

CURRICULUM VITAE

EUGENE C. RANKEY

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EDUCATION

Ph.D., Geology - University of Kansas (1996)
M.S., Geological Sciences - University of Tennessee, Knoxville (1993)
B.S., Geology - Augustana College, Illinois (1991)

EMPLOYMENT HISTORY

University of Kansas (Geology)	Associate Professor	2010-present
University of Kansas (Geology)	Assistant Professor	2008-2010
RSMAS/University of Miami (Marine Geology)	Assistant Professor	2002-2008
Iowa State University (Geological Sciences)	Assistant Professor	2000-2002
ExxonMobil Upstream Research Company	Research Geologist	1996-2000

RESEARCH RECORD

Honors and Awards for Research

- Honorable Mention, Outstanding Paper Award, *Journal of Sedimentary Research* (2012)
- Honorable Mention, Outstanding Paper Award, *Journal of Sedimentary Research* (2010)
- Distinguished Lecturer, *American Association of Petroleum Geologists* (2008-2009)
- Honorable Mention, Outstanding Paper Award, *Journal of Sedimentary Research* (2008)
- A.I. Levorsen Memorial Award for 'best paper presented at each American Association of Petroleum Geologists sectional meeting, with particular emphasis on creative thinking toward new ideas in exploration' (2004)
- Outstanding Paper Award, *Journal of Sedimentary Research* (2002)

Research Publications

Major Publications (all are peer-reviewed)

1. Rankey, E.C., in press, Contrasts between wave- and tide-dominated oolitic systems: Holocene of Crooked-Acklins Platform, southern Bahamas: *Facies*.

2. Sparks, A.G., and **Rankey, E.C.**, 2013, Relations between geomorphic form and sedimentologic-stratigraphic variability: Holocene ooid sand shoal, Lily Bank, Bahamas: *AAPG Bulletin*, v. 97, p. 61-85.
3. **Rankey, E.C.**, and Doolittle, D.F. 2012, Geomorphology of carbonate platform-marginal uppermost slopes: Insights from a Holocene analogue, Little Bahama Bank, Bahamas: *Sedimentology*. DOI: 10.1111/j.1365-3091.2012.01338.x
4. Berkeley, A., and **Rankey, E.C.**, 2012, Progradational Holocene carbonate tidal flats of Crooked Island, Southeast Bahamas: An alternative to the humid channeled belt model: *Sedimentology*, 59, 1902-1925.
5. **Rankey, E.C.**, and Garza-Perez, J.R., 2012, Seascape metrics of shelf-margin reefs and reef sand aprons of Holocene carbonate platforms: *Journal of Sedimentary Research*, 82, 53-71. [Honorable Mention, Outstanding Paper Award 2012]
6. **Rankey, E.C.**, Reeder, S.L., Garza-Perez, J.R., 2011, Controls on links between geomorphical and surface sedimentological variability: Aitutaki and Maupiti atolls, South Pacific Ocean: *Journal of Sedimentary Research*, 81, 885-900.
7. **Rankey, E.C.**, and Berkeley, A., 2011, Holocene carbonate tidal flats: *in* Tidal Sedimentology (ed. by Davis, R and Dalrymple, R.,) Springer-Verlag, 507-535. [invited chapter]
8. **Rankey, E.C.**, and Reeder, S.L., 2011, Tidal sands of the Bahamian Archipelago: *in* Tidal Sedimentology (ed. by Davis, R and Dalrymple, R.) Springer-Verlag, 537-565. [invited chapter]
9. **Rankey, E.C.**, 2011, Nature and stability of atoll island shorelines: Gilbert Island Chain, Kiribati, Equatorial Pacific: *Sedimentology*, 58, 1831-1859.
10. **Rankey, E.C.**, and Reeder, S.L., 2011, Holocene oolitic marine sand complexes of the Bahamas: *Journal of Sedimentary Research*, 81, 97-117.
11. **Rankey, E.C.**, and Reeder, S.L., 2010, Controls on platform-scale patterns of surface sediments, shallow Holocene platforms, Bahamas: *Sedimentology* 57, 1545-1565.
12. Duguid, S.M.A., Kyser, T.K., James, N.P., and **Rankey, E.C.**, 2010, Microbes and ooids: *Journal of Sedimentary Research*. 80, 236-251. [Honorable Mention, Outstanding Paper Award 2010]
13. Reeder, S.L., and **Rankey, E.C.**, 2009, Controls on morphology and sedimentology of carbonate tidal deltas, Abacos, Bahamas: *Marine Geology*, <http://dx.doi.org/10.1016/j.margeo.2009.09.010>.
14. **Rankey, E.C.**, and Reeder, S.L., 2009, Holocene ooids of Aitutaki Atoll, Cook Islands, South Pacific: *Geology*, 37, 971-974.

15. **Rankey, E.C.**, Guidry, S.A., Reeder, S.L., and Guarin, H., 2009, Geomorphic and sedimentologic heterogeneity along a Holocene shelf margin, Caicos Platform: *Journal of Sedimentary Research*, 79, 440-456.
16. Reeder, S.L., and **Rankey, E.C.**, 2009, An integrated field, remote sensing, and modeling study examining the impact of Hurricanes Frances and Jeanne on carbonate systems, Bahamas: *in*: Swart, P.K., Eberli, G.P., McKenzie, J.A. (eds.) *Perspectives in Carbonate Geology: A Tribute to the Career of Robert Nathan Ginsburg*, IAS Special Publication 41. Blackwell, Oxford, 75-90
17. **Rankey, E.C.**, and Harris, P.M., 2008, Remote sensing and comparative geomorphology of Holocene carbonate depositional systems: Controls on Carbonate Platform and Reef Development (edited by Jeff Lukasik and J.A. (Toni) Simo) *SEPM Special Publication* 89, 317-322.
18. Reeder, S.L., and **Rankey, E.C.**, 2008, Relations between sediments and tidal flows in ooid shoals, Bahamas: *Journal of Sedimentary Research*, 78, 175-186. [Honorable Mention, Outstanding Paper Award 2008]
19. **Rankey, E.C.**, Reeder, S.L., and Correa, T.B.S., 2008, Geomorphology and sedimentology of Ambergris ooid shoal, Caicos Platform: in (Morgan, W.A. and Harris, P.M., eds.) *Developing Models and Analogs for Isolated Carbonate Platforms - Holocene and Pleistocene Carbonates of Caicos Platform, British West Indies*, SEPM Core Workshop 22: Society for Sedimentary Geology, p. 127-132.
20. **Rankey, E.C.**, Guidry, S.A., Reeder, S.L., Garza-Perez, R., and Guarin, H., 2008, Integrated Chirp, remote sensing, and sedimentologic characterization of geomorphic variability along a shelf margin, northwest Caicos Platform in (Morgan, W.A. and Harris, P.M., eds.) *Developing Models and Analogs for Isolated Carbonate Platforms - Holocene and Pleistocene Carbonates of Caicos Platform, British West Indies*, SEPM Core Workshop 22: Society for Sedimentary Geology, p. 105-110.
21. **Rankey, E.C.**, Riegl, B., and Steffen, K., 2006, Form, function, and feedbacks in a tidally dominated ooid shoal, Bahamas: *Sedimentology*, 53, 1191-1210.
22. **Rankey, E.C.**, and Ruzek, M., 2006, Symphony of the Spheres: Perspectives on Earth System Science Education: *Journal of Geoscience Education*, 54, 197-201.
23. **Rankey, E.C.**, 2004, On the interpretation of shallow shelf carbonate facies and habitats: How much does water depth matter? *Journal of Sedimentary Research*, 74, 2-6.
24. **Rankey, E.C.**, Enos, P. Steffen, K., and Druke, D., 2004, Lack of impact of Hurricane Michelle on tidal flats, Andros Island, Bahamas: Integrated remote sensing and field observations: *Journal of Sedimentary Research*, 74, 654-661.

25. **Rankey, E.C.**, 2003, The use of critical thinking skills for teaching evolution in an introductory historical geology class: *Journal of Geoscience Education*, 51, 304-308.
26. **Rankey, E.C.**, and Mitchell, J.C., 2003, That's why it's called interpretation: The role of horizon uncertainty on seismic attribute analysis: *The Leading Edge*, p. 820-828.
27. **Rankey, E.C.**, 2003, Carbonate-filled channel complexes on carbonate ramps: an example from the Peerless Park Member [Keokuk Limestone, Visean, Lower Carboniferous (Mississippian)], St. Louis, MO, USA: *Sedimentary Geology*, 155, 45-61
28. **Rankey, E.C.**, and Morgan, J.J., 2002, Quantified rates of geomorphic change on a modern carbonate tidal flat: Andros Island, Bahamas: *Geology*, 30, 583-587.
29. **Rankey, E.C.**, 2002, Spatial patterns of sediment accumulation on a Holocene carbonate tidal flat, northwest Andros Island, Bahamas: *Journal of Sedimentary Research*, 72, 591-601. [Outstanding Paper Award, JSR, 2002]
30. Lehrmann, D. J., and **Rankey, E. C.**, 2000, Do meter-scale cycles exist? A statistical evaluation from vertical (1D) and lateral (2D) patterns in shallow marine carbonate-siliciclastic strata of the Seven Rivers Formation, Slaughter Canyon, New Mexico: in (Harris, P.M., et al., eds.), *Geologic framework of the Capitan Reef: SEPM Concepts in Sedimentology*.
31. **Rankey, E.C.**, Bachtel, S.L., and Kaufman, J., 1999, Controls on stratigraphic architecture of icehouse mixed carbonate-siliciclastic systems: A case study from the Holder Formation (Pennsylvanian, Virgilian), Sacramento Mountains, New Mexico: in (Harris, P.M., et al., eds.) *Recent advances in carbonate sequence stratigraphy: Applications to reservoirs, outcrops, and models: SEPM Special Publication 63*, 127-150.
32. **Rankey, E.C.**, 1999, Relations between relative changes in sea level and climate shifts: Pennsylvanian - Permian mixed carbonate-siliciclastic strata, western U.S.A.: Reply: *Geological Society of America Bulletin*, 111, 469-472.
33. Watney, W.L., **Rankey, E.C.**, and Harbaugh, J., 1999, Perspectives on stratigraphic simulation models: Current approaches and future opportunities: in (Harbaugh, J., Watney, W.L., **Rankey, E.C.**, et al., eds.) *Numerical Experiments in Stratigraphy: Recent advances in stratigraphic and sedimentologic computer simulations: SEPM Special Publication 62*, 3-21.
34. **Rankey, E.C.**, and Farr, M.R., 1997, Preserved pedogenic mineral magnetic signature, pedogenesis, and paleoclimate change: Pennsylvanian Roca Shale (Virgilian, Asselian), central Kansas, U.S.A.: *Sedimentary Geology*, 114, 11-32.
35. **Rankey, E.C.**, 1997, Relations between relative changes in sea level and climate shifts: Pennsylvanian - Permian mixed carbonate-siliciclastic strata, western U.S.A.: *Geological Society of America Bulletin*, 109, 1089-1100.

36. **Rankey, E.C.**, and Lehrmann, D.J., 1996, Anatomy and origin of toplap in a mixed carbonate-clastic system: Seven Rivers Formation, Slaughter Canyon, Guadalupe Mountains, New Mexico, U.S.A.: *Sedimentology*, 43, 807-826.
37. **Rankey, E.C.**, Walker, K.R., and Srinivasan, K., 1994, Gradual establishment of Iapetan "passive" margin sedimentation: Stratigraphic consequences of Cambrian episodic tectonism and eustasy, southern Appalachians: *Journal of Sedimentary Research*, B64, 298-310.

Publications - Edited Volumes:

1. **Rankey, E.C.**, and Ruzek, M., 2006, Symphony of the Spheres: Recent Advances in Earth System Science Education: *Journal of Geoscience Education, Special Issue*.
2. Harbaugh, J, Watney, W.L., **Rankey, E.C.**, Slingerland, R., Goldstein, R.H., and Franseen, E.K., (eds.), 1999, Numerical Experiments in Stratigraphy: Recent advances in stratigraphic and sedimentologic computer simulations: *SEPM Special Publication 62*.
3. Watney, W.L., **Rankey, E.C.**, Franseen, E.K., and Goldstein, R.H. (conveners), 1996, Numerical Experiments in Stratigraphy - An international workshop: *Kansas Geological Survey Open File Report 96-27*, 164 p.

Minor Publications (not peer reviewed):

1. **Rankey, E.C.**, and Doolittle, D.F., 2011, Heterogeneity of carbonate platform marginal foreslopes: Insights from the Little Bahama Bank, Bahamas: *Final Report for Shell E&P Research Project*.
2. **Rankey, E.C.**, 2010, Stability of atoll island shorelines: Republic of Kiribati: *Report to Ministry of Fisheries and Marine Resources Development, Republic of Kiribati*.
3. **Rankey, E.C.**, 2009, Sedimentology and geomorphology of isolated carbonate platforms: Predictive concepts from Holocene analogs: *Final Report for Shell E&P Research Project*.
4. **Rankey, E.C.**, 2008, Sedimentologic and geomorphologic heterogeneity of an isolated platform: Aitutaki Atoll, Cook Islands, South Pacific: *Final Report for Chevron Energy Technology Company Research Project*.
5. **Rankey, E.C.**, 2008, Holocene carbonate oolitic tidal sand ridges of Schooner Cays, Bahamas: *Final Report for Chevron Energy Technology Company Research Project*.
6. **Rankey, E.C.**, Reeder, S.L., Berkeley, A., 2008, Holocene and Pleistocene Carbonate Facies of Crooked-Acklins Platform, Bahamas: *Field Guidebook for Comparative Sedimentology Laboratory Sponsors Meeting*.

7. **Rankey, E.C.**, Reeder, S.L., Watney, W.L., and Byrnes, A., 2006, Spatial trend metrics of ooid shoal complexes, Bahamas: Implications for reservoir characterization and prediction: *26th Annual Gulf Coast Section-SEPM Foundation Bob F. Perkins Research Conference, CD-ROM*.
8. **Rankey, E.C.**, Garza, R., Reeder, S.L., 2006, Exploration scale patterns and processes on carbonate platforms: *Final Report for Shell International E&P Research Project*.
9. **Rankey, E.C.**, Reeder, S., 2005, Processes and Patterns in Ooid Shoals, Abaco Island Chain, Bahamas: Implications for Reservoir Characterization and Prediction: *Field Guidebook for Comparative Sedimentology Laboratory Sponsors Meeting*.
10. **Rankey, E.C.**, 2004, Spatial trend metrics of ooid shoal complexes, Bahamas: Implications for reservoir characterization and prediction: *Final Report for Shell International E&P Research Project*.
11. **Rankey, E.C.**, 2004, Quantitative spatial statistical analysis of patterns in natural fractures in carbonates: *Final report for Shell International E&P Research Project*.
12. Jansen, X., Bachtel, S.L., and **Rankey, E.C.**, 2004, Field Guide for Pennsylvanian Holder Formation, Sacramento Mountains, NM: Sequence Development in Mixed Carbonate-Siliciclastic Strata During Global Icehouse Climatic Periods: *Field trip guidebook in association with American Association of Petroleum Geologists Hedberg Conference*.
13. **Rankey, E.C.**, 2003, Carbonate coasts as complex systems: A case study from Andros Island, Bahamas: *Proceedings of the International Conference on Coastal Sediments 2003*. CD-ROM Published by World Scientific Publishing Corp. and East Meets West Productions, Corpus Christi, Texas, USA. ISBN 981-238-422-7.
14. **Rankey, E.C.**, 2003, Field trip guidebook to Lower Carboniferous (Visean) Carbonates, St. Louis area, Missouri: *Prepared for ExxonMobil Field Trip*
15. **Rankey, E.C.**, 2001, Sedimentology and stratigraphic implications of the Peerless Park Member (Keokuk Limestone, Visean, Mississippian), St. Louis, Missouri: in Heckel, P.H. ed., Stratigraphy and biostratigraphy of the Mississippian Subsystem (Carboniferous System) in its type region, the Mississippi River valley of Illinois, Missouri, and Iowa, *IUGS Subcommission on Carboniferous Stratigraphy Field Trip Guidebook*, 67-72.
16. **Rankey, E.C.**, 2001, Stop 6: in Heckel, P.H. ed., Stratigraphy and biostratigraphy of the Mississippian Subsystem (Carboniferous System) in its type region, the Mississippi River valley of Illinois, Missouri, and Iowa, *IUGS Subcommission on Carboniferous Stratigraphy Field Trip Guidebook*, 28-31.
17. Bachtel, S.L., **Rankey, E.C.**, and Kaufman, J., 2000, Field guide for Pennsylvanian Holder Formation, Sacramento Mountains, NM: sequence development in mixed carbonate-siliciclastic strata during global icehouse climatic periods, in Stanton, R.J., Jr., ed., *Field*

Guide to the Carboniferous Geology of the Sacramento Mountains, New Mexico: Platforms and Mounds of the Lake Valley and Holder Formations: Tulsa, OK, *SEPM (Society for Sedimentary Geology) and International Association of Sedimentologists Field Guide*, p. 1-58.

18. Bachtel, S.L., **Rankey, E.C.**, Kaufman, J., and Mitchell, J.C., 1998, Field guide and discussion questions for the Pennsylvanian Holder Formation, Dry Canyon, Sacramento Mountains, New Mexico: *in* (Cox, D.M., ed.) Upper Pennsylvanian and Wolfcampian mixed carbonate-siliciclastic systems, Sacramento Mountains, New Mexico, *West Texas Geological Society Publication* 98-104, 55-114.
19. **Rankey, E.C.**, and Bachtel, S.L., 1998, Subaerial exposure surfaces in carbonate sequences: Their recognition and significance: *in* (Cox, D.M., ed.) Upper Pennsylvanian and Wolfcampian mixed carbonate-siliciclastic systems, Sacramento Mountains, New Mexico, *West Texas Geological Society Publication* 98-104, 115-136.

Works Submitted or Ready for Submission

1. Wasserman, H.N., **Rankey, E.C.**, in revision, Heterogeneity and Depositional Variability of Reef Sand Aprons: Integrated Field and Modeling Analysis of the Dynamics of Holocene Aranuka Atoll, Republic of Kiribati, Equatorial Pacific: *Journal of Sedimentary Research*.
2. Garza-Perez, J.R., **Rankey, E.C.**, Arias-Gonzalez, J.E., and Knudby, A., in revision, Systematic test of GRASP for predicting bathymetry using multispectral satellite imagery and aerial -photography: *International Journal of Remote Sensing*.

Scholarly Presentations

1. Wasserman, H.N., **Rankey, E.C.**, and Uriam, T., 2013, Heterogeneity and depositional variability of reef sand aprons: Integrated field and modeling analysis of dynamics of Holocene Aranuka Atoll, Republic of Kiribati, equatorial Pacific: *AAPG Annual Meeting*.
2. **Rankey, E.C.**, Garza-Perez, R., and Naranjo-Garcia, J., 2013, Carbonate Ramp Shoreface Coquina and Lagoonal Systems: Holocene of Northwestern Yucatan Peninsula, Mexico: *AAPG Annual Meeting*.
3. Johnson, J.T., O'Brien, L., **Rankey, E.C.**, Uriam, T., Uriam, K., and Feddema, J., 2013, Learning from Indigenous science: I-Kiribati knowledge, awareness, and adaptation to environmental change: *AAG Annual Meeting*.
4. Leslie, K., **Rankey, E.C.**, and Roberts, J., 2013, Geochemical and microbiological characterization of carbonate sediments and associated fluids, Crooked-Acklins Platform, Bahamas: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
5. Duarte, A, and **Rankey, E.C.**, 2013, Shifting shorelines of atoll islands, Gilbert island chain,

Kiribati: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.

6. Huang, H., **Rankey, E.C.**, and Jin, X., 2013, Integrated Permian fusulinid biostratigraphy and carbonate facies analysis of Baoshan Block, China: Paleoclimatic and paleogeographic implications: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
7. Lowery, J., **Rankey, E.C.**, Garza-Perez, R., and Narajo-Garcia, J., 2013, Sedimentology and organic matter of coquina beach ridge - Fine-grained carbonate lagoon system on a Holocene ramp with upwelling: Yucatan Peninsula, Mexico: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
8. **Rankey, E.C.**, Uriam, T., Mary, M., Lowery, J., and Moore, D., 2013, Microbial Mats and Microbialites in Nearshore and Coastal Lacustrine Environments: Beru and Aranuka Atolls, Kiribati: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
9. **Rankey, E.C.**, Garza-Perez, R., Reeder, S.L., Wasserman, H.N., and Rader, M., 2013, Global-scale controls on the sedimentology of isolated carbonate platforms: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
10. Rush, J., **Rankey, E.C.**, and Holubnyak, E., 2013, Multi-scale Geocellular Models of a Holocene Bahamian Oolitic Tidal Bar Belt: How Geologic Resolution Impacts Simulation Studies: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
11. Sparks, A.N., **Rankey, E.C.**, and Wasserman, H.N., 2013, Sediment transport pathways on a Holocene reef sand apron: Evidence from foraminifera, Aranuka Atoll, Kiribati: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
12. Wasserman, H.N., **Rankey, E.C.**, and Uriam, T., 2013, Heterogeneity and depositional variability of reef sand aprons: Integrated field and modeling analysis of dynamics of Holocene Aranuka Atoll, Republic of Kiribati, equatorial Pacific: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
13. Winkel, B., and **Rankey, E.C.**, Is ooid micromorphology related to landscape-scale geomorphology: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
14. **Rankey, E.C.**, 2012, How (and why) the carbonate sediments are seascapes of the Bahamian archipelago are anomalous: A global perspective: *Geological Society of America Annual Meeting*. [Invited talk]
15. Jordan, J., and **Rankey, E.C.**, 2012, Vertical and lateral facies patterns in a Holocene ooid shoal complex, Fish Cays, Crooked-Acklins Platform, southern Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
16. **Rankey, E.C.**, and Doolittle, D.F., 2012, Complex patterns of erosion and sedimentation on an open-ocean carbonate foreslope: Holocene, Little Bahama Bank: *American Association of Petroleum Geologists Annual Meeting*.

17. **Rankey, E.C.**, Jordan, J., and Reeder, S.L., 2012, Prograding oolitic shoreface of the leeward margin of Crooked-Acklins Platform, southern Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
18. Wasserman, H., and **Rankey, E.C.**, 2012, Physical and chemical oceanographic influences on sedimentology and geomorphology of equatorial carbonates: Aranuka Atoll, Gilbert Island Chain, Republic of Kiribati: *American Association of Petroleum Geologists Annual Meeting*.
19. **Rankey, E.C.**, 2012, Are atoll islands disappearing with sea-level rise? *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
20. **Rankey, E.C.**, and Doolittle, D.F., 2012, Erosion and re-sedimentation on an open-ocean margin: Holocene uppermost foreslope, northern Little Bahama Bank: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
21. **Rankey, E.C.**, and Jordan, J., 2012, Impact of Hurricane Irene on shallow carbonate environments, Crooked-Acklins Platform, Bahamas: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
22. **Rankey, E.C.**, Jordan, J., and Reeder, S.L., Progradational oolitic shorefaces: A Holocene example from the leeward margin of Crooked-Acklins Platform, Bahamas: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
23. Hasiotis, S.T., **Rankey, E.C.**, and Knapp, J., 2012, Preliminary analysis of the character and extent of bio-reworking, Pleistocene shallow marine deposits, Bahamas: implications and applications: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
24. Mary, M., and **Rankey, E.C.**, 2012, Production, stabilization and modification of sediment by encrustation and bioerosion: Aranuka Atoll, Kiribati: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
25. Rush, J., and **Rankey, E.C.**, 2012, Deriving predictive spatial trends and useful characterization scales for ooid sand shoal reservoirs from modern and ancient analogs: a review of project scope and progress: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
26. Sparks, A.G., and **Rankey, E.C.**, 2012, Predictive links between geobody attributes and stratigraphy: Lily Bank Holocene ooid sand shoal: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
27. Wasserman, H., and **Rankey, E.C.**, 2012, Sedimentologic and geomorphic trends on an isolated carbonate platform: Aranuka Atoll, Gilbert Island Chain, Republic of Kiribati, Equatorial Pacific: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
28. **Rankey, E.C.**, Reeder, S.L., and Sparks, A.G., 2011, Process dynamics of Holocene ooid

tidal sand shoals: Emergent properties and prediction across scales: *Geological Society of America Annual Meeting*. [Invited talk]

29. **Rankey, E.C.**, Reeder, S.L., and Garza-Perez, R., 2011, Geometry and sedimentology of Holocene shelf-margin reefs and sandy backreef aprons: *American Association of Petroleum Geologists Annual Meeting*.
30. Sparks, A.G., and **Rankey, E.C.**, 2011, Stratigraphic evolution and heterogeneity of a Holocene ooid tidal sand shoal: Lily Bank, Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
31. **Rankey, E.C.**, and Reeder, S.L., 2011, Physical and chemical influences on distribution, morphology and sedimentology of Holocene oolitic sand bodies: *Karst Waters Institute* [Invited talk]
32. **Rankey, E.C.**, and Reeder, S.L., 2011, Process dynamics of Holocene ooid sand shoals: Implications for reservoir analogs: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
33. **Rankey, E.C.**, Reeder, S.L., and Garza-Perez, R., 2011, Global patterns in sedimentology and geomorphology of Holocene reefs and reef sand aprons: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
34. Berkeley, A., and **Rankey, E.C.**, 2011, Holocene tidal flats of Crooked Island, Bahamas: An alternative to the channeled-belt model: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
35. Mary, M., and **Rankey, E.C.**, 2011, Nature of ichnologically controlled porosity: Insights from the Holocene: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
36. Sparks, A.G., and **Rankey, E.C.**, 2011, Stratigraphic heterogeneity and evolution of a Holocene ooid tidal sand shoal: Lily Bank, Bahamas: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
37. Hasiotis, S. **Rankey, E.C.**, and Knapp, J., 2011, Ichnology of shallow marine carbonates, Pleistocene, Bahamas: Potential applications and implications: *Kansas Interdisciplinary Carbonates Consortium Annual Review*.
38. **Rankey, E.C.**, 2010, Nature and scales of autogenic processes in carbonate sedimentary and geomorphic systems: *American Association of Petroleum Geologists Annual Meeting*. [Invited talk.]
39. Berkeley, A., **Rankey, E.C.**, 2009, Geomorphology and sedimentology of intertidal environments, Crooked Island, southeast Bahamas: An alternative model for tidal flat development: *American Association of Petroleum Geologists Annual Meeting*.

40. Hakiki, F., **Rankey, E.C.**, and Reeder, S.L., 2009, Sedimentology and geomorphology of Holocene carbonate systems on the reef-rimmed shelf of Crooked-Acklins Platform, Southern Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
41. **Rankey, E.C.**, Berkeley, A., and Yeeting, K., 2009, Holocene facies patterns on a tide-dominated isolated carbonate platform: Nonouti Atoll, Republic of Kiribati, Central Pacific: *American Association of Petroleum Geologists Annual Meeting*.
42. **Rankey, E.C.**, and Reeder, S.L., 2009, Holocene ooids of Aititaki Atoll, Cook Islands, South Pacific: *American Association of Petroleum Geologists Annual Meeting*.
43. **Rankey, E.C.**, Guidry, S.A., Reeder, S.L., Garza-Perez, R., and Guarin, H., 2008, Integrated Chirp, remote sensing and sedimentologic characterization of geomorphic variability along a shelf margin, northwest Caicos Platform: *American Association of Petroleum Geologists Annual Meeting*.
44. **Rankey, E.C.**, Correa, T.B., and Reeder, S.L., 2008, Morphology and sedimentology of Ambergris ooid shoal, Caicos Platform: *American Association of Petroleum Geologists Annual Meeting*.
45. Simo, J.A.T., **Rankey, E.C.**, Guidry, S.A., and others, 2008, Holocene-Pleistocene geology of a transect of an isolated carbonate platform, NW Caicos Platform, British West Indies: *American Association of Petroleum Geologists Annual Meeting*.
46. Vlaswinkel, B., **Rankey, E.C.**, and Harris, P.M., 2008, Facies trend metrics of modern carbonate depositional systems: *American Association of Petroleum Geologists Annual Meeting*.
47. **Rankey, E.C.**, Reeder, S.L., Ritter, S., and Harris, P.M., 2008, Morphology and dynamics of carbonate tidal sand ridges: Schooner Cays, Bahamas: *American Association of Petroleum Geologists International Conference and Exhibition*.
48. Garza-Perez, J.R., **Rankey, E.C.** and others, 2008, Spatial prediction of reef bathymetry and geomorphology using high-resolution satellite imagery: *International Coral Reef Symposium*.
49. Haikiki, F., and **Rankey, E.C.**, 2008, Linkages between geomorphology and sedimentology along a reef-rimmed shelf: Crooked-Acklins Platform, southern Bahamas: *Comparative Sedimentology Laboratory, Annual Review Meeting*.
50. Jackson, K.L., Eberli, G.P., **Rankey, E.C.**, Amelung, F., and Moore, A.L., 2008, High recurrence rate of paleotsunamis in southeastern Sri Lanka: *AGU Annual Meeting*.
51. Jackson, K. L., Amelung, F., Eberli, G. P., Jayasena, H. A. H., Kehelpannala, K. V. W., Moore, A. L., Peterson, L. C., **Rankey, E. C.**, Swart, P. K., 2008, Sedimentary signatures of paleotsunami deposits in Sri Lanka, *American Society of Limnology and Oceanography*

Ocean Sciences Meeting.

52. Jackson, K. L., Amelung, F., Eberli, G. P., Jayasena, H. A. H., Kehelpannala, K. V. W., Moore, A. L., Peterson, L. C., **Rankey, E. C.**, and Swart, P. K., 2007, Comparative sedimentology of Recent and ancient tsunami deposits in Sri Lanka, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract OS31A-169.
53. **Rankey, E.C.**, Garza-Perez, J.R., and Reeder, S.L., 2007, Why are only some isolated carbonate buildups grain-dominated? *American Association of Petroleum Geologists Annual Meeting*.
54. **Rankey, E.C.**, Guidry, S.A., and Reeder, S.L., 2007, Along-strike variability in sedimentology and geomorphology of a leeward margin, Caicos Platform: *American Association of Petroleum Geologists Annual Meeting*.
55. Reeder, S.L., **Rankey, E.C.**, 2007, Carbonate sedimentology's next generation: New perspectives on shoal geomorphology: *American Association of Petroleum Geologists Annual Meeting*.
56. Jackson, K. L., **E. C. Rankey**, G. P. Eberli, F. Amelung, M. S. Andres, L. C. Peterson, P. K. Swart, H. A. H. Jayasena, K. V. W. Kehelpannala, 2007, Are tsunamis always sedimentologically important events? A case study of sedimentological and geochemical analyses of coastal lagoons, Sri Lanka: *American Association of Petroleum Geologists Annual Meeting*.
57. Levy, M., W. Milliken, P. Harris, S. Strebelle, **Rankey, E.C.**, 2007, Importance of facies-based Earth models for understanding flow behavior in carbonate reservoirs: *American Association of Petroleum Geologists Annual Meeting*.
58. Levy, M., Harris, P.M., Strebelle, S., and **Rankey, E.C.**, 2007, Geomorphology of carbonate systems and reservoir modeling: Carbonate training images, FDM cubes, and MPS: *American Association of Petroleum Geologists Annual Meeting*.
59. Cruz, F.E.G., Eberli, G.P., and **Rankey, E.C.**, 2007, Variable Pleistocene topography below Holocene carbonate shoals: Ocean Cay, Western Great Bahama Bank: *Comparative Sedimentology Laboratory, Annual Review Meeting*.
60. Ruf, A. S., J. W. Elson, B. Motzel, T. S. Dulaney, G. S. Benson, S. Kaczmarek, L. K. Meeks, S. A. Guidry, **E. C. Rankey**, S. L. Reeder, H. Guarin, J. R. Markello, J. Weber, 2007, Integrated CHIRP and water bottom sediment sampling across a Modern carbonate platform, Turks and Caicos, BWI: *American Association of Petroleum Geologists Annual Meeting*.
61. Vlaswinkel, B.M., **Rankey, E. C.**, 2007, Experimental tidal channel geometries in space and time: *American Association of Petroleum Geologists Annual Meeting*.
62. **Rankey, E.C.**, Brock, J., and C.W. Wright, 2006, Bathymetric LiDAR offers insights into

sizes, shapes and distribution of patch reefs, northern Florida Keys, USA: *American Association of Petroleum Geologists Annual Meeting*.

63. Reeder, S.L. and **Rankey, E.C.**, 2006, Comparative morphology of oolitic tidal deltas: *American Association of Petroleum Geologists Annual Meeting*.
64. Vlaswinkel, B., **Rankey, E.C.**, and Harris, P.M., 2006, Facies trend metrics of Modern carbonate depositional systems: *American Association of Petroleum Geologists Annual Meeting*.
65. Jackson, K.L., Amelung, F., Andres, M.S., Eberli, G., Jayasena, H.A.H., Kehelpannala, K.V.W., Peterson, L. and **Rankey, E.C.**, 2006, Tsunami Sediments in Coastal Lagoons, Sri Lanka: Implications for Paleotsunamis: *American Association of Petroleum Geologists Annual Meeting*.
66. Watney, W.L., Franseen, E.K., Byrnes, A.P., Miller, R.D., Raef, A., Reeder, S.L., and **Rankey, E.C.**, 2006, Characterization of seismically imaged Pennsylvanian ooid shoal geometries and comparison with the Modern: *American Association of Petroleum Geologists Annual Meeting*.
67. Cruz, F.E.G., Eberli, G.P., and **Rankey, E.C.**, 2006, Cat Cay shoals revisited: contrasting morphologies in a bank-margin system, Bahamas: *American Association of Petroleum Geologists International Conference*.
68. Reeder, S.L. and **Rankey, E.C.**, 2006, Sand is sand, physics is physics: Comparative morphology of oolitic tidal deltas: *Comparative Sedimentology Laboratory, Annual Meeting*.
69. **Rankey, E.C.**, Guidry, S., Reeder, S.L., and Guarin, H., Along-strike variability in sedimentology and geomorphology of a leeward margin, Caicos Platform. 2006, *Comparative Sedimentology Laboratory, Annual Meeting*.
70. Cruz, F.E., Eberli, G.P., **Rankey, E.C.**, and Byrnes, A.P., 2006, Modern processes and petrophysical heterogeneity of Pleistocene ooid shoals around Ocean Cay, Bahamas: Lessons for ancient reservoirs. *Comparative Sedimentology Laboratory, Annual Meeting*.
71. Vlaswinkel, B., and **Rankey, E.C.**, 2006, The nature of growth and morphology of experimental tidal channel systems. *Comparative Sedimentology Laboratory, Annual Meeting*.
72. **Rankey, E.C.**, Vlaswinkel, B., Harris, P.M., and Levy, M., 2006, Use of quantitative data from Modern grainstone and reef analogs as input to reservoir simulation models. *Comparative Sedimentology Laboratory, Annual Meeting*.
73. Jackson, K.L., **Rankey, E.C.**, Eberli, G.P., Amelung, F., Andres, M.S., Peterson, L.C., and Swart, P.K., 2006, Are tsunamis always sedimentologically important events? *Comparative Sedimentology Laboratory, Annual Meeting*.

74. **Rankey, E.C.**, Byrnes, A.P., Watney, L., and Reeder, S.L., 2006, Sedimentologic and petrophysical properties of a Pennsylvanian ooid shoal, Kansas: *Comparative Sedimentology Laboratory, Annual Meeting*.
75. **Rankey, E.C.**, Riegl, B., and Steffen, K., 2005, Landscape-scale morphodynamics of ooid shoals, Lily Bank, Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
76. Reeder, S.L., and **Rankey, E.C.**, 2005, 'A tale of two storms' – Impacts of hurricanes Frances and Jeanne on carbonate systems, Abacos, Bahamas: *GSA Annual Meeting*.
77. Reeder, S.L., and **Rankey, E.C.**, 2005, Stuck on spin cycle: Interactions between tidal flows and ooid shoals, Bahamas: *GSA Annual Meeting*.
78. Steffen, K., **Rankey, E.C.**, and Fiechter, J., 2005, Links among sedimentology, geomorphology, and hydrodynamics in a mixed carbonate-clastic tidal delta: *GSA Annual Meeting*.
79. Jackson, K. L., Amelung, F., Andres, M. S., Eberli, G., Jayasena, C., Kehelpannala, K. W., Peterson, L., and **Rankey, E.**, 2005, Comparative study of the sediment record of coastal lagoons, Sri Lanka: Implications for paleotsunamis, *Eos Trans. AGU*, 86 (52), *Fall Meet. Suppl.*, Abstract U11A-0801.
80. Reeder, S.L., and **Rankey, E.C.**, 2005, Stuck on spin cycle: Interactions between tidal flows and ooid shoals, Bahamas. *Comparative Sedimentology Laboratory, Annual Meeting*.
81. **Rankey, E.C.**, Riegl, B., and Steffen, K., 2005, Close linkages between geomorphology and granulometry in an oolitic marine sand belt, Lily Bank, Bahamas. *Comparative Sedimentology Laboratory, Annual Meeting*.
82. Cruz, F.E., Eberli, G.E., **Rankey, E.C.**, and Byrnes, A., 2005, Patterns and processes in ooid shoals around Ocean Cay, Bahamas: using the Modern to predict the Pleistocene. *Comparative Sedimentology Laboratory, Annual Meeting*.
83. Vlaswinkel, B., Ellis, C., and **Rankey, E.C.**, 2005, Preliminary results of a physical modeling approach to quantifying four-dimensional tidal creek network morphometrics. *Comparative Sedimentology Laboratory, Annual Meeting*.
84. **Rankey, E.C.**, Brock, J., and Wright, W., 2005, Sizes, shapes and distribution of patch reefs, northern Florida Keys. *Comparative Sedimentology Laboratory, Annual Meeting*.
85. Reeder, S.L., and **Rankey, E.C.**, 2005, 'A Tale of Two Storms' – Impacts of Hurricanes Frances and Jeanne on carbonate systems, Abacos, Bahamas. *Comparative Sedimentology Laboratory, Annual Meeting*.

86. Jackson, K.L., Amelung, F., Andres, M.S., Eberli, G.E., Jayasena, H.A.H., Kehelpannala, K.V.W., Peterson, L., and **Rankey, E.C.**, 2005, Tsunami sediments in coastal lagoons, Sri Lanka: Implications for paleotsunamis. *Comparative Sedimentology Laboratory, Annual Meeting*.
87. **Rankey, E.C.**, 2004, Relations between shallow shelf carbonate facies and water depth, South Florida: *American Association of Petroleum Geologists Annual Meeting*
88. **Rankey, E.C.**, and Burgess, P.B., 2004, The role of system-internal dynamics on the generation of peritidal carbonate cycles: Insights from modeling and field observations: *American Association of Petroleum Geologists Annual Meeting*.
89. **Rankey, E.C.**, 2004, Space – The final frontier: Nature and implications of multi-scale spatial heterogeneity in carbonate reservoir analogs: *American Association of Petroleum Geologists Hedberg Conference*.
90. **Rankey, E.C.**, 2004, Spatial heterogeneity of modern carbonate systems: Implications for reservoir complexity: *Southwest Section American Association of Petroleum Geologists*
91. **Rankey, E.C.**, 2004, Landscape structure of tidal creeks, creek networks, and facies, Andros Island, Bahamas: Implications for reservoir modeling: *Comparative Sedimentology Laboratory, Annual Meeting*
92. **Rankey, E.C.**, 2004, How dramatic are hurricanes in shallow-water carbonates: *Comparative Sedimentology Laboratory, Annual Meeting*
93. Al Kharusi, L., **Rankey, E.C.**, and Eberli, G. P., 2004, Mechanical stratigraphy of the Warsaw and Salem Formations, St. Louis, Missouri: Preliminary observations and interpretations: *GSA North-Central Meeting*.
94. Ginsburg, R.N., **Rankey, E.C.**, Zhang, C., and Mooers, C.N., 2004, Tropical Systems Research at the University of Miami's Rosenstiel School of Marine and Atmospheric Science (RSMAS): *American Geophysical Union Fall Meeting*.
95. Steffen, K., **Rankey, E.C.**, Weger, R., Grasmueck, M., and McNeill, D., 2004, Using high-resolution ground penetrating radar to investigate the 3-D sedimentologic architecture of the Pleistocene Miami Oolite: *American Association of Petroleum Geologists Annual Meeting*.
96. Waite, L.E., and **Rankey, E.C.**, 2004, Source-to-sink: A systems approach to sedimentation and the stratigraphic record: *American Association of Petroleum Geologists Annual Meeting*.
97. Vlaswinkel, B., and **Rankey, E.C.**, 2004, Low energy coasts in times of transgression: sediment dynamics and perhaps.....a new stratigraphic model: *Comparative Sedimentology Laboratory, Annual Meeting*.
98. Steffen, K., **Rankey, E.C.**, and Fiechter, J., 2004, Mixed carbonate-clastic tidal delta

sedimentology and morphodynamics: Implications for geologic models: *Comparative Sedimentology Laboratory, Annual Meeting*.

99. Steffen, K., **Rankey, E.C.**, Grasmueck, M., and McNeill, D., 2004, Three-dimensional sedimentologic heterogeneity in the Miami Oolite: *Comparative Sedimentology Laboratory, Annual Meeting*.
100. Vlaswinkel, B., Wanless, H.R., and **Rankey, E.C.**, 2004, Processes and dynamic evolution of a rapidly changing, low energy carbonate coastal system, Cape Sable, southwest Florida: *International Association of Sedimentologists*.
101. **Rankey, E.C.**, 2003, Internal architecture and sequence stratigraphy of Middle Mississippian (Visean) grainstones, Eastern Missouri: *American Association of Petroleum Geologists Annual Meeting*
102. **Rankey, E.C.**, and Burgess, P.B., 2003, Unraveling complexity on carbonate tidal flats: Insights from integrated modeling and field observations: *American Association of Petroleum Geologists Annual Meeting*
103. **Rankey, E.C.**, and Vlaswinkel, B., 2003, Morphometrics and scaling of tidal creek networks, Florida and Bahamas: Implications for facies distribution in geologic models: *Comparative Sedimentology Laboratory, Annual Meeting*.
104. **Rankey, E.C.**, 2003, Stratigraphic heterogeneity of Lower Carboniferous grainstones, Missouri: *Comparative Sedimentology Laboratory, Annual Meeting*
105. **Rankey, E.C.**, 2003, How much does water depth control facies distribution? A case study from the Florida Shelf: *Comparative Sedimentology Laboratory, Annual Meeting*
106. Vlaswinkel, B., Wanless, H.R., and **Rankey, E.C.**, 2003, Changing land- and seascape environments at Cape Sable, a coastal wetland complex in south florida: *EGS - AGU - EUG Joint Assembly*.
107. **Rankey, E.C.**, Hummer, D., and Vlaswinkel, B., 2002, Morphometrics of carbonate tidal creek systems, Bahamas and Florida: Implications for tidal flat response to sea-level rise: *GSA Annual Meeting*.
108. **Rankey, E.C.**, Steffen, K., and Enos, P., 2002, (Lack of) impact of Hurricane Michelle on tidal flats, Andros Island, Bahamas: *GSA Annual Meeting*.
109. **Rankey, E.C.**, Using Remote Sensing Data in the Classroom to Explore the Dynamics of Earth Surface Systems: Inquiry, Exploration, and Discovery: *North-Central GSA Meeting*
110. **Rankey, E.C.**, 2002, Self-organization of the coastal system of Andros Island, Bahamas: Implications for coastal dynamics: *North-Central GSA Meeting*

111. **Rankey, E.C.**, 2002, Sizes, shapes, and patterns of sediment accumulations on a Modern tidal flat and stratigraphic implications: Three Creeks area, Andros Island, Bahamas: *American Association of Petroleum Geologists Annual Meeting*
112. **Rankey, E.C.**, Vander Velden, K., Morgan, J., Langley, M., 2002, Insights into sedimentology and evolution of a Modern carbonate tidal flat from historical and satellite imagery: Andros Island, Bahamas: *American Association of Petroleum Geologists Annual Meeting*.
113. **Rankey, E.C.**, 2002, Architecture, origin, and significance of a Lower Carboniferous (Visean) grainstone-filled valley complex: *Comparative Sedimentology Laboratory, Annual Meeting*
114. **Rankey, E.C.**, 2002, Using remote sensing, GIS, and carbonate sedimentology to quantify complexity in Modern carbonate systems: Implications for exploration and production: *Comparative Sedimentology Laboratory, Annual Meeting*
115. Bray, R.D., and **Rankey, E.C.**, 2002, Is wetter better? The impact of paleoclimate on vadose diagenesis and implications for reservoir characterization: *GEO 2002, Middle East Oil Show*.
116. **Rankey, E.C.**, 2001, Hyperspectral remote sensing data as input for spatial analysis of carbonate sediment accumulation patterns: A feasibility test: *Iowa Space Grant Consortium Annual Meeting*.
117. **Rankey, E.C.**, Vander Velden, K., 2001, Quantifying facies patterns, shapes and sizes by integrating remote sensing, GIS, and carbonate sedimentology: Three Creeks area, Andros Island, Bahamas: *GSA Annual Meeting*.
118. **Rankey, E.C.**, 2001, Quantifying spatial patterns and shapes of carbonate sediment accumulations using remote sensing, Andros Island, Bahamas: *International Association of Mathematical Geology*
119. **Rankey, E.C.**, Graesch, M., and Davis, N., 2001, Architecture and stratigraphic implications of a carbonate-filled channel complex: Peerless Park Member (Keokuk Formation, Mississippian), St. Louis, MO: *GSA North-Central Meeting*.
120. Weber, L.J., **Rankey, E.C.**, et al., 1998, Delineation of high permeability thief zones: Integration of core, log, and engineering data in a large Middle East oil field: *Exxon Advanced Formation Evaluation Seminar*.
121. Tremblay, M.L., and **Rankey, E.C.**, 1998, Insights into reservoir architecture and play concepts from analysis of an outcropping mixed carbonate-siliciclastic shelf and shelf margin: Pennsylvanian-Permian Snaky Canyon Formation, Central Idaho: in (Winfree, K., ed.) *West Texas Geological Society Publication* 98-105.

122. Lehrmann, D.J., **Rankey, E.C.**, and Goldhammer, R.K., 1997, Relationships between parasequence stacking patterns and seismic-scale depositional sequence geometries: Upper Guadalupian (Permian) strata of Slaughter Canyon, New Mexico: *American Association of Petroleum Geologists 1997 Annual Meeting Abstracts*.
123. **Rankey, E.C.**, 1996, The roles of system-external and -internal forcing mechanisms on lateral and vertical high-resolution stratigraphic predictability: A quantitative case study from the Upper Paleozoic, western U.S.A.: *Numerical Experiments in Stratigraphy, An International Workshop: Extended Abstracts*, 129-131.
124. Watney, W.L., **Rankey, E.C.**, and others, 1995, Cycle hierarchy in Middle and Upper Pennsylvanian strata of the Midcontinent -- A review: *American Association of Petroleum Geologists Midcontinent Section Meeting Official Program*, A12.
125. Lehrmann, D.J. and **Rankey, E.C.**, 1995, Relations between meter-scale parasequence stacking patterns and seismic scale geometries in a mixed carbonate-clastic system: Upper Guadalupian (Permian) Seven Rivers, Yates, and Tansill Formations, New Mexico: *Exxon Production Research Company Carbonate Exploration and Exploitation Symposium*.
126. **Rankey, E.C.**, 1995, Insights into Permian pedogenesis and climate: Magnetic stratigraphy of four stacked paleosols, Lower Permian (Wolfcampian) Roca Shale, Kansas: *American Association of Petroleum Geologists Bulletin*, 79, 1406.
127. **Rankey, E.C.**, and Watney, W.L., 1994, Analysis of stratigraphic/sedimentologic computer models: *International Association for Mathematical Geology Extended Abstracts*, 293-298.
128. **Rankey, E.C.**, and Walker, K.R., 1993, Milankovitch-induced stratigraphic forcing may not be discernible from the stratigraphic record: "Cyclic" facies of the Maryville Limestone (Middle Cambrian), southern Appalachians: *Geological Society of America Annual Meeting*
129. **Rankey, E.C.**, Srinivasan, K., and Walker, K.R., 1992, Coincident exposure/drowning surfaces within Middle Cambrian grand cycles, east Tennessee: A model for abrupt limestone/shale transitions/sequence boundaries: *Geological Society of America Annual Meeting*

Minor Presentations (Invited Seminars/Short Courses with no Published Abstract)

- 2013** *Republic of Kiribati Ministry of Fisheries and Marine Resources Development*, "Reefs, sediment, and islands: Report on continuing research in Kiribati"
- Saudi Aramco, Eastern Area Exploration Department*, "Links between geobody architecture and depositional phi/k of an ooid sand shoal complex, Bahamas"
- Saudi Aramco, GTT*, "Process dynamics of ooid sand shoals: Prediction across scales in reservoir analogs"

2012 *Republic of Kiribati Ministry of Fisheries and Marine Resources Development*, “Past and on-going research in Kiribati”

West Texas Geological Society, “Links between Oolitic Reservoir Geometries and Internal Porosity and Permeability: Insights from the Holocene of the Crooked-Acklins Platform, southern Bahamas”

International Centre for Study of Carbonate Reservoirs (University of Edinburg, Scotland), “Predicting attributes of oolitic depositional geobodies from their internal sedimentology and stratigraphy: Insights from the Holocene succession of the Bahamas” (**invited keynote**)

Schlumberger-Doll Research “Complexity in carbonate reservoirs: The depositional template”

2011 *Republic of Kiribati Ministry of Fisheries and Marine Resources Development*, “Mode and magnitude of shoreline change, Kiribati”

International Centre for Study of Carbonate Reservoirs (University of Edinburg, Scotland), Process dynamics of Holocene ooid sand shoals: Emergent properties and prediction across scales (**invited keynote**)

2010 *BHP Billiton*, “Seismic Characterization of Carbonate Reservoirs,” (**invited short course**)

Kansas Geological Society, “Morphodynamics and Depositional Heterogeneity of Bahamian Holocene Ooid Shoals”

2009 *Republic of Kiribati Ministry of Fisheries and Marine Resources Development*, “Preliminary report on impact of ENSO climatic variability on islet stability, Kiribati”

Tulsa Geological Society, “Morphodynamics and Depositional Heterogeneity of Bahamian Holocene Ooid Shoals” [American Association of Petroleum Geologists Distinguished Lecture Series]

Colorado State University, “Controls on Sedimentology and Geomorphology of Holocene Isolated, Shallow, Tropical Carbonate Platforms” [American Association of Petroleum Geologists Distinguished Lecture Series]

New Mexico Tech, “Controls on Sedimentology and Geomorphology of Holocene Isolated, Shallow, Tropical Carbonate Platforms” [American Association of Petroleum Geologists Distinguished Lecture Series]

2008 *ExxonMobil Exploration Company*, “Workshop on the Caicos Platform” (**invited short course**)

West Virginia University, “Controls on Sedimentology and Geomorphology of Holocene Isolated, Shallow, Tropical Carbonate Platforms” [American Association of Petroleum Geologists Distinguished Lecture Series]

University of Memphis, “Controls on Sedimentology and Geomorphology of Holocene Isolated, Shallow, Tropical Carbonate Platforms” [American Association of Petroleum Geologists Distinguished Lecture Series]

Utah Geological Society, “Controls on Sedimentology and Geomorphology of Holocene Isolated, Shallow, Tropical Carbonate Platforms” [American Association of Petroleum Geologists Distinguished Lecture Series]

University of Kansas, “Controls on Facies Patterns of Holocene Carbonate Platforms”

Kansas Geological Survey, “Controls on Facies Patterns of Holocene Carbonate Platforms: Geologic Implications”

Community Surface Dynamics Modeling System – Keynote Lecture at NSF Workshop, “The Yin and Yang of Carbonate Depositional Systems”

Republic of Kiribati Ministry of Fisheries and Marine Resources Development, “Preliminary report on sedimentologic research on Nonouti”

2007 *Pioneer Natural Resources*, “Carbonate Seismic Stratigraphy” (**invited short course**)

Cambridge University, “Controls on Facies Patterns of Holocene Carbonate Platforms”

University of Edinburgh, “Why are only some shallow, subtropical carbonate platforms grainy?”

Heriot-Watt University, “Holocene Ooid Shoals and Reservoir Simulations”

2006 *ExxonMobil Exploration Company* “Modern ooid shoals and ancient analogs”

Chevron Technology Company “Landscape homomorphism and prediction in Earth surface systems”

2005 *US Army Corps of Engineers, Waterways Experiments Station, Vicksburg, MS*, “Shoal morphodynamics and the functions of feedbacks in carbonate systems”

Pioneer Natural Resources “Is there a ‘preferred shape’ in tidally dominated sand shoals?”

Pioneer Natural Resources “Comparative geomorphology of modern carbonate systems” (**invited short course**)

Chevron Technology Conference “Trend Metrics of Modern Carbonate Depositional Systems 1: CarbWeb – A Qualitative Image Database”

Chevron Technology Company, San Ramon “Nature and dynamics of a Modern Bahamian ooid shoal: ‘Shapes’ of Marine Tidal Sand Geobodies”

Kansas Geological Survey “Nature and dynamics of a Modern Bahamian ooid shoal: Implications for ancient reservoir analogs”

2004 *ChevronTexaco Technology Conference* “Comparative geomorphology of modern carbonate systems” (**invited short course**)

Rice University “Ecohydrology of a Carbonate Tidal Flat, Bahamas, and Why the Petroleum

Geologist Should Care.”

Shell E&P “Space - the Final Frontier: Geomorphology, GIS and Geologic Models

Southwest Section American Association of Petroleum Geologists “Seismic Characterization of Carbonate Reservoirs” (**invited short course**)

Pioneer Natural Resources “Spatial heterogeneity of carbonate tidal flats: Implications for geologic models”

NASA/ESSE21 Conference “Earth System Science at UM”

2003 *West Texas Geological Society* “Spatial patterns in modern carbonate depositional systems from remote sensing and GIS: Implications for reservoir analogs”

West Texas Geological Society “Seismic Reservoir Characterization” (**short course**)

ExxonMobil Exploration Company “Neogene Carbonate Stratigraphy: A Caribbean Perspective” (keynote speaker, conference on Southeast Asian Carbonate Systems)

NASA/ESSE21 Conference “Music of the Spheres: Coastal Earth Science at UM”

ExxonMobil Exploration Company “Use of remote sensing data to study modern carbonate systems”

2002 *Massachusetts Institute of Technology* “Carbonate Coasts as Complex Systems: A top-down approach integrating remote sensing, GIS and carbonate sedimentology”

National Center for Earth Surface Dynamics, University of Minnesota “Carbonate Coasts as Complex Systems: A top-down approach integrating remote sensing, GIS and carbonate sedimentology”

Florida International University “Carbonate Coasts as Complex Systems: A top-down approach integrating remote sensing, GIS and carbonate sedimentology”

University of Miami, “Chaos on the Coast?”

Washington University in St. Louis “Chaos on the Coast?”

2001 *University of Northern Iowa*

University of Iowa

University of Nebraska “Carbonate Seismic Stratigraphy” (**day short course**)

GRANTS AND/OR OTHER FUNDED PROJECTS

External Funding

- *Kansas Interdisciplinary Carbonates Consortium* (>\$450,000 annually, co-PI with Bob Goldstein and Evan Franseen; total funding >\$1,000,000)
- *National Science Foundation* (\$236,804; PI) “Geomorphic evolution and heterogeneity of Holocene carbonate tidal sand shoals” (PI) (2010-2013)

- *Schlumberger Information Systems* (\$625,436) “Petrel Software Licenses and Maintenance” (PI, with Bob Goldstein and Evan Franseen) (2011-)
- *Shell International Exploration and Production* (\$62,500; PI) “High-resolution mapping of upper slope features on a carbonate platform margin” (PI) (2009-2011)
- *Schlumberger-Doll Research* (\$50,000 - grant) “New approaches to reservoir modeling from Holocene carbonate analogs” (PI) (2009)
- *National Science Foundation* (\$29,626) “Impact of ENSO climate shifts on atoll shoreline stability, Kiribati” (PI) (2009-2010)
- *Schlumberger-Doll Research* (\$50,000 - grant) “New approaches to reservoir modeling from Holocene carbonate analogs” (PI) (2008)
- *National Science Foundation* (\$50,000) “Community Sedimentary Model Science Plan for Carbonate Systems Workshop; Golden, Colorado; February 27-29, 2008” (Co-I with Rick Sarg, Evan Franseen)
- *Shell International Exploration and Production* (\$198,000) “Global analysis of exploration-scale patterns and processes of modern carbonate platforms: Phase 2” (PI; July 2006-January 2009)
- *Army Research Office* (\$313,380) “Shoal dynamics and the functions of feedbacks in coastal systems” (PI; November 2004-October 2007)
- *National Science Foundation* (\$271,645) “Landscape-scale morphology and dynamics of some Bahamian ooid shoals” (PI; November 2004 – November 2008)
- *Shell International Exploration and Production* (\$190,000) “Global analysis of exploration-scale patterns and processes of modern carbonate platforms” (PI; June 2004 – January 2006)
- *NIEHS* (\$25,000) “From eyes in the sky to bugs in the sand: The environmental context of Virginia Key” (PI; May 2004-March 2005)
- *Center for Oceans and Human Health/National Institutes of Health* (\$36,240) “Recreational Microbes: Assessment of Microbial Indicators for Monitoring Recreational Water Quality in Marine Sub-Tropical Environments” (PI)
- *Shell International Exploration and Production* (\$11,819) “Quantitative Spatial Statistical Analysis of Patterns in Fracture Systems” (PI; 2003)
- *NASA/Universities Space Research Program* (\$65,570) “Music of the Spheres: Coastal Earth Systems at the University of Miami” (PI; March 2003-Feb 2005)
- *Shell International Exploration and Production, The Hague*, (\$70,000) “Use of remote sensing data to quantify the geometry and continuity of grainstone shoal complexes, Bahamas” (PI; June 2002 – December 2003)
- *ExxonMobil Exploration Company* (\$35,000) “Quantifying Spatial Patterns and Shapes of Carbonate Sediment Accumulations: Integrating Carbonate Sedimentology, Remote Sensing & GIS” (PI; June 2002 – September 2003)
- *National Science Foundation* (\$8,652) “Sedimentologic and geomorphic response of a tidal flat

system to Hurricane Michelle: Andros Island, Bahamas” (PI; January 2002-June 2003)

- *Petroleum Research Fund* (\$25,000) “Quantifying Spatial Patterns and Shapes of Carbonate Sediment Accumulations: Integrating Carbonate Sedimentology, Remote Sensing and GIS” (PI; June 2001 - August 2003)
- *NASA* (\$23,038) “Mapping patterns of tidal flat accumulations: Andros Island tidal flats, Bahamas” data acquisition
- *NASA* (\$13,038) “Geomorphic and sedimentologic impact of Hurricane Michelle on tidal flats, Bahamas” data acquisition
- *ExxonMobil Exploration Company* (PI; \$7,225) “Geometry and Sequence Stratigraphy of Carbonate Grainstone Bodies: Middle Mississippian Salem Limestone near St. Louis, MO”
- *Martin Marietta Aggregates* (\$6,000; co-PI) “Integrated Geologic and Geophysical Characterization of the Gilmore City Formation, Alden Quarry, Alden, IA: A Feasibility Study”
- *NASA (Iowa Space Grant Consortium)* (PI; \$8,000) “Hyperspectral Remote Sensing Data as Input for Spatial Analysis of Carbonate Sediment Accumulation Patterns: A Feasibility Test”

Internal Funding

University of Kansas Commons “Learning from Indigenous Science: Indigenous Perception and Adaptation to Environmental Change in Kiribati” (\$28,950, with Jay Johnson, Kambati Uriam and Johannes Fedema) (2012)

KU New Faculty General Research Fund (\$8,000) “Ocean Acidification and the Balance Between Internal Constructive and Destructive Influences on Pacific Atoll Reef Systems”

KU TEACHING RECORD

List of Courses Taught

Course Number & Title	Sem/Year	# Enrolled
Geo 302 – Introduction to Oceanography	Fall 2012	178
Geo 732 – Carbonate Depositional Systems	Fall 2012	10
Geo 302 – Introduction to Oceanography	Fall 2011	115
Geo 761 – Regional Field Geology, Florida/Bahamas	Spring 2012	14
Geo 732 – Carbonate Depositional Systems	Fall 2011	9
Envr 720 – Climate and Borders	Fall 2011	15
Geo 302 – Introduction to Oceanography	Fall 2010	115
Geo 732 – Carbonate Depositional Systems	Fall 2010	5
Geo 302 – Introduction to Oceanography	Fall 2009	131
Geo 732 – Carbonate Depositional Systems	Fall 2009	5
Geo 732 – Carbonate Depositional Systems	Spring 2009	8

Undergraduate Advising Record

I have several geology undergraduates who presently are working with me on research projects. Bethany Winkel is working on micromorphology of Holocene ooids and relation to geomorphology, Adrienne Duarte studies shoreline change in Kiribati, and Ashton Sparks is examining the distribution of foraminifera on reef sand aprons in Kiribati.

In the past at KU, Matthew Rader examined the sedimentology of Alacran Reef, Mexico (2012), and Jessica Jordan studied the stratigraphy of a Holocene ooid sand shoal in the Bahamas (2012). I have served as research advisor for Shane Miller, through the Environmental Studies program, researching the role of habitat fragmentation on shark abundances in tidal creeks of the Bahamas (2012). Finally, Kat Leibtrau completed an undergraduate independent study with me, examining the role of global change on fisheries, as expressed in the Abacos, Bahamas.

I served as directed study (Geo 391) advisor for Morgan Riley, KU School of Education, who completed an educational module on Geology of the Bahamas, presented to Bahamian education officials in 2009.

Graduate and Postgraduate Advising Record

Student Committees: Committee Chair: Doctoral

Michelle Mary (Ph.D., *chair*)

Jason Rush (Ph.D., *chair*)

Stacy Reeder (Ph.D., *chair*, defended Spring 2007, University of Miami)

Brigitte Vlaswinkel (Ph.D; *co-chair with Hal Wanless*, defended Spring 2007, University of Miami)

Eduardo Cruz (Ph.D., *co-chair with Gregor Eberli*, finished Fall 2008, University of Miami)

Student Committees: Committee Chair: Masters

Jennifer Lowery (M.S., *chair*)

Hannah Wasserman (M.S., *chair*, defended July 2013)

Andrew Sparks (M.S., *chair*, defended June 2011)

Fikril Haikiki (M.A., *co-chair with Gregor Eberli*, defended May 2010, University of Miami)

Kelly Jackson (M.S., *co-chair with Gregor Eberli*; defended Fall 2008, University of Miami)

Kelley Steffen (M.S., *chair*, defended Spring 2005, University of Miami)

Student Committees: Other graduate committee service

Hunter Harlow (M.S.)

Clyde Redger (M.S.)

Peter Senior (M.S., defended Fall 2012)

Mark Villareal (M.S., defended Spring 2012)

Art Gleason (Ph.D., defended, Winter 2008, University of Miami)
Dave Katz (Ph.D., defended Fall 2006, University of Miami)
Kathryn Lamb (Ph.D., defended Fall 2006, University of Miami)
Ralf Weger (Ph.D., defended 2005, University of Miami)
Tiina Manne (M.S., defended Summer 2003, University of Miami)

Thesis examiner: Mike Page, James Cook University – Townsville: “Late Pleistocene – Holocene development of mixed siliciclastic-carbonate sequences east of the Great Barrier Reef, northeast Australian margin.”

Postdoctoral Fellows

Andrew Berkeley (Ph.D., Manchester Metropolitan University) (2008-2009)
Rodrigo Garza-Perez (Ph.D., Centro de Investigacion y Estudios Avanzados del I.P.N. Unidad Merida) (2005-2006)

Visiting Scholars

I have hosted two visiting scholars.

Dr. Hao Huang, Institute of Geology, Chinese Academy of Geological Sciences (2012). Project explored integrating carbonate facies and biota to understand the paleoclimate and tectonic evolution of a micro-continent in China.

Dr. Scott Ritter, BYU (2007). Project examined Pleistocene and Holocene facies and stratigraphy in the Bahamas.

Additionally, two of my students have won awards:

Brigitte Vlaswinkel (Univ. Miami) Outstanding dissertation, Marine Geology and Geophysics (2007)

Kelly Jackson (Univ. Miami) Dean’s Prize for outstanding M.S. thesis (2008)

SERVICE RECORD

University of Kansas Service

- KU Center for Undergraduate Research, Advisory Committee, 2012-
- KU Geology, Chair, Ritchie Chair Search Committee, 2011-2012
- KU, C-CHANGE Instructor, 2011
- KU Geology, Graduate Admissions Committee, 2009-2012
- KU Geology, Library Liaison

Professional Service outside the University

National and International

Editorial responsibilities

- Co-Editor, *Journal of Sedimentary Research*, 2008-
- Associate Editor: *Sedimentology*, 2006-2008

- Associate Editor: *Journal of Sedimentary Research*, 2004-2008
- Associate Editor: *Geological Society of America Bulletin*, 1998-2005 [Associate Editor Special Mention for quality and volume of work, 2001]
- Special Guest Editor, *Journal of Geoscience Education*, “The Symphony of the Spheres: Recent Advances in Earth System Science Education”

Professional Society Leadership

- SEPM Council, 2008-
- Co-Chair, Ad Hoc Committee on Membership Issues, SEPM, 2012
- Chair, Ad Hoc Committee on Publication Ethics, SEPM, 2011
- Chair, Ad Hoc Committee on Journal Publication Issues, SEPM, 2010
- Chair, SEPM Search Committee, *Sedimentary Record* Editors, 2009
- Co-convener, ‘Community Surface Dynamic Modeling System – Carbonates,’ February 2008
- SEPM Journal of Sedimentary Research ‘Outstanding Paper’ Selection Committee, 2006
- Member, SEPM Research Concepts Committee, 2004-2007
- Member, SEPM E-Publishing Committee, 2004-2006

Research Sessions/Conferences

- Karst Waters Institute, Session Co-chair, ‘Climate Change and Landscapes’, 2011
- Co-convener, “Mapping, Modeling, and Understanding Facies Heterogeneity in Carbonate Deposits” American Association of Petroleum Geologists/SEPM annual meeting, 2010
- SEPM Research Symposium Session, Co-Chair: ‘Changing Paradigms in Carbonates’ SEPM/American Association of Petroleum Geologists Annual Meeting, 2007
- “Community Surface Dynamic Modeling System: Implementation Workshop” (May 2004, Minneapolis, MN)
- Co-convener, “New Directions in Sedimentary Geology” (April 2004) NSF-sponsored day discussion/workshop at American Association of Petroleum Geologists meeting
- Session convener, “Recent Developments in Understanding Carbonate Geology of the Midcontinent” (April 2004) NC GSA Meeting
- Session convener, International Association of Mathematical Geology, Cancun, 2001
- Leader: Carbonate Research Group, American Association of Petroleum Geologists Annual Meetings, 1997-1998
- Convener: Numerical Experiments in Stratigraphy: An International Symposium, May 1996

Advisory Committees

- International Centre for Study of Carbonate Reservoirs, Institute of Petroleum Engineering, University of Edinburgh/Heriot-Watt University, 2011-
- Earth System Science Education Alliance Advisory Committee, 2006-2009
- Advisory Council, Northwest Missouri State University, Department of Geology and Geography: 2001
- Alumni Advisory Council, Augustana College, Department of Geology: 1999-2001

Field Trip Leadership

- Leader, Field Trip, Cairn Energy, South Florida-Bahamas, June 2013

- Leader, Field Trip, PBS-SEPM, to Crooked-Acklins Platform, Bahamas, April 2013
- Leader, Field Trip, Maersk and Shell, to Crooked-Acklins Platform, Bahamas, May 2011
- Leader, Field Trip, Maersk and Pioneer Natural Resources, to Crooked-Acklins Platform, Bahamas, May 2010
- Leader, Field Trip, Pioneer Natural Resources, to Crooked-Acklins Platform, Bahamas, Nov 2009
- Leader, Field trip, Comparative Sedimentology Lab sponsors meeting, to Crooked-Acklins Platform, Bahamas, Oct 2008
- Leader, Field trip, Chevron, to Florida Keys, July 2007
- Leader, Field trip, ExxonMobil Exploration, to Caicos Platform, March 2007
- Leader, Field trip, Pioneer Natural Resources, to Crooked-Acklins Platform, Bahamas, November 2006
- Leader, Field trip, ExxonMobil Exploration, to Caicos Platform, May 2006
- Leader, Field trip, Chevron, to Florida Keys, February 2006
- Leader, Field trip, Comparative Sedimentology Lab sponsors meeting, to Abacos, Bahamas, Oct 2005
- Leader, Field trip, Pioneer Natural Resources, to Abacos, Bahamas, July 2005
- Leader, Field trip, Geological Society of America, to St. Louis, MO, April 2004
- Leader: Field trip, American Association of Petroleum Geologists Hedberg Meeting, to Sacramento Mountains, NM, March 2004
- Leader, Field trip, ExxonMobil Exploration, to St. Louis, MO, June 2003
- Leader, Field Trip, MIT Sedimentology Class to Andros Island, Bahamas, March 2003
- Leader, Field trip stops, Intl. Commission on Stratigraphy, to St. Louis, MO, June 2001
- Leader: Field trip for West Texas Geological Society, October 1998
- Leader: Field trip for American Association of Petroleum Geologists National Meeting, to Sacramento Mountains, NM, May 1998

Reviewer

Manuscript Reviewer

- *Sustainability Science*
- *Nature Geoscience*
- *Journal of Sedimentary Research*
- *Geological Society of America Bulletin*
- *SEPM Special Publications*
- *Sedimentary Geology*
- *Geological Magazine*
- *Coral Reefs*
- *American Association of Petroleum Geologists Special Publications*
- *American Association of Petroleum Geologists Bulletin*
- *Geomorphology*
- *Geology*
- *Nonlinear Processes in Geophysics*
- *Kuwait Journal of Science and Engineering*
- *Bulletin of Canadian Petroleum Geology*

- *Palaios*
- *Marine and Petroleum Geology*
- *Paleo³*

Proposal Reviewer

- *National Science Foundation*
- *Deutsche Forschungsgemeinschaft (German Research Foundation)*
- *Petroleum Research Fund*
- *NASA*
- *Review Panelist, NASA – ESE Education Products 2003-2005*
- *Reviewer, Starting Point - Teaching Entry Level Geoscience*