Cook.
- 2014 – 2016 DeVore, Joshua. Mudstone Consolidation in the Presence of Seismicity. The Ohio State University, Columbus, Ohio, United States.
- 2014 – 2015 Akinci, Levent. An Analytical Modelling Approach to Test if a Rising Salt Diapir Triggered the Cape Fear Landslide. The Ohio State University, Columbus, Ohio, United States.
- 2013 – 2015 Moore, Zachary. Dynamics of a Large Submarine Landslide in an Active Margin from Particle Size Analysis, 3-D Seismic, and Logs: IODP Expedition 338, Nankai Trough, offshore Japan. University of Kentucky, Lexington, Kentucky, United States.

Undergraduate Senior Honor Thesis Advisor (1)

- 2016 – 2017 Mason, Robert Alan. Seafloor Brine Lake Impacted by Submarine Landsliding, Orca Basin, Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.

Undergraduate Senior Thesis Advisor (14)

- 2018 – 2019 Lager-Lowe, Kain. Three-Dimensional Seismic Interpretation of Near-Seafloor Salt Bodies and Fluid Expulsion Features Adjacent to the Mississippi Canyon, Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.
- 2018 – 2018 Fuad, Mohamad I. A Seismic Well-Tie Analysis at Integrated Ocean Drilling Program Expedition 308 Site U1320, Brazos-Trinity Basin IV, Northwestern Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.
- 2017 – 2018 O'Malley, Michael D. A Multi-channel Seismic Interpretation of the Canterbury Basin Offshore New Zealand and Potential Hydrocarbon Sources. The Ohio State University, Columbus, Ohio, United States.
- 2017 – 2018 Mason, Keith L. An Analysis of Shallow Sediment Overlying Gas Hydrate, Green Canyon Block 955 (GC-955), Gulf of Mexico, USA. The Ohio State University, Columbus, Ohio, United States.

- 2015 – 2017 Lenz, Brandi L. Shear Strength of Sediment Offshore Southern Alaska. The Ohio State University, Columbus, Ohio, United States.
- 2016 – 2017 Rodgers, Nick. A Numerical Simulation of a Tsunami Generated by a Submarine Landslide, Offshore Puerto Rico. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2016 Gutierrez, Mario. Upper and Middle Miocene Ash Beds in the Central Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2016 Rohan, Tyler. Grain Size and Seismic Analysis of IODP Expedition 333, Site C0018 and the Pink Volcanic Ash Horizon, Nankai Trough, Offshore Japan. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2016 Haugh, Ryan. Styles of Soft-Sediment Deformation of the Lower Headwall of the Cape Fear Landslide, Offshore North Carolina. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2016 Copeland, Thomas. Grain Size Analysis of the Watershed and Nearshore Coastal Sediments in Coral Bay, St. John, U.S. Virgin Islands. The Ohio State University, Columbus, Ohio, United States.
- 2014 – 2015 Mills, Jacqueline. Mapping Key Subsurface Boundaries to Determine Maximum Thickness of Methane Hydrate within the Blake Ridge Region of Offshore North Carolina, USA, Constrained with Three-Dimensional Seismic Data and Well Logs. The Ohio State University, Columbus, Ohio, United States.
- 2014 – 2015 Munson, Sarah. Petroleum Potential in the Carolina Trough. The Ohio State University, Columbus, Ohio, United States.
- 2014 – 2015 Nsona, John. Oil and Natural Gas Reserves of the Utica Shale in Ohio. The Ohio State University, Columbus, Ohio, United States.
- 2013 – 2014 Hodelka, Bailee. The Role of Foraminifera-enriched Condensed Section in Arresting the Movement of a Large Retrogressive Submarine Landslide in the Gulf of Mexico. The University of Kentucky, Lexington, Kentucky, United States.

Doctoral Student (Committee Member) (8)

- 2018 – Present Wei, Li. Diffusive Migration in Gas Hydrate Reservoirs. The Ohio State University, Columbus, Ohio, United States.
- 2017 – Present Oti, Emma A. Using Nondestructive X-Ray Computed Tomography (XCT) to Solve Geologic Problems. The Ohio State University, Columbus, Ohio, United States.
- 2017 – Present Price, James T. Coral Resilience to Global Change: Roles of the Microbiome and Animal Physiology. The Ohio State University, Columbus, Ohio, United States.
- 2017 – Present Knights, Deon. Quantifying Nitrate Attenuation in a Coastal Freshwater Wetland. The Ohio State University, Columbus, Ohio, United States.

- 2017 – Present Xiong, Fengyang. Potential Evaluation of Utica Shale in the Appalachian Basin, USA. The Ohio State University, Columbus, Ohio, United States.
- 2017 – Present Whyte, Colin. Combining Noble Gas Geochemistry with Deep Earth Seismic Data to Understand Mantle-surface Connections in the United States. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2018 Majumdar, Urmi. Natural Gas Hydrates in the Northern Gulf of Mexico. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2017 Scott, Jameson. Towards a Petrologically Constrained Thermal Model of Mid-Ocean Ridges. The Ohio State University, Columbus, Ohio, United States.

Masters Student (Thesis Committee Member) (5)

- 2019- Heber, Ryan. Occurrence of Gas Hydrate in the Barents and Norwegian Seas Inferred from Industry Well Logs. The Ohio State University, Columbus, Ohio, United States.
- 2017 – 2018 Robinson, Caroline. Sedimentology of South China Sea Deepwater Sites. The Ohio State University, Columbus, Ohio, United States.
- 2016 – 2017 Blocher, Will. Fault Geometry and Kinematics within the Terror Rift, Antarctica. The Ohio State University, Columbus, Ohio, United States.
- 2016 – 2017 Hall, Tricia. Tectonic and climatic interactions and implications for Paleogene-Neogene erosion and landscape modification, McMurdo Sound, Antarctica. The Ohio State University, Columbus, Ohio, United States.
- 2015 – 2015 Chen, Jie. The Influence of Lithospheric Flexure Induced by Volcano Loading on Neogene Basin Evolution in McMurdo Sound, West Antarctica. The Ohio State University, Columbus, Ohio, United States.

PROFESSIONAL SERVICE AND PARTICIPATION

- 2011-Present Peer reviewer for the following journals: Geology, Earth and Planetary Science Letters, Geophysical Research Letters, Marine Geology, Marine and Petroleum Geology, Journal of Geophysical Research-Solid Earth, Journal of Geophysical Research-Earth Surface
- 2012-2015 Science Evaluation Panel, International Ocean Discovery Program
- 2015 Steering Committee, Marine Geoscience Leadership Symposium, Consortium for Ocean Leadership
- 2015 Seismic processing workshop held at Lamont-Doherty Earth Observatory, Columbia University, June 22-26, 2015.
- 2014- Steering Committee International Symposium on Mass Movements and Their Consequences
- 2014- Faculty advisor, Society of Exploration Geophysicists Student Chapter, The Ohio State University
- 2014 Imperial Barrel Award Faculty Advisor, University of Kentucky
- 2013 Marine Geoscience Leadership Symposium, Washington DC, March 10-15.

- 2013-2012 AAPG Student Chapter Faculty Advisor, University of Kentucky
Building U.S. Strategies for 2013-2023 Scientific Ocean Drilling, Denver, CO, April 30 – May 2, 2012
- 2010 MARGINS Successor Program Planning Meeting, San Antonio, TX, Feb. 15-18
- 2010 Science Fair Judge, Austin Energy Regional Science Festival, Feb. 25
- 2009 Integrated Ocean Drilling Program INVEST Meeting, Bremen, Germany, Sep. 21-25
- 2009 Organized a Core-Log-Seismic Workshop for 25 participants (academia/government/private) as part of 4th International Submarine Mass Movements Conference, Austin, TX, November, 2009.
- 2009 Co-led Morphodynamics Workshop for 25 participants (academia/government/private) as part of 4th International Submarine Mass Movements Conference, Austin, TX, November, 2009.
- 2008 Co-Chair, UT Institute for Geophysics Lunchtime Seminar Series
- 2007 Integrated Ocean Drilling Program Geohazards Workshop, Portland, OR, Aug 26-30
- 2007-2008 Treasurer, AAPG Student Chapter at UT Austin
- 2007 Chair, 39th Annual Graduate Student Colloquium (Penn State)
- 2001 Student director of Eckerd College Sedimentology Lab

AWARDS

-
- 2010 Best Ph.D. Student Technical Session, spring semester (UT Austin Jackson School)
 - 2005/2008 Outstanding Student Paper Award (AGU Fall mtg)
 - 2004/2007 Best Petroleum Research Presentation (Penn State graduate student colloquium)