Alexander Ray Simms

University of California, Santa Barbara
Department of Earth Science
1006 Webb Hall
Santa Barbara, CA 93106
(805) 893-7292
asimms@geol.ucsb.edu

Education:

Rice University, Houston, TX, 2006
PhD in Earth Science, The Holocene Evolution of the Nueces Incised Valley, Central Texas. (Advisor Prof. John Anderson)

Oklahoma State University, Stillwater, OK, 2001
BS in Geology, Summa Cum Laude, with Honors, Mathematics Minor.

Research Interests:

Sedimentology/Stratigraphy, Quaternary Geology, Coastal Geology, Sea-Level Changes and Glacial History

Academic Appointments:

Professor, Department of Earth Science, University of California Santa Barbara, 2019-Pr
Acting Associate Director, Earth Research Institute, University of California Santa Barbara, 2018-2019
Acting Vice-Chair, Department of Earth Science, University of California Santa Barbara, 2018-2019
Associate Professor, University of California Santa Barbara, 2013-2019
Fulbright Scholar, Durham University, Durham, UK, 2017-2018
Assistant Professor, Department of Earth Science, University of California Santa Barbara, 2010-2013.
Assistant Professor, Boone Pickens School of Geology, Oklahoma State University, 2005-2010.
Visiting Fellow, Research School of Earth Sciences, Geodynamics Group, Australian National University, Jan.-March, 2005; Nov., 2007-Jan., 2008.
Research Assistant, Department of Earth Science, Rice University, 2001- 2005.

Teaching Experience:

Assistant (2010-2013), Associate (2013-2019), and Full Professor (2019-Pr), University of California Santa Barbara

- Taught large (~300 students) lower-level undergraduate general education course on Antarctica (8)
- Taught upper-level undergraduate courses in sedimentology/stratigraphy (10), field methods (1), field camp (4), and GIS (1)
- Taught graduate courses in depositional systems (4), sequence stratigraphy (3), and Antarctic Marine Geology (1)
- Taught undergraduate honors seminar on: Causes and Consequences of Sea-level Change: A geologic Perspective (14)

Assistant Professor, Oklahoma State University, 2005-2010

- Taught lower-level undergraduate course in Environmental Geology (1)
- Taught upper-level undergraduate courses in Geomorphology (5) and Sedimentology/Stratigraphy (4)
- Taught graduate level course in Depositional Systems (3) and Antarctic Geology (1)

Adjunct Faculty, University of St. Thomas, 2004

- Taught undergraduate lower-level physical geology lab and lecture

Tutor, Math Learning Resource Center (MLRC), Oklahoma State University, 1999-2001

Professional Experience:

Geoscience Intern, Phillips Petroleum Company, Bartlesville, Oklahoma, 1997, 2001
Geologist and Field Hand, Gateway Resources, Bartlesville, Oklahoma, 1999-2000

Awards:

Internal:

"Most Helpful Faculty", 2018-2019 – Royal Society of Goleta (UCSB Earth Science Graduate Student Association)

"Faculty of the Year", 2016-2017 – Royal Society of Goleta (UCSB Earth Science Graduate Student Association)

External:

Fulbright Scholar – Durham University, UK, 2017-2018

Antarctic Service Medal, 2010

National Science Foundation Graduate Fellowship, 2003-2005

Research Grants:

Simms, A.R. NHERP: United States Geological Survey (USGS). Constraining the ages and slip across strands of the Hosgri and Los Osos fault zones, central California. $74, 090. 7/1/21-6/30/23.

Simms, A.R. NHERP: United States Geological Survey (USGS). Do the marshes of Tomales Bay, California record old earthquakes along the San Andreas Fault Zone? $21,929. 7/1/21-6/30/22.

Simms, A.R., and Kluesner, J. Pacific Gas and Electric Co. (PGE). Refining the age of offset offshore geomorphic and depositional features along the Hosgri, Los Osos, and other faults along the central California shelf to better constrain their slip rates. $50,181. 5/20-4/23.

Simms, A.R., and DeWitt, R., National Science Foundation - OPP. Collaborative Research: New Constraints on Post-Glacial Rebound and Holocene Environmental History along the Northern Antarctic Peninsula from Raised Beaches. $287,731. 9/17-8/22.

Simms, A.R., Southern California Earthquake Center (SCEC), Testing model predictions of large tsunamis associated with Great Earthquakes on the Pitas Point Thrust using ground-penetrating radar. $12,000, 2/16-1/17.

Simms, A.R., Southern California Earthquake Center (SCEC), Stratigraphic Changes within Carpinteria and Goleta Slough Estuaries: A signal of Great Earthquakes on the Pitas Point Thrust. $16,000, 2/16-1/17.

Simms, A.R., Rockwell, T., Peters, B. Southern California Earthquake Center (SCEC), Stratigraphic Changes within Carpinteria and Goleta Slough Estuaries: A signal of Great Earthquakes on the Pitas Point Thrust. $17,500, 2/15-1/16.

Simms, A.R., Rockwell, T., Peters, B. Southern California Earthquake Center (SCEC), Documentation of tsunami deposits in the Carpinteria and Goleta Slough Estuaries: A signal of Great Earthquakes on the Pitas Point Thrust. $23,200, 2/14-1/15.

Simms, A.R. EDMAP: United States Geological Survey (USGS), Geologic Constraints on Karsting in Western Oklahoma. $19,508. 8/14-7/15.

Simms, A.R. Petroleum Research Fund of the American Chemical Society (PRF). Hyperpycnal Fans of the Santa Barbara Channel. $100,000. 1/13-6/15.

Simms, A.R. United States Department of Interior – National Park Service. Stream terrace mapping at the Washita Battlefield National Historical Site. $2,409. 8/12-4/13.

Simms, A.R. and DeWitt, R. National Science Foundation - OPP. Constraining the deglaciation of the Antarctic Peninsula using OSL dated beach deposits. $199,980. 7/09-6/13

Simms, A.R., DeWitt, R. and Cruse, A. National Science Foundation - EAR. New Approaches to Unraveling the Climatic and Sea-Level History of the Northwestern Gulf of Mexico. $237,537. 10/09-9/12.

Bement, L., Carter, B., Madden, A, **Simms, A.R.** National Science Foundation - BCS. Collaborative Research: Prospecting for nanodiamonds in equivalent deposits of different age for Younger Dryas verification. $185,000 ($27,869 - OSU geology portion). 7/09-6/12.

Simms, A.R. EDMAP: United States Geological Survey (USGS), Mapping the terraces along the Bull Creek Drainage, Oklahoma. $15,515. 8/10-7/11.

Simms, A.R. National Science Foundation - OPP. Collaborative Research: The Sedimentary Record of Tidewater Glacier Response to Holocene Climate Variability in the Antarctic Peninsula. $3,738.00. 8/08-7/09. Subcontract from Rice University.

Simms, A.R. EDMAP: United States Geological Survey (USGS), Determining the Impact of Relative Sea-Level Changes on the Permian Rocks of Western Oklahoma. $11,881. 8/08-7/09.

Simms, A.R. and Stephens, P. Petroleum Research Fund of the American Chemical Society (PRF), Summer Research Fellow Supplement, $8,000. 5/08-9/08.

Simms, A.R. and Kalchgruber, R. SGER: National Science Foundation - OPP, Testing the use of OSL dating of beach deposits along the Antarctic Peninsula, $20,188. 3/07-2/08.

Simms, A.R. Petroleum Research Fund of the American Chemical Society (PRF), Controls on the development of mixed siliciclastic/carbonate under-filled incised valleys: Lessons from the late Pleistocene/ Holocene history of Baffin Bay, Texas, $35,000. 7/06-6/08.

Academic Service and Affiliations:

Associate Editor: Lithosphere, 2020-Pr.

Guest Editor: Earth Systems Science Data special issue: 2020-2022

PalSea (Paleoconstraints on Sea-Level Rise) Workshop Co-organizer, 2020, 2021

Theme 2 Co-Leader, INSTANT (INStabilities & Thresholds in ANTarctica) – SCAR (Scientific Committee on Antarctic Research) -sponsored group, 2021-Pr.

Scientific Committee, SEPM International Sedimentary Geoscience Congress, 2019-2020

Steering Committee for SERCE – Solid Earth Response and Influence on Cryosphere (Scientific Committee on Antarctic Research), 2017-2020

STEPPE Business Committee, 2015-2016

Early Career Councilor, SEPM, 2013-2014

Shepard Medalist Committee, SEPM, 2010-2012

Headquarters and Business Committee, SEPM, 2006-2009.

Management Board, GSA-South Central section, 2006.

Treasurer/Secretary, GSA-South Central section, 2007-2010.

Fieldtrip Leader, AAPG/SEPM Student Fieldtrip, "Quaternary Depositional Environments of the East Texas Coast and Shelf: Analogs for Ancient Deposits. AAPG/SEPM Annual Convention, April 7, 2006 and April 4, 2014.

Fieldtrip Leader, Pacific Section, SEPM/AAPG Fieldtrip, "Depositional Environments along an Active Margin", May, 2015

Fieldtrip Leader, Depositional Systems of the Eastern San Juan Basin, Oklahoma State University Arts and Sciences Outreach, 5/08.

Session Chair, SEPM Student Poster Session, AAPG/SEPM Annual Convention, April, 2007; GSA Annual Meeting, Nov., 2009; GSA Annual Meeting, Oct., 2013; AAPG/SEPM Annual Convention, April 2014, Pacific Section, SEPM/AAPG Annual Meeting, May 2015, Pacific Section GSA, May 2016, AAPG/SEPM Annual Convention, April 2017.

Formal Reviewer:

Science, Proceedings of the National Academy of Sciences, Science Advances, Scientific Reports, Geology, Earth-Science Reviews, Geophysical Research Letters, Journal of Geophysical Research, Quaternary Science Reviews, Geological Society of America Bulletin, Earth and Planetary Science Letters, Terra Nova, Geosphere, *Marine Geology*, *Marine and Petroleum Geology, Global and Planetary Change, Sedimentology*, *Sedimentary Geology*, *Journal of Sedimentary Research*, *Quaternary Research*, *Quaternary International*, *Basin Research*, *Geomorphology*, *Ocean and Coastal Management, Earth Surface Processes and Landforms, Climate Change, P3, G3, Journal of Coastal Research, Continental Shelf Research, Journal of Island & Coastal Archeology, Western North American Naturalist, Marine Geophysical Research,* STAR Program: Environmental Protection Agency, NCCIR: Department of Energy, National Environmental Research Council of the UK, National Science Foundation, German National Science Foundation, Polish Science Foundation, State of Louisiana, NERSC (Canada), Dutch Science Foundation, American Chemical Society – Petroleum Research Fund, AAPG Annual Meeting and Convention.

Faculty Promotion Reviewer: external to UCSB: 6x

Panelist: National Science Foundation (5), Environmental Protection Agency (2), Fulbright Commission (2)

Member: Society for Sedimentary Geology (SEPM), Geological Society of America (GSA), American Geophysical Union (AGU), American Association of Petroleum Geologists (AAPG)

Publications (underline denotes student author from Simms lab):

In Press:

Reynolds, L.C., **Simms, A.R.**, Rockwell, T.; Yokoyama, Y., Miyairi, Y., and Hangsterfer, A. (in press). Sedimentary response of a microtidal estuary to coseismic subsidence. *Geological Society of America Bulletin.*

2022:

[76] Ryang, W.H., **Simms, A.R.**, Yoon, H.H., Chun, S.S., and Kong, G.S. (2022). Last interglacial sea-level proxies in the Korea Peninsula. *Earth System Science Data* 14: 117-142.

[75] **Simms, A.R.,** Best, L., Shennan, I., Bradley, S.L., Small, D., Bustamante, E., Lightowler, A., Osleger, D., Sefton, J. (2022). Investigating the roles of relative sea-level change and glacio-isostatic adjustment on the retreat of a marine based ice stream in NW Scotland. *Quaternary Science Reviews* 277: 107366.

[74] Best, L., **Simms, A.R.**, Brader, M., Lloyd, J., Sefton, J., and Shennan, I. (in press). Local and regional constraints on relative sea-level changes in southern Isle of Skye, Scotland, since the Last Glacial Maximum. *Journal of Quaternary Science* 37: 59-70.

2021:

[73] **Simms, A.R.,** Bentley, M.J., Simkins, L.M., Zurbuchen, J., Reynolds, L.C., DeWitt, R., Thomas, E.R. (2021). Evidence for a "Little Ice Age" glacial advance within the Antarctic Peninsula – Examples from glacially-overrun raised beaches. *Quaternary Science Reviews 271: 10791.*

[72] **Simms, A.R.** (2021). Last interglacial sea levels within the Gulf of Mexico and northwestern Caribbean Sea. *Earth System Science Data* 13: 1419-1439.

2020:

[71] Zurbuchen, J., **Simms, A.R.,** and Huot, S. (2020). Episodic coastal progradation of the coastal Oxnard Plain, southern California. *Journal of Coastal Research* 36: 1130-1144.

[70] **Simms, A.R**., Rood, D.H., Rockwell, T.K. (2020). Correcting MIS5e and 5a sea-level estimates for tectonic uplift, an example from southern California. *Quaternary Science Reviews* 248: 106571.

[69] Switzer, A.D., Gouramanis, C., Bristow, C.S., and **Simms, A.R.** (2020). Chapter 8: Ground-penetrating radar (GPR) in coastal hazard studies. In: Engel, M., Pilarczyk, J., May, S.M., Brill, D., Garrett, E.G. (Eds.) *Geological Records of Tsunamis and Other Extreme Waves*, p. 143-168. Elsevier.

[68] Zurbuchen, J., **Simms, A.R.**, Warrick, J.A., Miller, I.M., Ritchie, A. (2020). A model for the growth and development of wave-dominated deltas fed by small mountainous rivers: Insights from the Elwha River delta, Washington. *Sedimentology* 67: 2310-2331.

[67] Rice, J.A, **Simms, A.R.**, Buzas-Stephens, P., Steel, E., Livsey, D., Reynolds, L.C., Yokoyama, Y., and Halihan, T. (2020). Deltaic response to climate change: The Holocene history of the Nueces Delta. *Global and Planetary Change* 191: 103213

2019:

[66] Zurbuchen, J., **Simms, A.R.** (2019). Late Holocene ice-mass changes recorded in a relative sea-level record from Joinville Island, Antartica. *Geology* 47: 1064-1068.

[65] King, B., **Simms, A.R.,** and Simkins, L.M., (2019). The stratigraphic architecture of small incised valleys along an active margin: Examples from the Oceanside littoral cell of the southern California Coast, In Marsaglia, K., Schwalbach, J., and Behl, R. (eds.), *From Mountains to the Abyss: The California Borderland as an Archive of Southern California Geologic Evolution*. SEPM Special Publication 110: 78-86.

[64] Reinhard, A.A., Jackson, M.G., Blusztajn, J., Koppers, A.A.P., **Simms, A.R.**, Konter, J.G., (2019). "Petit Spot" rejuvenated volcanism superimposed on plume-derived Samoan Shield volcanoes: evidence from a 645-m drill core from Tutuila Island, American Samoa. *Geochemistry, Geophysics, Geosystems* 20: 1485-1507.

[63] Gebbie, G., **Simms, A.R.**, Lisiecki, L.E., (2019). Why estimates of glacial ice loss should be biased low. *Earth and Planetary Science Letters* 515: 112-124.

[62] **Simms, A.R.**, Lisiekci,L., Gebbie, G., Whitehouse, P.L., Clark, J.F., (2019). Balancing the last glacial maximum (LGM) sea-level budget. *Quaternary Science Reviews* 205: 143-153.

2018:

[61] Steel, E., **Simms, A.R.**, Steel, R., Olariu, C. (2018). Hyperpycnal delivery of sand to the continental shelf: insights from the Jurassic Lajas Formation, Neuquen Basin, Argentina. *Sedimentology* 65: 2149-2170.

[60] **Simms, A.R.,** Whitehouse, P.L., Simkins, L.M., Nield, G., DeWitt, R., Bentley, M.J. (2018). Late Holocene relative sea levels near Palmer Station, northern Antarctic Peninsula, strongly controlled by late Holocene ice-mass changes. *Quaternary Science Reviews* 199: 49-59.

[59] **Simms, A.R.**, Rodriguez, A.B., Anderson, J.B. (2018). Bayhead deltas and shorelines: Insights from modern and ancient examples. *Sedimentary Geology* 374: 17-35.

[58] Reynolds, L.C., **Simms, A.R.**, Ejarque, A., King, B., Anderson, R.S., Carlin, J.A., Bentz, J.M., Rockwell, T.K., Peters, R. (2018). Coastal flooding and the 1861-2 California storm season. *Marine Geology 400: 49-59.*

[57] Ferguson, S., Warny, S., Anderson, J.B., **Simms, A.R.**, Escarguel, G. (2018). Holocene vegetation and climate evolution of Corpus Christi and Trinity bays: Implications on coastal Texas source-to-sink deposition. *Geobios 51: 123-135*.

[56] Stocchi, P., Vacchi, M., Lorscheild, T., de Boer, V., **Simms, A.R.**, van de Wal, R.S.W., Vermeersen, B.L.A., Pappalardo, M., Rovere, A., (2018). MIS5e relative sea-level changes in the Mediterranean Sea: Contribution of isostatic disequilibrium. *Quaternary Science Reviews* 185: 122-134.

[55] Ferguson, S., Warny, S., Anderson, J.B., **Simms, A.R.**, and White, C., (2018). Breaching of Mustang Island in response to the 8.2 ka sea-level event and impact on Corpus Christi Bay, Gulf of Mexico: implications for future coastal change. *The Holocene* 28: 166-172.

2017:

[54] **Simms, A.R.**, DeWitt, R., Zurbuchen, J., and Vaughn, P., (2017). Coastal erosion and recovery from a Cascadia subduction zone earthquake and tsunami. *Marine Geology* 392: 30-40.

[53] Milliken, K., Anderson, J.B., **Simms, A.R.**, and Blum, M., (2017). A Holocene record of alluvial sediment flux related to climate: case studies from the northern Gulf of Mexico. *Journal of Sedimentary Research* 87:780-794.

[52] Buzas, M., Hayek, L.-A. C., Buzas-Stephens, P., **Simms, A.R.**, (2017). The ecological balance of nature and the evolution of Baffin Bay, Texas. *Journal of Foraminiferal Research* 47: 219-227.

[51] Ashford, J., Zane, L., Torres, J., La Mesa, M., and **Simms, A.R.**, (2017). Population structure and life history connectivity of Antarctic Silverfish (*Pleuragramma antarctica*) in Southern Ocean ecosystem, In: Vacchi, M., Pisano, E., and Ghigliotti, L., The Antarctic Silverfish – A Keystone Species in a Changing Ecosystem. Springer. p. 193-234.

[50] Steel, E., Buttles, J., **Simms, A.R.,** Mohrig, D., and Meiburg, E., (2017). The role of buoyancy reversal in turbidite deposition and submarine fan geometry. *Geology* 45: 35-38.

2016:

[49] Simkins, L.M., DeWitt, R., **Simms, A.R.**, Briggs, S., Shapiro, R.S. (2016). Investigation of optically stimulated luminescence behavior of quartz from crystalline rock surfaces: A look forward. *Quaternary Geochronology* 36: 161-173.

[48] Livsey, D.N., **Simms, A.R.**, (2016). Episodic flooding of estuarine environments in response to drying climate over the last 6,000 years in Baffin Bay, Texas. *Marine Geology* 381: 142-162.

[47] Steel, E., **Simms, A.R.,** Warrick, J. and Yokoyama, Y. (2016). Highstand shelf fans: The role of buoyancy reversal in the deposition of a new type of shelf sandbody. *Geological Society of America Bulletin* 128:1717-1724.

[46] **Simms, A.R.**, Reynolds, L.C., Bentz, M.J., Roman, A., Rockwell, T., and Peters, R. (2016). Tectonic subsidence of California estuaries increases forecasts of relative sea-level rise. *Estuaries and Coasts* 39:1571-1581.

[45] Anderson, J.B., Wallace, D.J., **Simms, A.R.**, Rodriguez, A.B., Weight, R.W.R., and Taha, Z.P. (2016). Recycling sediments between source and sink during a eustatic cycle: Systems of late Quaternary northwestern Gulf of Mexico Basin. *Earth-Science Reviews* 153: 111-138.

[44] Livsey, D.N., **Simms, A.R.**, Hangsterfer, A., Nisbet, R.A., and DeWitt, R. (2016). Drought modulated by North Atlantic sea surface temperatures for the last 3,000 years along the northwestern Gulf of Mexico. *Quaternary Science Reviews* 135: 54-64.

[43] Azura, H.M., **Simms, A.R.**, Bement, L.C., Carter, B.J., Conley, T., Wolderqauy, A., Johnson, W.C., and Jaiswal, P. (2016). Geomorphic and sedimentary responses of the Bull Creek Valley (Southern High Plains, USA) to Pleistocene and Holocene environmental change. *Quaternary Research* 85: 118-132

[42] **Simms, A.R**., Rouby, H., and Lambeck, K. (2016). Marine terraces and rates of vertical tectonic motion: The importance of glacio-isostatic adjustment along the Pacific Coast of central North America. *Geological Society of America Bulletin* 128: 81-93.

2015:

[41] Reynolds, L.C., and **Simms, A.R.** Late (2015). Quaternary relative sea level in Southern California and Monterey Bay. *Quaternary Science Reviews* 126: 57-66.

[40] Simkins, L.M., **Simms, A.R.**, and DeWitt, R. (2015). Assessing the link between coastal morphology, wave energy, and sea ice throughout the Holocene from Antarctic raised beaches. *Journal of Quaternary Science* 30: 335-348.

[39] Holmquist, J., Reynolds, L., Brown, L., Southon, J., **Simms, A.R.**, and MacDonald, G. (2015). Marine radiocarbon reservoir values in southern California estuaries: interspecies, latitudinal, and interannual variability. *Radiocarbon* 57: 449-458.

[38] Ejarque, A., Anderson, R.S., **Simms, A.R.**, and Gentry, B.J. (2015). Prehistoric fires and the shaping of colonial transported landscapes in southern California: A paleoenvironmental study at Dune Pond, Santa Barbara County. *Quaternary Science Reviews* 112: 181-196.

[37] **Simms, A.R.** and Rodriguez, A.B. (2015). The influence of valley morphology on the rate of bayhead delta progradation. *Journal of Sedimentary Research* 85: 38-44.

2014:

[36] The RAISED Consortium, Bentley, M.J...(76 other authors), **Simms, A.R.** (2014). A community-based geological reconstruction of Antarctic Ice Sheet deglaciation since the Last Glacial Maximum. *Quaternary Science Reviews* 11:1-9.

[35] O Cofaigh, C, Davies, B.J. Livingstone, S.J., Smith, J.A,. Johnson, J.S., Hocking, E.P., Hodgson, D.A., Anderson, J.B., Bentley, M.J., Canals, M., Domack, E., Dowdeswell, J.A., Evans, J., Glasser, N.F., Hillenbrand, C.-D., Larter, R.D., Roberts, S.J., **Simms, A.R.** (2014). Reconstruction of ice-sheet changes in the Antarctic Peninsula since the Last Glacial Maximum. *Quaternary Science Reviews* 11:87-110.

[34] Anderson, J.B., Wallace, D.J., **Simms, A.R.**, Rodriguez, A.B., Milliken, K.T. (2014). Variable response of coastal environments of the northwestern Gulf of Mexico to sea-level rise and climate change: Implications for future change. *Marine Geology* 352: 348-366.

[33] Buzas-Stephens, P., Livsey, D.N., **Simms, A.R.,** Buzas, M.A. (2014). Estuarine foraminifera record Holocene stratigraphic changes and Holocene climate changes in ENSO and the North American monsoon: Baffin Bay, Texas. *Palaeogeography, Palaeoclimatology, Palaeoecology* 404: 44-56.

[32] **Simms, A.R.**, and Rodriguez, A.B. (2014). Where do coastlines stabilize following rapid retreat? *Geophysical Research Letters* 41: 1698-1703.

[31] Bement, L.C., Madden, A.S., Carter, B.J., **Simms, A.R.**, Swindle, A.L., Alexander, H.M., Fine, S., and Benamara, M. (2014). Quantifying the distribution of nanodiamonds in pre-Younger Dryas to recent age deposits along Bull Creek, Oklahoma Panhandle, USA. *Proceedings of the National Academy of Sciences* 111: 1726-1731.

2013:

[30] **Simms, A.R.**, Anderson, J.B., DeWitt, R., Lambeck, K., and Purcell, A., (2013). Quantifying rates of coastal subsidence since the last interglacial and the role of sediment loading. *Global and Planetary Change* 111: 296-308.

[29] Simkins, L.M., **Simms, A.R.**, DeWitt, R., (2013). Relative sea-level history of Marguerite Bay, Antarctic Peninsula derived from optically stimulated luminescence-dated beach cobbles. *Quaternary Science Reviews 77: 141-155*.

[28] Livsey, D. and **Simms, A.R.**, (2013). Holocene sea-level change derived from microbial mats. *Geology* 41: 971-974.

[27] Simkins, L.M., DeWitt, R., **Simms, A.R.**, (2013). Methods to reduce sample carrier contamination for luminescence measurements. *Ancient TL* 31: 19-28.

[26] Warrick, J.A., **Simms, A.R**., Ritchie, A., Steel, E., Dartnell, P., Conrad, J.E., and Finlayson, D.P. (2013). Hyperpycnal plume-derived fans in the Santa Barbara Channel, California. *Geophysical Research Letters* 40: 2081-2086.

[25] Anderson, J.B., Kirshner, A., **Simms, A.R.** (2013), Constraints on the Antarctic Ice Sheet configuration during and following the Last Glacial Maximum and its episodic contribution to sea-level rise. In: Hambrey, M.J., Barker, P.F., Barrett, P.J., Bowman, V., Davies, B., Smellie, J.L., and Tranter, M. (eds.). *Antarctic Palaeoenvironments and Earth-Surface Processes*, Geological Society of London Special Publication 381: 215-232.

[24] Livsey, D.N., **Simms, A.R**., Clary, W., Wellner, J.S., Anderson, J.B., and Chandler, J.P., (2013). Fourier grain-shape analysis of Antarctic marine core: the relative influence of provenance and glacial activity on grain-shape. *Journal of Sedimentary Research 83:80-90*.

2012:

[23] Simkins, L.M., **Simms, A.R.**, Cruse, A.M., Troiani, T., Atekwana, E.A., Puckette, J., and Yokoyama, Y. (2012). Correlation of early and mid-Holocene events using magnetic susceptibility in estuarine cores. *Palaeogeography, Palaeoclimatology, Palaeoecology* 346-347: 95-107.

[22] **Simms, A.R.**, DeWitt, R., Ivins, E.R., Kouremenos, P., and Simkins, L.M. (2012), Determining the timing of the Little Ice Age in the Antarctic Peninsula from raised beaches. *Quaternary Science Reviews 47:41-55.*

[21] Poland, Z. and **Simms, A.R.** (2012), Sedimentology of an erg-erg margin depositional system, the Rush Springs Sandstone of western Oklahoma: implications for paleowinds across northwestern Pangea during the Guadalupian (middle Permian). *Journal of Sedimentary Research* 82:345-363.

[20] Valentine, D.W., Keller, E.A., Carver, G., Li, W.-H., Manhart, C., **Simms, A.R.** (2012), Paleoseismicity of the southern end of the Cascadia Subduction Zone, northwestern California, USA. *Bulletin of the Seismological Society of America 102: 1059-1078*.

[19] Woldearegay, A., Jaiswal, P., **Simms, A.R**., Alexander H., Bement, L.C., and Carter, B.J. (2012), Ultrashallow depth imaging of a channel stratigraphy with first-arrival traveltime inversion and prestack depth migration: A case study from Bull Creek, Oklahoma. *Geophysics* 77:1-10.

2011:

[18] Wellner, J.S., Anderson, J.B., Werner, E., Weaver, F.M., Kirshner, A., Livsey, D., and **Simms, A.R.** (2011). History of an evolving ice sheet as recorded in SHALDRIL cores from the northwestern Weddell Sea, Antarctica. In: *Tectonic, Climatic, and Cryospheric Evolution of the Antarctic Peninsula*, AGU Monograph Series 63: 131-152.

[17] Anderson, J.B., Warny, S., Askin, R.A., Wellner, J.S., Bohaty, S.M., Kirshner, A., Livsey, D.N., **Simms, A.R.**, Smith, T.R., Ehrmann, W., Lawver, L.A., Barbeau, D., Wise, S.W., Kulhenek, D.K., Weaver, F.M., Mojewski, W. (2011). Progressive Cenozoic cooling and the demise of Antarctica's last refugium. *Proceedings of the National Academy of Sciences* 108: 11356-11360.

[16] **Simms, A**.R., Milliken, K.T., Anderson, J.B. Wellner, J.S. (2011). The marine record of deglaciation of the South Shetland Islands, Antarctica since the Last Glacial Maximum. *Quaternary Science Reviews* 30: 1583-1601.

[15] Troiani, T., **Simms, A.R.**, Dellapenna, T., Piper, E., and Yokoyama, Y. (2011). The importance of sea-level and climate change, including wind energy, on the evolution of a coastal estuary: Copano Bay, Texas. *Marine Geology* 280, p.1-19.

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2006:

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2005:

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Invited Presentations:

2004: Oklahoma State University, School of Geology; ExxonMobil Production Research Company

2005: Oklahoma State University, School of Geology

2006: Langston University, Department of Biology; Tulsa Geological Society Research Group; University of Tulsa, Department of Geology and Geophysics
2007: Northeastern State University (OK); Triple Junction Function (OK).
2008: Northeastern Oklahoma Association of Math and Science Teachers.
2009: University of Texas at Arlington, Department of Geology; University of California, Santa Barbara, Department of Earth Science; Oklahoma State University, Department of Animal Science; Oklahoma City Chapter of the Society for Professional Earth Scientists
2010: AGU Fall Meeting (poster)
2011: Caltech, Division of Geological Sciences
2012: SLOLAM (Athens, Greece)
2013: GSA Penrose/AGU Chapman Conference – Galveston, Texas; USGS Pacific Coastal Science Center, Santa Cruz, CA; Brigham Young University, Provo, UT
2015: Coast Geological Society, Ventura, CA
2017: San Joaquin Geological Society, Bakersfield, CA
2018: Palmer Station, Antarctica; NIOZ, Texel, Netherlands
2020: GSA Annual Meeting (online)
2021: University of Gloucestershire; GSA Annual Meeting, Portland, OR; Coast Geological Society, Ventura, CA

Thesis Director:
Michael Aufill (MS'07 – Newfield Exploration, Tulsa, OK), Niranjan Aryal (MS'07 – Schlumberger, Houston, TX), Peter Kouremenous (MS'08 – BP, Calgary, AB), Annie Drewry (MS'08 – Dark Horse Exploration, Tulsa, OK), Tyler Treece (MS'09 – EOG, Oklahoma City, OK), Taylor Troiani (MS'09 – Mack Energy, Oklahoma City, OK), Zachary Poland (MS'11 – Laredo Petroleum, Oklahoma City, OK), Katherine Jackson (MS'11 – S&M Energy, Midland, TX), Hanna Alexander (MS'12 – Broadbent & Associates, Denver, CO), Eva von Thury (MS'13 – Padre & Assoc., Santa Barbara, CA), Lauren Simkins (PhD'14 – Assistant Professor – University of Virginia.), Daniel Livsey (PhD'15 – USGS, Sacramento, CA), Johnathan Rice (MS'15 – D-Corp, Ventura, CA), Vanessa Brillo (MS'15 – Harvey Mudd, Los Angeles, CA), Michael Bentz (MS'16 – Apache, Houston, TX), Elisabeth Steel (PhD'17 – Assistant Professor – Queens University), Zach Nelson (MS'17 – DOGGR, Orcutt, CA), Laura Reynolds (PhD'18 – Assistant Professor – Worcester State University), Dillon Osleger (MS'18 – Nature Conservancy), Julie Zurbuchen (PhD'19 – BP, Houston, TX), Brittany Theilen (MS'20 – Geosyntec, Longbeach, CA), Cameron Gernant (MS'21 – Vandenburg Airforce Base, Lompoc, CA), Elisa Medri (PhD'24), Claire Divola (PhD'25), Emily Huffman (PhD'25).

Thesis Committee Member:
Sassan Mouri (MS - 06), Eric Gerding (MS - 07), Kurtis Boucher (MS - 07), Emiko Konishi (MS - 07), Brad Rogers (MS - 07), Mack Blackford (MS - 08), Cameron Thompson (MS - 08), Mike Sample (MS - 08), Jeff Gigstad (MS - 08), Andy Rihn (MS - 08), John Tackett (MS - 08), Patrick Cohorn (MS - 08), Joe Wicker (MS - 08), Britni Watson (MS - 08), Jeremiah Chrisman (MS - 09), Tony Moss (MS – 09), Ayodeji Bamijoko (MS – 09), Stuart Barnes (MS – 10), S. Byron Stephens (PhD - 10), Cody Manek (MS - 10), Travis Conley (MS – 10), Jeff Roden (MS-11), Ammanuel Woldearegay (MS-11), Jason P. Jones (MS-11), Jon Sanford (MS-11), Joseph Goodie (PhD-12), Andrew Rich (PhD-13), Jessica Thompson (PhD-13), Joseph Stern (PhD-14), Samantha Gwizd (MS-15), Al Neely (MS-15), Minda Monteagudo (MS-16), Chandler Adamaitis (MS-20), Nick Harrichhausen (PhD – 21).

External Thesis Reviewer:
Gilad Shtienberg (PhD- 2017; University of Haifa – Israel); Nonkululeko N. Dladla (PhD – 22; University of Kwazulu-Natal – South Africa),

Undergraduate Student Research:
Kristy Tetter (BS '06), Greg Federko (BS '08), Lauren Miller (OK-LSAMP, BS '09), Jared Roundtree (BS '09), Daniel Livsey (BS'10), Brent McCullough (BS'11), Sloan Anderson (BS'11), Beau Gentrey (BS'12), Julian Stahle (BS'13), Angel Roman (BS'14), Justin Steinmann (BS'15), Olivia Nicholson (BS'15),

Michael Truong (BS’16), Audrey Pyle (BS’16), Ian Baxter (BS’17), Elisa Medri (BS’17), Jackson Cook (BS’18), Margarita McInnis (BS’18), James Schatz (BS’20).