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CURRICULUM VITAE

Jeffrey A. Nittrouer

Assistant Professor

Department of Earth, Environmental and Planetary Sciences

Rice University

nittrouer@rice.edu

www.sedimentology.rice.edu

+1 (713) 348-4886 (office); +1 (206) 251-2444 (mobile)

Education

2010 PhD, Geological Sciences, University of Texas

2006 M.S., Earth and Environmental Sciences, Tulane University

2003 B.S., Geology, University of Washington

Employment

Assistant Professor

2012- Department of Earth, Environmental and Planetary Sciences, Rice University

NSF Earth Sciences Post-doctoral Fellow and assistant instructor

2010-2012 Department of Geology and Department of Civil and Environmental Engineering, University of Illinois

Research and Teaching Assistantships

2006-2010 Jackson School of Geosciences, University of Texas

2003-2006 Department of Earth and Environmental Sciences, Tulane University

References

Dr. Gary Parker Professor, Dept. of Civil and Environmental Engineering and Dept. of Geology, University of Illinois Urbana-Champaign (parkerg@illinois.edu)

Dr. Michael Lamb Professor, Division of Geological and Planetary Sciences, California Institute of Technology (mpl@gps.caltech.edu)

Dr. David Mohrig Professor and Associate Dean of Research, Department of Geological Sciences, Jackson School of Geosciences, University of Texas (mohrig@jsg.utexas.edu)

Dr. James Best Professor, Depts. of Geology, Geography, Mechanical Science and Engineering, and Dept. of Civil and Environmental Engineering, University of Illinois (jimbest@illinois.edu)

Dr. Gail Kineke Professor, Dept. of Earth and Environmental Sciences, Boston College (gail.kineke.1@bc.edu)

Dr. John Anderson Professor Emeritus, Dept. of Earth, Environmental and Planetary Sciences, Rice University (johna@rice.edu)

Publications (published & in review)

*indicates supervised student and/or post-doc led effort, †indicates student-led effort

[36] †Chadwick, A. J., Lamb, M. P., Moodie, A. J., Parker, G. and **J. A. Nittrouer** “Origin of a preferential avulsion node on lowland river deltas”, *in review at Geophysical Research Letters*

[35] *Ma, H., **Nittrouer, J. A.**, Wu, B., Zhang, Y., Mohrig, D., Lamb, M. P., Wang, Y., Fu, X., Moodie, A. J., Naito, K., Wang, G., Hu, C., and G. Parker “Universal sediment transport relation for fine-bed rivers with phase transition” *in review at Nature Geoscience*

[34] Venditti, J. G., **Nittrouer, J. A.**, Allison, M. A., Humphries, R. P., and M. Church “Supply Limited Bedform Patterns and Scaling through a Gravel-Sand Transition” *in revision at Sedimentology*

[33] Petter, A. L., Steel, R. J., Mohrig, D., and **J. A. Nittrouer**, “The stratigraphic consequences of long-term river aggradation, part I: the importance of backwater hydraulic conditions for downstream sediment fractionation and changes in fluvial style in the Campanian Lower Castlegate Sandstone of Utah”, *accepted for publication at Journal of Sedimentary Research*

[32] †Naito, K., Ma, H., **Nittrouer, J. A.**, Zhang, Y., Wu, B., Wang, Y., Fu, X., and G. Parker (2019) “Extended Engelund-Hansen type sediment transport relation for mixtures based on the sand-silt-bed lower Yellow River, China”, *Journal of Hydraulic Research*, doi: 10.1080/00221686.2018.1555554.

[31] *Dong, T. Y., **Nittrouer, J. A.**, Il'icheva, E., Pavlov, M., McElroy, B., Czapiga, M., Ma, H., and G. Parker (2019) “Roles of bank material in setting bankfull hydraulic geometry as informed by the Selenga River delta, Russia”, *Water Resources Research*, doi: 10.1029/2017WR021985

[30] †Phillips, J. D., Ewing, R. C., Bowling, R., Weymer, B. A., Barrineau, P., **Nittrouer, J. A.**, and M. E. Everett (2019) “Low-angle eolian deposits formed by protodune migration, and insights into slipface development at White Sands Dune Field, New Mexico”, *Aeolian Research*, 36, pp. 9-26. <https://doi.org/10.1016/j.aeolia.2018.10.004>

[29] *Demet, B. P., **Nittrouer, J. A.**, Anderson, J. A., and L. M. Simkins (2018) “Sedimentary processes at ice sheet grounding-zone wedges: comparing planform morphology from the western Ross Sea (Antarctica) to internal stratigraphy from outcrops of the Puget Lowlands (Washington State, U.S. A.)”, *Earth Surface Processes and Landforms*, doi: 10.1002/esp.4550.

[28] Maselli, V., Pellegrini, C., Del Bianco, F., Mercorella, A., Nones, M., Crose, L., Guerrero, M., and **J. A. Nittrouer** (2018) “River morphodynamic evolution under dam-induced backwater: an example from the Po River (Italy), *Journal of Sedimentary Research*, v. 88, pp. 1190-1204. doi: <http://dx.doi.org/10.2110/jsr.2018.61>

[27] †Liu, Z., Dugan, B., Masiello, C. A., Wahab, L. M., Gonermann, H. M., and **J. A. Nittrouer** (2018) “Effect of freeze-thaw cycling on grain size of biochar”, *PLOS One*, 13(1): e0191246. <https://doi.org/10.1371/journal.pone.0191246>

[26] *Pietron, J., **Nittrouer, J. A.**, Jarso, J., Chalov, S. R., and T. Y. Dong (2017) “Sedimentation processes in the Selenga River delta: implications for sequestering particle-reactive metals”, *Hydrological Processes*, v. 32, pp. 278-292 doi: 10.1002/hyp.11414

[25] *Ma, H., **Nittrouer, J. A.**, Naito, K., Fu, X., Zhang, Yuanfeng, Moodie, A., Y. Wang (2017) “The exceptional sediment load of fine-grain dispersal systems”, *Science Advances*, v. 3, pp. 1-7 doi: 10.1126/sciadv.1603114

[24] *Khanna, P., Droxler, A., **Nittrouer, J. A.**, Tunnell, W., and T. C. Shirley (2017) “Coralgal reef morphology records punctuated sea-level rise during last deglaciation”, *Nature Communications*, 8:1046, 8 pp. doi: 10.1038/s41467-017-00966-x

[23] *Anarde, K. A., †Kameshwar, S., †Irza, J. N., **Nittrouer, J. A.**, Lorenzo-Trueba, J., Padgett, J. E., Sebastian, A., and P. B. Bedient (2017) “Impacts of Hurricane Storm Surge on Infrastructure Vulnerability for an Evolving Coastal Landscape”, *Natural Hazards Review* 19(1): 04017020, 14 pp.

[22] †Wu, X., Bi, N., Xu, J., **Nittrouer, J. A.**, Yang, Z., Yoshiki, S., and H. Wang “Stepwise morphological evolution of the active Yellow River (Huanghe) delta lobe (1976-2013): Dominant roles of riverine discharge and sediment grain size” (2017), *Geomorphology*, v. 292, pp. 115-127. doi:10.1016/j.geomorph.2017.04.042

[21] Karthe, D., Abdullaev, I., Boldgiv, B., Borchardt, D., Chalov, S., Jarso, J., Li, L., and **J. A. Nittrouer** (2017) “Water in Central Asia: An integrated Assessment for Science-Based Management”, *Environmental Earth Science*, 76:690, 15 pp. DOI 10.1007/s12665-017-6994-x

[20] Wang, H., Wu, X., Bi, N., Li, S., Yuan, P., Wang, A., Syvitski, J P.M., Saito, Y., Yang, Z, Liu, S., and **J. A. Nittrouer** (2017) “Impacts of dam-oriented water-sediment regulation scheme on the lower reaches and delta of the Yellow River (Huanghe): A review”, *Global and Planetary Change*, v. 157, pp. 93-113. doi: 10.1016/j.gloplacha.2017.08.005

[19] *Moran, K. E., **Nittrouer, J. A.**, Perillo, M. M., Lorenzo-Trueba, J., and J. B. Anderson (2016) “Morphodynamic modeling of fluvial channel fill and avulsion

timescales during the early Holocene transgression, as constrained by the incised valley stratigraphy of the Trinity River, Texas” *Journal of Geophysical Research, Earth Surface*, 20 pp. doi: 10.1002/2015JF003778

[18] *Dong, T. Y., **Nittrouer, J. A.**, Il'icheva, E., Pavlov, M., McElroy, B., Czapiga, M., Ma, H., and G. Parker (2016) “Controls on gravel termination in seven distributary channels of the Selenga River delta, Baikal Rift basin, Russia” *Geological Society of America Bulletin*, v. 28 (7/8), pp. 1297-1312. doi:10.1130/B31427.1

[17] Chalov, S., Thorslund, J., Kasimov, N., Aybullatov, D., Ilyicheva, E., Karthe, D., Kositsky, A., Lychagin, M., **Nittrouer, J. A.**, Pavlov, M., Pietron, J., Shinkareva, G., Tasasov, M., Garmaev, E., Akhtman, Y., and J. Jarso (2016) “The Selenga River delta: a geochemical barrier protecting Lake Baikal waters”, *Regional Environmental Change*, v. 16 (5), 17 pp. doi: 10.1007/s10113-016-0996-1

[16] †Czapiga, M. J., Smith, V. B., **Nittrouer, J. A.**, Mohrig, D., and G. Parker (2015) “Internal connectivity of meandering rivers: statistical generalization of channel hydraulic geometry”, *Water Resources Research*, pp. 7485-7500. doi: 10.1002/2014WR016133

[15] Viparelli, E., **Nittrouer, J. A.** and G. Parker (2015) “Modeling flow and sediment transport dynamics in the lowermost Mississippi River, Louisiana, USA, with an upstream alluvial-bedrock transition and a downstream bedrock-alluvial transition: implications for land-building using engineered diversions”, *Journal of Geological Research, Earth Surface*, v. 120, pp. 534-563. doi: 10.1002/2014JF003257

[14] **Nittrouer, J. A.** and E. Viparelli (2014) *Reply to Nature Geoscience Correspondence*. *Nature Geoscience*, 7, pp. 852.

[13] **Nittrouer, J. A.** and E. Viparelli (2014) “Sand as a stable and sustainable resource for nourishing the Mississippi River delta”, *Nature Geoscience*, 7, pp. 350-354. 10.1038/ngeo2142.

[12] †Ganti, V., Zhongxin, C., Lamb, M. P., and **J. A. Nittrouer** (2014) “Testing morphodynamic controls on the location and frequency of river avulsions on fans and deltas: Huanghe (Yellow River), China”, *Geophysical Research Letters*, pp. 7882-7890. 10.1002/2014GL061918

[11] **Nittrouer, J. A.** (2013) “Backwater hydrodynamics and sediment transport in the lowermost Mississippi River Delta: Implications for the development of fluvial-deltaic landform in a large lowland river”, in *Deltas: Landforms, Ecosystems and Human Activity*. Proceedings of the International Association of Hydrological Sciences-IAHS-IAPSO-IASPEI Assembly, Gothenburg, Sweden, July 2013 IAHS Publication 358, pp. 48-61. *Invited review: International Association of Hydraulic Sciences*

- [10] Kenney, M. A., Hobbs, B. F., Mohrig, D., Huang, H., **Nittrouer, J. A.**, Kim, W., and G. Parker (2013) “Cost analysis of water and sediment diversions to optimize land building in the Mississippi River delta”, *Water Resources Research*, v. 49(6), pp. 3388-3405. 10.1002/wrcr.20139 *WRR Editors’ Choice Award*
- [9] **Nittrouer, J. A.**, Best, J. L., Brantley, C., Czapiga, M., Cash, R. W., Kumar, P., and G. Parker, (2012) “Mitigating land loss in coastal Louisiana by controlled diversion of Mississippi River sand”, *Nature Geoscience*, 5, pp. 534-537. doi. 10.1038/NCEO1525
- [8] **Nittrouer, J. A.**, Shaw, J., Lamb, M. P., and D. Mohrig (2012) “Spatial and temporal trends for water-flow velocity and bed-material sediment transport in the lower Mississippi River” *GSA Bulletin*, 124, pp. 400-414. doi:10.1130/B30497.1
- [7] Lamb, M. P., **Nittrouer, J. A.**, Shaw, J., and D. Mohrig (2012) “Backwater and river-plume controls on scour upstream of river mouths: Implications for fluvio-deltaic morphodynamics”, *Journal of Geophysical Research*, v. 117, 15 pp. doi:10.1029/2011JF002079
- [6] Chatanantavet, P., Lamb, M. P., and **J. A. Nittrouer** (2012) “Backwater controls on avulsion locations on deltas”, *Geophysical Research Letters*, v. 39, 6 pp. doi:10.1029/2011GL050197
- [5] **Nittrouer, J. A.**, Mohrig, D., Allison, M. A., and A. B. Peyret (2011), “The Lowermost Mississippi River: A mixed bedrock-alluvial channel”, *Sedimentology*, v. 58, pp. 1914-1934. doi: 10.1111/j.1365-3091.2011.01245.x
- [4] **Nittrouer, J. A.**, Mohrig, D., and M. A. Allison (2011), “Punctuated sand transport in the lowermost Mississippi River”, *Journal of Geophysical Research*, v. 116, pp. 1914-1934. doi: 10.1029/2011JF002026
- [3] Venditti, J. G., Humphries, R. P., Allison, M. A., **Nittrouer, J. A.**, and M. Church (2010), “Morphology and dynamics of a gravel-sand transition”, *Proceedings of the Joint Federal Interagency Conference 2010. 9th Federal Interagency Sedimentation Conference, June 27-July 1, 2010, Las Vegas, NV.* 12 pp.
- [2] Ryan-Mishkin, K., Walsh, J. P., Corbett, D. R., Dail, M. B., and **J. A. Nittrouer** (2009), “Modern sedimentation in a mixed siliciclastic-carbonate coral reef environment, La Parguera, Puerto Rico”. *Caribbean Journal of Science*, 45 (2-3), pp. 151-167. doi: 20.18475/cjos.v45i2.a4
- [1] **Nittrouer, J. A.**, Allison, M. A., and R. Campanella (2008) “Bedform transport measurements in the lower Mississippi River”, *Journal of Geophysical Research*, v. 113, F03004, 16 pp. doi: 10.1029/2007JF000795

Publications in Preparation (Manuscripts available upon request)

*** indicates supervised student or post-doc manuscripts**

*Stokes, M., **Nittrouer, J. A.**, Dugan, B., Ronay, E., and K. C. Burmeister
“Synsedimentary deformation on prodelta facies of the Western Irish Namurian Basin: Conditions of sediment failure and consequences for deep-sea sediment dispersal” *in preparation for submission to Sedimentology*

*Moodie, A. J., **Nittrouer, J. A.**, Ma, H., Carlson, B. N., and G. Parker “Modeling deltaic lobe-building cycles and avulsions of the Yellow River delta, China” *in preparation for submission to the Journal of Geophysical Research Earth Surface*

*Carlson, B. N., **Nittrouer, J. A.**, Moodie, A. J., Kineke, G. C., Kumpf, L. L. and H. Ma
“Infilling abandoned deltaic channels through tidal sedimentation: a case study from the Huanghe (yellow River) delta, China” *in preparation for submission to the Journal of Geophysical Research Earth Surface*

*Huff, S., **Nittrouer, J. A.**, and J. Lorenzo-Trueba “The Influence of Large Woody Debris on the Geometry of the Subaerial Brazos River Delta, As Demonstrated Through Field Observations and a First Order Coastal Model” *in preparation for submission to the journal Geomorphology*

*Duncan, M. S., Weller, M. B., and **J. A. Nittrouer**, “Formation Timescales of Kasei Valles, Mars: Determination from Observations and an Erosional Model”, *in preparation for submission to Icarus*

Supervised Students

- [11] Eric Barefoot, PhD, matriculated 2016 (*in progress*)
- [10] Chenliang Wu, PhD, matriculated 2015 (*in progress*)
- [9] Tian Dong, PhD, matriculated 2015 (*in progress*)
- [8] Andrew Moodie, PhD, matriculated 2014 (*in progress*)
- [7] Brandee Carlson, PhD, matriculated 2014 (*in progress*)
- [6] Pankaj Khanna, PhD, matriculated 2012, *completed 2017*
- [5] Brian Demet, MS, matriculated 2014, *completed 2016*
- [4] Maya Stokes (undergraduate honors research thesis), 2015
- [3] Sarah Huff, MS, matriculated 2013, *completed 2015*
- [2] Tian Dong, MS, matriculated 2013, *completed 2015*
- [1] Kaitlin Moran, MS, matriculated 2013, *completed 2015*

International Co-supervised Students, Visiting at Rice University

- [3] 2017: Zhaoying Li (PhD), Ocean University of China, Dept. of Marine Geology
Qingdao, China
- [2] 2016: Manuel Bagoni (PhD), Dept. of Civil, Environmental and Architectural
Engineering, University of Padova, Padova, Italy

[1] 2016: Jan Pietron (PhD), Dept. of Physical Geography, Stockholm University, Stockholm, Sweden

Post-doctoral Research Mentoring

- [1] Dr. Jorge Lorenzo-Trueba, 2013-2014, currently position: assistant professor at Montclair State University
- [2] Dr. Hongbo Ma, 2014 – (*in progress*)
- [3] Dr. Travis Swanson, 2016 – (*in progress*)

Grants:

- 2018-2021 National Science Foundation; *Geomorphology and Land-use Dynamics: Collaborative Research: Flocculation Dynamics in the Fluvial to Marine Transition*; **co-lead PI**, \$290,000 to Rice University
- 2014-2018 National Science Foundation; *Coastal SEES Collaborative Research: Morphologic, Socioeconomic and Engineering Sustainability of Massively Anthropic Coastal Deltas: the Compelling Case of the Huanghe*; **lead PI**, \$2,000,000 in award with \$598,000 to Rice University
- 2014-2015 National Science Foundation; *Collaborative: International Deltas Meeting: Genesis, Dynamics, Modeling, and Sustainable Development*; **lead PI** \$32,000
- 2013-2015 Shell Center for Sustainability; *The stress nexus of coastlines: Population development, infrastructure security, and morphological dynamics of the Upper Texas Gulf Coast*; **lead PI**, \$207,000
- 2011-2012 National Science Foundation Rapid-Response Grant: *Mississippi Flood of 2011 - Investigation of Initial Impact on the Landscape*; \$125,000
- 2010-2012 National Science Foundation Earth Sciences Postdoctoral Fellowship; University of Illinois, Urbana- Champaign; *Field observations and modeling of backwater effects on bed material sequestration and fluvial kinematics in the lowermost Mississippi River*; \$170,000

Community and University Service

2012-2018: Solicited Reviews for Community Journals: 1. *Estuarine, Coastal and Shelf Science*, 2. *Geology*, 3. *Journal of Geophysical Research, Earth Surface*, 4. *Geophysical Research Letters*, 5. *Journal of Hydrology*, 6. *Sedimentology*, 7. *Marine Geology*, 8. *Proceedings of the National Academy of Science*, 9. *Water Resources Research*

2018: American Geophysical Union Fall Meeting (Washington, D. C.), session convener: [1] *River deltas: sediment accumulators and biogeochemical reactors*, Earth and Planetary Surface Processes Section; [2] *Further research into the cause and impacts of the 2017 hurricanes with applications of flood warning and inundation mapping during storms*, Natural Hazards Section

2017: American Geophysical Union Fall Meeting (New Orleans), session convener: [1] *Sediment transport mechanics, morphologic expressions and depositional patterns of fine-grained dispersal systems*, Earth and Planetary Surface Processes Section; [2] *Dynamic Atmosphere, Oceans, and Landscapes: Impacts of the 2017 Atlantic Hurricane*

Season on Earth's Surface, Natural Hazards Section; [3] *The Sustainability and Resilience of Coastal Systems; Creating Synergy Among Federal, State, and NGO Initiatives*, Global Environmental Change Section

2017: Geological Society of America Fall Meeting (Seattle), session convener: *Fluvio-deltaic processes and their stratigraphic record*, Clastic Sedimentology, Stratigraphy

2017: Lead Organizer: "The Second International Science Workshop of Huanghe (Yellow River) Delta", Qingdao, China

2017: Participant, National Science Foundation Panel, Geomorphology and Land-use Dynamics

2016: Lead Organizer: "Bringing Together Selenga-Baikal Research Conference", Chelan, Washington; meeting of international scientists to evaluate the state of hydrological, geomorphological, and sedimentological sciences for the Selenga River basin and Lake Baikal system

2016: Participant, National Science Foundation Panel, Coastal SEES

2016: Co-Editor, "Sustainable Water Management in Central Asia", in *Environmental Earth Sciences*

2016: Geological Society of America South-Central Section Meeting (Baton Rouge), session convener, "Fluvial Forms and Processes and Gulf Coast Rivers and Groundwater"

2015: Participant, National Science Foundation Virtual Panel, Coastal SEES

2015: Lead Organizer: "The First International Science Workshop of Huanghe (Yellow River) Delta", Zhengzhou, China

2015: Lead Organizer, Shell Oil workshop on river deltas at Rice University

2014: Lead Organizer, Hess Oil Company workshop on river deltas at Rice University

2014: Lead Organizer: "International Deltas Meeting: Genesis, dynamics, modelling, and sustainable development", Istomino, Russia, an academia-industry sponsored workshop

2014: American Geophysical Union Fall Meeting, session convener: *Advances in understanding fluvial-deltaic processes and their interactions with tectonic settings* Earth and Planetary Surface Processes Section

2014: Geological Society of America, session convener: *Bedforms: genesis and development processes, morphology, stratigraphy, and insights into planetary environment* Clastic Sedimentology, Stratigraphy

2014: Lead Organizer: ExxonMobil workshop on river deltas, Upstream Research Laboratory, Houston, Texas

2014: Lead Organizer: Industry-Rice Earth Sciences Symposium I (IRESS) “Imaging and sedimentary basin modeling”, Houston

2013: American Geophysical Union Fall Meeting, session convener: *Morphodynamic characteristics of non-normal flow conditions* Earth and Planetary Surface Processes Section

2011: American Geophysical Union Fall Meeting, session convener: *Evaluating Hydrodynamics and Sediment Transport in Lowland Rivers* Earth and Planetary Surface Processes Section

2011: American Geophysical Union Fall Meeting, session convener: *The Great Mississippi Flood of 2011: geomorphological, ecological and engineering effects and consequences*

2007-2010: Organizer: Softrock Seminar Brownbag Series for the Jackson School of Geosciences at the University of Texas

Teaching Experience

Rice University, Instructor: [1] Introductory Geological Sciences, [2] Mechanics of Sediment Transport, [3] Sedimentary Basin Analysis, [4] Advanced Geomorphology
Teaching evaluations available upon request.

University of Illinois, Assistant Instructor [1] Sediment transport dynamics and channel morphology of large river systems: Implications for the stratigraphic record.

University of Texas, Laboratory Instructor [1] Sedimentary Rocks

Tulane University, Laboratory Instructor [1] Survey of Geology

Professional Affiliations

American Geophysical Union
Geological Society of America

Awards and Fellowships

2019 Wageningen Institute for Environment and Climate Research (WIMEK) Research Fellowship, Wageningen University, The Netherlands
2018 111 Distinguished Foreign Expert, Tsinghua University (as administered by the Foreign Expert Bureau, and Ministry of Education, People’s Republic of China)
2014 Editors’ Choice Award, paper published in Water Resources Research

- 2013 Luna B. Leopold Award, American Geophysical Union, Earth and Planetary Surface Processes focus group, “*to a young scientist for making a significant and outstanding contribution that advances the field of Earth and planetary surface processes*”
- 2013 Sharp Lectureship, American Geophysical Union, Earth and Planetary Surface Processes focus group
- 2013 Thomas A. Philpott Excellence of Presentation Award, Gulf Coast Section, SEPM Annual Convention
- 2012 AGU editors’ citation for excellence in refereeing: *Water Resources Research*
- 2009 Technical Sessions Best Speaker Award, Jackson School of Geosciences, University of Texas

Supervised Student Awards (Rice University)

Barefoot, Eric:

[4] Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI), supported by the National Science Foundation (2019), [3] AAPG Student Grant (2018), [2] SEPM Student Grant (2018), [1] Sam and Helen Worden Fellowship (2017)

Carlson, Brandee:

[5] Douglas and Martha Lou Broussard Fellowship (2018), [4] AGU EPSP Young Researcher Spotlight (2018), [3] Rice University Women in Natural Sciences Travel Award (2018), [2] Alison Hening Teaching Award (2017), [1] AAPG Grants in Aid (2016)

Dong, Tian:

[7] Mills Bennet Fellowship (2018), [6] GSA Graduate Student Research Grant (2018), [5] AAPG Foundation Grants-in-Aid, [4] SIPES Foundation Earth Science Scholarship (2017), [3] Torkild Rieber Award in Earth Science (2017), [2] Sam and Helen Worden Fellowship (2016), [1] Rice University Graduate Student Fellowship (2013)

Moodie, Andrew:

[5] Geological Society of America Research Grant (2018), [4] First Place: Houston Geological Society Poster Session (2018), [3] Chair’s Award for Departmental Service at Rice University (2017), [2] Alison Henning Teaching Award in Earth Science (2016), [1] National Science Foundation Graduate Student Research Fellowship

Stokes, Maya:

[1] Geological Society of America, Sedimentology Division, Best Student Presentation

Wu, Chenliang:

[4] Meckel Family Named Grant, AAPG (2018), [3] ExxonMobil GSA Student Geoscience Grant (2018), [2] Alison Henning Teaching Award (2018), [1] Post-graduate Research Grant, IAS (2017)

Invited Presentations: Academia

- 2019—Wageningen University, The Netherlands
2018—University of Minnesota, Alvin G. Anderson Award Keynote Speaker
2018—Faculty of Geography, Lomonosov Moscow State University
2017—American Geophysical Union Meeting
2017—University of Wyoming, Department of Geology and Geophysics
2017—Tulane University, Department of Earth and Environmental Sciences
2017—The University of British Columbia, Canadian Geophysical Union Meeting
2016—Ocean University of China, Department of Marine Sciences, Qingdao, China
2016—University of Houston, Department of Earth and Atmospheric Sciences
2015—Bureau of Economic Geology, University of Texas at Austin
2015—Louisiana State University, Department of Geography
2014—Ocean University of China, Department of Marine Sciences, Qingdao, China
2014—Helmholtz Centre for Environmental Research, Leipzig, Germany
2014—University of Houston, Department of Civil and Environmental Engineering
2013—Sharp Lecture, American Geophysical Union, Earth and Planetary Sciences focus group capstone lecture, Fall Meeting
2013—International Association of Hydrological Sciences Assembly, Gothenburg, Sweden *Keynote speaker and invited review paper*
2013—Gulf Coast Associate of Geological Societies, Annual Meeting, New Orleans, LA
2012—Louisiana State University, Department of Oceanography and Coastal Studies
2012—Rice University, Department of Earth Science
2012—Texas A&M University, Department of Geology and Geophysics
2012—Saint Louis University, Department of Earth and Atmospheric Sciences
2012—Massachusetts Institute of Technology, Department of Earth and Planetary Sciences
2012—University of Washington, Department of Earth and Space Sciences
2011—Coastal Estuarine Research Foundation (CERF) 21st Biennial Conference, Daytona Beach FL:
2011—Geological Society of America Fall Meeting, Minneapolis MN
2011—Woods Hole Oceanographic Institute
2009—Tulane University, Department of Earth and Environmental Sciences
2009—University of Illinois, Department of Civil and Environmental Engineering
2008—Dynamics of the 2008 Lower Mississippi River Flood Conference, hosted by the Long-term Estuarine Assessment Group and the Center for Bioenvironmental Research, Tulane University, New Orleans, invited speaker

Invited Presentations: Industry

- 2019: ExxonMobil Upstream Research Laboratory, Houston, TX
2016: ExxonMobil Upstream Research Laboratory, Houston, TX
2014: Chevron Research Group, Houston, TX
2013: ExxonMobil Upstream Research Laboratory, Houston, TX
2012: Shell Research Group, Houston, TX

Media

- [15] The New York Times: “A new formula to help tame China’s Yellow River”, https://www.nytimes.com/2017/06/02/science/china-yellow-river-xiaolangdi-dam.html?_r=0
- [14] China Daily: “Analytical tool may improve prediction of flooding”; http://usa.chinadaily.com.cn/world/2017-05/23/content_29466587.htm
May 23, 2017
- [13] The Times of India: “Now, a tool that can help prevent surging waters in flood plains”, <http://timesofindia.indiatimes.com/home/science/now-a-tool-that-can-help-prevent-surging-waters-in-flood-plains/articleshow/58668978.cms>
May 14, 2017
- [12] Phys.Org: “Yellow River formula addresses flood risk, sustainability”, <https://phys.org/news/2017-05-yellow-river-formula-sustainability.html>
May 12, 2017
- [11] Water Online: “New Tool Could Help Predict, Prevent Surging Waters in Flood Plains”, <https://www.wateronline.com/doc/new-tool-could-help-predict-prevent-surging-waters-in-flood-plains-0001>
May 12, 2017
- [10] Futurity: “Dams won’t starve Mississippi Delta of Sand” <http://bit.ly/1i8O6Jn>
April 21, 2014
- [9] Phys.org: “Centuries of sand to grow Mississippi Delta” <http://bit.ly/1h5lEwg>
April 21, 2014
- [8] The Times-Picayune: “Mississippi River will carry enough sand needed to build new Louisiana wetlands for at least 600 years, new study says” <http://bit.ly/1lvBQLd>
April 20, 2014
- [6] New Scientist: “Mississippi dams aren’t to blame for flood risks” <http://bit.ly/1i3rXkD>
April 20, 2014
- [5] The New York Times: “How to Rebuild the Mississippi Delta” <http://green.blogs.nytimes.com/2012/07/25/how-to-rebuild-the-mississippi-delta/>
July 25, 2012
- [4] Discovery News: “Can Sand Stop New Orleans From Drowning?” <http://news.discovery.com/earth/can-sand-stop-new-orleans-from-drowning-120723.html> July 23, 2012
- [3] Phys.ORG: “Investigative team finds river spillway flooding caused new land formation in Louisiana” <http://phys.org/news/2012-07-team-river-spillway-formation-louisiana.html>
July 23, 2012
- [2] NewScientist: “River Diversion Created New Land in Mississippi Delta” <http://www.newscientist.com/article/dn22089-river-diversion-created-new-land-in-mississippi-delta.html>
July 22, 2012
- [1] Science, News Focus: “Rebuilding Wetlands by Managing the Muddy Mississippi” v. 335, pp. 520-521, February 3, 2012

Meeting Abstracts

**indicates supervised student or post-doc presentation*

[101] *Barefoot, E. A., Nittrouer, J. A., Foreman, B. Z., Hajek, E. A., and A. J. Moodie (2018), "Paleohydraulic estimates from alluvial strata during the PETM: an example from the Piceance Basin, Colorado", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[100] *Swanson, T., Palermo, R., Anderson, J., and J. A. Nittrouer (2018), "Exploring the influence of bay morphology during coastal barrier retreat", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[99] *Li, Z., Wang, H., Nittrouer, J. A., Bi, N., and X. Wu (2018), "Modeling the Filling Processes of an Abandoned Fluvial-deltaic Distributary Channel: an Example From the Yellow River Delta of China", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[98] *Wu, C., and J.A. Nittrouer (2018), "Impacts of non-uniform flow hydraulics on fluvial-deltaic stratigraphy: Linking field investigations and hydrodynamic modeling", Geological Society for America Fall Meeting 2018, Indianapolis, Indiana, Abstract

[97] *Wu, C., Nittrouer, J. A., and T. Swanson (2018), "Dune morphodynamics and forward models of set-scale architecture within the backwater zone of the Mississippi River, USA", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[96] *Ma, H., Nittrouer, J. A., Zhang, Y., Fu, X., Wang, Y., Moodie, A., Wang, Y., Wu, B., and G. Parker (2018), "Change in downstream bedform type, bed material sediment transport regime and flood potential in response to sediment blockage by a dam: can bed degradation increase flooding risk?", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[95] *Ma, H., Nittrouer, J. A., McElroy, B., Wang, Y., Moodie, A., Chen, X., Fu, X., Wu, B., and G. Parker (2018), "Turbidity currents in Xiaolangdi reservoir, Yellow River, China: dynamics and geomorphic expression", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[94] *Carlson, B. N., Nittrouer, J. A., Moodie, A. J., Mullane, M. A., Kumpf, L. L., and G. C. Kineke (2018), "Seasonal sediment delivery to an abandoned deltaic distributary channel", American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[93] *Moodie, A. J., Nittrouer, J. A., Ma, H., Carlson, B. N., and M. P. Lamb (2018), "Suspended-sediment induced stratification inferred from concentration and velocity

profile measurements in the flooding lower Yellow River, China”, American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[92] *Dong, T. Y., Nittrouer, J. A., McElroy, B., Il'icheva, E., and Pavlov, M. (2018), “Evaluating delta lobe evolution from the tectonically active Selenga River delta: a case study of auto and allogenic controls on sedimentation patterns”, American Geophysical Union Fall 2018 Annual Meeting, Washington, D.C., Abstract

[91] *Dong, T. Y., Nittrouer, J. A., McElroy, B. J., Ma, H., Czapiga, C. J., Ma, H., Il'icheva, E., Pavlov, M., and G. Parker (2017), “Length scale hierarchy and spatiotemporal change of alluvial morphologies over the Selenga River delta, Russia”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[90] *Barefoot, E. A., Nittrouer, J. A., Foreman, B. Z., Moodie, A. J., and J. R. Dickens (2017), “Towards a mechanistic understanding of linkages between PETM climate modulation and stratigraphy, as discerned from the Piceance Basin, CO, USA”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[89] *Ma, H., Nittrouer, J. A., Wu, B., Zhang, Y, Mohrig, D., Lamb, M.P., Wang, Y., Fu, X., Moodie, A. J., Naito, K., and G. Parker (2017), “Phase transition behavior of sediment transport at the sand-mud interface across scales from flumes to large rivers”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[88] Nittrouer, J. A., and T. Dong (2017), “Sediment dispersal on the topset of a tectonically active shelf-edge delta: an interplay between sediment supply and subsidence, as demonstrated for the Selenga River, Lake Baikal, Russia”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[87] *Moodie, A. J., Nittrouer, J. A., Ma, H., Lamb, M. P., Carlson, B. N., Kineke, G. C., and G. Parker (2017), “Measuring Density Stratification and Understanding its Impact on Sediment Transport in Fine-grained Rivers, Based on Observations from the Lower Yellow River, China” American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[86] *Carlson, B. N., Nittrouer, J.A., Moodie, A.J., and H. Ma (2017) “Tie channels on deltas: A case study from the Huanghe (Yellow River) delta, China”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[85] Phillips, J. D., Ewing, R. C., Bowling, R., Weymer, B. A., Barrineau, P., Nittrouer, J. A., and M. E. Everett (2017) “The formation of low-angle eolian stratification through the migration of protodunes” American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[84] Kineke, G., Kumpf, L, Mullane, M., Lamb, M. P., Chadwick, A., Nittrouer, J. A., Ma, H., Moodie, A. J., Carlson, B., Hobbs, B., Chen, L., Parker, G., and K. Naito (2017),

“Morphodynamics and Sediment Transport on the Huanghe (Yellow River) Delta: Work in Progress”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[83] *Swanson, T., Lorenzo-Trueba, J., Anarde, K., Odezulu, C., Anderson, J. A., and J. A. Nittrouer (2017), “Exploring the morphodynamic response of coastal barriers to sea-level rise along the Texas Gulf Coast”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[82] *Wu, C., Nittrouer, J. A., and K. C. Burmeister (2017), “Impacts of variable channel hydraulics on the stratigraphic record: an example provided from the Tullig Sandstone, Western Irish Namurian Basin”, American Geophysical Union Fall 2017 Annual Meeting, New Orleans, Abstract

[81] *Demet, B. P., Nittrouer, J. A., Anderson, J. B., and L. M. Simkins (2017), “Sedimentary processes at ice sheet grounding-zone wedges: examples from Antarctica and Washington State (U.S.A.)”, Geological Society for America Fall Meeting 2017, Seattle, Washington, Abstract

[80] Lopez, A., Herbert, L., Wu, C., Sacklett, H., Giorgis, S. D., Burmeister, K. C., and J. A. Nittrouer (2017), “A comparison of RF/PHI and AMS fabrics within strata involved in the Variscan fold-thrust belt; Western Irish Namurian Basin, County Clair, Ireland”, Geological Society for America Fall Meeting 2017, Seattle, Washington, Abstract

[79] Nittrouer, J. A., Ma, H., Carlson, B., Moodie, A., and G. Parker (2017), “On the exceptional sediment load of the Huanghe (Yellow River), and its capacity to produce subaerial deltaic landscape”, 10th Symposium on River, Coastal, and Estuarine Morphodynamics, Trento-Padova, Italy

[78] Nittrouer, J. A., and H. Ma (2017), “On the exceptional sediment load of the Huanghe (Yellow River), and its capacity to produce subaerial deltaic landscape”, Canadian Geophysical Union Meeting, 2017, The University of British Columbia, Vancouver, British Columbia, Canada, Abstract

[77] Nittrouer, J. A., Moran, K., Anderson, J. B., Perillo, M. M., and J. Lorenzo-Trueba (2017), “Morphodynamic modeling of fluvial channel fill and avulsion timescales during early Holocene transgression, as substantiated by the incised valley stratigraphy of the Trinity River, Texas”, American Association of Petroleum Geologists Annual Meeting, Houston, Texas, Abstract

[76] *Anarde, K., Kameshwar, S., Irza, N., Lorenzo-Trueba, J., Nittrouer, J. A., Padgett, J., and P. B. Bedient (2016), “Extreme storms, sea level rise, and coastal change: implications for infrastructure reliability in the Gulf of Mexico”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[75] *Bogoni, M., Nittrouer, J. A., Cantelli, A., and S. Lanzoni (2016), “Modeling the meander morphodynamics with internal boundary conditions given by a localized variation in the flow field”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[74] *Dong, T. Y., Nittrouer, J. A., Czapiga, C. J., Ma, H., McElroy, B. J., Il'icheva, E., Pavlov, M., and G. Parker (2016), “The signature of bankfull hydraulic conditions reflected by properties of the channel bank: a case study from the Selenga River delta, Lake Baikal, Russia”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[73] *Moodie, A. J., Nittrouer, J. A., Ma, H., Carlson, B., and G. Parker (2016), “A Quasi-2D Delta-growth Model Accounting for Multiple Avulsion Events, Validated by Robust Data from the Yellow River Delta, China”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[72] *Ma, H., Nittrouer, J. A., Naito, K., and G. Parker (2016), “A New Model to Predict the Total Suspended Sediment Load from a River to the Ocean Based on an End Member Example from the Lowermost Huanghe (Yellow River), China”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[71] *Carlson, B. N., Nittrouer, J. A., Kineke, G. C., Moodie, A. J., Ma, H., and L. Kumpf (2016), “The Coastline Evolution of an Abandoned Deltaic Lobe and the Fate of its Relict Distributary Channel: A Case Study from the Huanghe (Yellow River) Delta, China”, American Geophysical Union Fall 2016 Annual Meeting, San Francisco, Abstract

[70] *Ma, H., Nittrouer, J. A., Naito, K., Moodie, A. J., and G. Parker (2016), “The exceptional sediment load of a fine-grain meandering river and relation to bedform geometry: an appealing example from the lower Yellow River, China”, Geological Society for America Fall Meeting 2016, Denver, Colorado, Abstract

[69] Nittrouer, J. A. (2016), “Sustainability of massively anthropic deltas via dispersal of sediment to manage land building: results from two unique case studies, the Mississippi River (U.S.A.) and the Yellow River (China) deltas”, European Geophysical Union Spring 2016 Annual Meeting, Vienna, Austria, Abstract

[68] Nittrouer, J. A., Dong, T. Y., Ilicheva, E., Pavlov, M., Parker, G., and B. McElroy (2015), “Sediment Dispersal Linked to Hydrodynamics on the Selenga River delta topset, Lake Baikal: Combining Field Data and Morphodynamic Modeling”, International Geographical Union Regional Conference, Moscow, Russia, Abstract

[67] Nittrouer, J. A. (2015), “Hydrodynamic Controls on the Downstream Elimination of gravel, and implications for fluvial-deltaic Stratigraphy: Two Endmember Case Studies

from the Selenga River, Russia, and the Mississippi River, U.S.A.”, American Geophysical Union Fall 2015 Annual Meeting, San Francisco, Abstract

[66] *Ma, H., Nittrouer, J. A., Moodie, A. J., Carlson, B., and G. Parker (2015), “Role of River Bends for the Formation and Evolution of Channel Bedforms: Combined Field Studies and Numerical Modeling from the Tidally Influenced Zones of the Yellow River, China, and Mississippi River, USA”, American Geophysical Union Fall 2015 Annual Meeting, San Francisco, Abstract

[65] *Demet, B. P., Anderson, J. B., Nittrouer, J. A., Simkins, L., Halberstadt, A. R., and L. O. Prothro (2015), “Sedimentary Processes of Unstable Ice Sheet Grounding Zones: Comparing Polar and Temperate Grounding Zone Wedges Using Marine Geophysical Data and Outcrop Studies”, American Geophysical Union Fall 2015 Annual Meeting, San Francisco, Abstract

[64] Liu, Z., Dugan, B., Masiello, C. A., Gonnermann, H. M., and J. A. Nittrouer (2015), “Effect of Freeze-Thaw Cycles on Grain Size of Biochar”, American Geophysical Union Fall 2015 Annual Meeting, San Francisco, Abstract

[63] *Carlson, B. N., Nittrouer, J. A., Ma, H., and A. J. Moodie (2015), “Channel Infilling Processes on the Huanghe (Yellow River) Deltaic Coastal Plain, China”, Geological Society for America Fall Meeting 2015, Baltimore, Maryland, Abstract

[62] *Moodie, A. J., Ma, H., Nittrouer, J. A., Carlson, B. N., and G. C. Kineke (2015), “Spatiotemporal Channel-bed Evolution Patterns Observed for the Huanghe (Yellow River), China: Implications for Evaluating System Response and Complexity to External Perturbations”, Geological Society for America Fall Meeting 2015, Baltimore, Maryland, Abstract

[61] *Ma, H., Naito, K., Nittrouer, J. A., Zhang, Y., Fu, X., Parker, and G. Parker (2015), “Sediment Transport in the Lower Huanghe (Yellow River), China: Assessing the Physical Conditions that Produce Hyperycnal Flow Events”, Geological Society for America Fall Meeting 2015, Baltimore, Maryland, Abstract

[60] Lopez, A., Burmeister, K. C., Avalos, R. M., Stokes, M., Nittrouer, J. A., Carter, M. J., Giorgis, S. D., and F. A. Corsetti (2015), “Petrofabric Analysis of Samples from the Cyclothem Sequences of the Western Irish Namurian Basin (WINB) Deformed within the Variscan Foreland Fold Thrust Belt”, Geological Society for America Fall Meeting 2015, Baltimore, Maryland, Abstract

[59] *Duncan, M. S., Weller, M. B., and J. A. Nittrouer (2015), “Formation Timescales of Kasei Valles, Mars: Determination from Observations and an Erosional Model”, Lunar and Planetary Science Conference, Abstract.

[58] *Dong, T. Y., Nittrouer, J. A., McElroy, B., Czapiga, M., Il'icheva, E., Pavlov, M., and G. Parker (2014), "Sediment Transport Dynamics Linked to Morphological Evolution of the Selenga River delta, Lake Baikal, Russia", American Geophysical Union Fall 2014 Annual Meeting, San Francisco, Abstract

[57] *Moran, K., Nittrouer, J. A., Lorenzo-Trueba, J. and J. Anderson (2014), "Linking grain size and sedimentary structure to autogenic and allogenic processes associated with Holocene Valley Infill and Evolution, Brazos River, TX, U.S.A.", American Geophysical Union Fall 2014 Annual Meeting, San Francisco, Abstract

[56] Venditti, J. G., Nittrouer, J. A., Allison, M., Humphries, R. P. Bradley, R, and M. Church (2014), Supply Limited Bedform Patterns and Scaling Through a Gravel-Sand Transition", Geological Society for America Fall Meeting 2014, Vancouver, British Columbia, Canada, Abstract

[55] *Huff, S., Nittrouer, J. A., and J. Lorenzo-Trueba (2014), "The Influence of Large Woody Debris on the Geometry of the Subaerial Brazos River Delta, As Demonstrated Through Field Observations and a First Order Coastal Model", Geological Society for America Fall Meeting 2014, Vancouver, British Columbia, Canada, Abstract

[54] *Stokes, M., Dwyer, S. M., and J. A. Nittrouer (2014) "Growth Faults and Dewatering Structures in Prodelta Sedimentary Deposits: Using Sedimentary Structures to Constrain Post-Failure Sediment Transport in the Western Irish Namurian Basin", Geological Society for America Fall Meeting 2014, Vancouver, British Columbia, Canada, Abstract *winner: GSA Sedimentology Division Best Student Presentation*

[53] *Dwyer, S. M., Nittrouer, J. A., Burmeister, K. C., and M. J. Carter (2014) "Preliminary Assessment of Structural Controls on the Spatial Relationships Among Fluvial Systems in the Carboniferous Western Irish Namurian Basin, County Clare, Ireland", Geological Society for America Fall Meeting 2014, Vancouver, British Columbia, Canada, Abstract

[52] *Duncan, M. S., Weller, M. B., and J. A. Nittrouer (2014) "Erosional and Depositional Evolution of Kasei Valles, Mars: Implications for Timescales of Formation", Geological Society for America Fall Meeting 2014, Vancouver, British Columbia, Canada, Abstract

[51] *Dong, T. and J. A. Nittrouer (2014), "Morphology and Sediment Transport Dynamics of the Selenga River delta, Lake Baikal, Russia", Deltas: Genesis, Dynamics, Modelling, and Sustainable Development, International Deltas Meeting, Istomino, Russia, Abstract

[50] *Khanna, P., Droxler, A. W., and J. A. Nittrouer (2014), "Uppermost Pleistocene Banks Along the South Texas Shelf Edge: A Clear Case of Drowning Based Upon Their

Morphologies”, American Association of Petroleum Geologists Annual Meeting, Houston, TX

[49] Nittrouer, J. A. (2013), “Sediment transport processes and their resulting stratigraphy: informing science and society”, Sharp Lecture, American Geophysical Union Fall 2013 Annual Meeting, San Francisco, Abstract

[48] Nittrouer, J. A., and E. Viparelli (2013), “Sand transport in the lower Mississippi River does not yield to dams: applications for building deltaic land in Louisiana”, American Geophysical Union Fall 2013 Annual Meeting, San Francisco, Abstract

[47] *Dong, T. Y., Il'icheva, L., Nittrouer, J. A., and M. Pavolv (2013), “Morphology and sediment transport dynamics of the Selenga River delta, Lake Baikal, Russia”, American Geophysical Union Fall 2013 Annual Meeting, San Francisco, Abstract

[46] *Khanna, P., Droxler, A. W., Nittrouer, J. A., Tunnell, W., Shirly (2013), “Detailed bathymetry of Uppermost Pleistocene Drowned Coralgall Banks along the South Texas Shelf Edge: Record of Episodic Rapid Sea-Level Rise During Last Deglaciation Between Meltwater Pulses 1A and 1B”, American Geophysical Union Fall 2013 Annual Meeting, San Francisco, Abstract

[45] *Khanna, P., Droxler, A. W., Nittrouer, J. A., Tunnell, W., Shirly, T, Nash, H. L. (2013), “Detailed Bathymetric Survey of Uppermost Pleistocene Drowned Banks along the South Texas Shelf Edge: A Glimpse at their Growth and Demise During Last Deglaciation”, Geological Society of America South Central Section 47th Annual Meeting, Austin, TX

[44] Nittrouer, J. A., Best, J., Viparelli, E., and G. Parker (2013), “Grain size variation and bedrock exposure in the lower Mississippi River”, 8th Symposium on River, Coastal and Estuarine Morphodynamics, Santander, Spain

[43] Nittrouer, J. A. (2013), “Backwater hydrodynamics and sediment transport in the lowermost Mississippi River Delta: Implications for the development of fluvial-deltaic landform in a large lowland river”, Proceedings of the International Association of Hydrological Sciences-IAHS-IAPSO-IASPEI Assembly, Gothenburg, Sweden

[42] Nittrouer, J. A. (2013), “Sand transport dynamics in the lower Mississippi River: applications to building and sustaining deltaic landscapes”, joint Penrose-Chapman Conference, “Coastal Processes and Environments Under Sea-Level Rise and Changing Climate: Science to Inform Management”, Galveston, TX

[41] Nittrouer, J. A. and J. Lorenzo-Treuba (2013) “Coastal landscape dynamics: understanding the evolution of the upper Texas Gulf Coast”, American Planning Association Texas Chapter, annual meeting, Galveston, TX

[40] Nittrouer, J. A. (2013) “Hydrodynamics and sediment transport in the lowermost Mississippi River: Implications for the development of fluvial-deltaic stratigraphy in large lowland rivers basins”, Gulf Coast Associate of Geological Societies, annual meeting, New Orleans, LA, Abstract and invited talk

[39] Czapiga, M. J., Nittrouer, J. A., Smith, V. B., Mohrig, D. C., and G. Parker (2012), “Statistical analysis of depth connectivity within single thread meandering riverine systems”, American Geophysical Union Fall 2012 Annual Meeting, San Francisco, Abstract

[38] Nittrouer, J. A., and A. L. Petter (2012), “Flow dynamics in lowland rivers and influence on fluvial-deltaic stratigraphy: Comparing the modern Mississippi River system to the Campanian Castlegate Sandstone”, American Geophysical Union Fall 2012 Annual Meeting, San Francisco, Abstract

[37] Viparelli, E., Nittrouer, J. A., Mohrig, D. C., and G. Parker (2012), “Numerical model of the lowermost Mississippi River as an alluvial-bedrock reach: preliminary results”, American Geophysical Union Fall 2012 Annual Meeting, San Francisco, Abstract

[36] Nittrouer, J. A., Best, J., Brantley, C., Cash, R., Czapiga, M., Kumar, P., and G. Parker (2012), “Engineering water and sediment diversions along the lowermost Mississippi River for coastal wetland mitigation efforts in Louisiana: new Insights provided by the 2011 Mississippi River flood and the opening of the Bonnet Carré Spillway”, Geological Society for America Fall Meeting 2012, Charlotte, NC, Abstract

[35] Hager, C. H., Viparelli, E., and J. A. Nittrouer (2012), “Preliminary characterization of the lowermost Mississippi River floodplain sediment and implications for the restoration of the Mississippi delta”, Geological Society for America Fall Meeting 2012, Charlotte, NC, Abstract

[34] Nittrouer, J. A., Viparelli, E., Parker, G., and D. Mohrig (2012), “Backwater hydraulics and sediment transport in coastal fluvial systems: observation and modeling from the Mississippi River”, American Geophysical Union Ocean Sciences Meeting 2012, Salt Lake City, Abstract

[33] Kenney, M. A., Hobbs, B. F., Mohrig, D., Huang, H., Nittrouer, J. A., Kim, W., and G. Parker (2012), “Cost analysis of water and sediment diversions to optimize land building in the Mississippi River delta”, Tulane Engineering Forum, New Orleans, Abstract

[32] Nittrouer, J. A., Petter, A., Mohrig, D., Chatanantavet, P. and M. P. Lamb (2011), “Backwater flow dynamics in lowland rivers, influence on channel avulsions, and the development of fluvial-deltaic stratigraphic architecture”, Geological Society of America Fall Meeting 2011, Minneapolis, Abstract

[31] Petter, A. L., Steel, R. J., Mohrig, D., and J. A. Nittrouer (2011), “Reconstructing the backwater reaches of paleo-rivers and their influence on fluvial facies distribution, Campanian Lower Castlegate Sandstone, Utah”, Geological Society of America Fall Meeting 2011, Minneapolis, Abstract

[30] Czapiga, M. J., Nittrouer, J. A., Brantley, C., Cash, R. W., Parker, G., and J. L. Best (2011) “Evaluating sand transport through two spillway diversions on the lower Mississippi River during the flood of 2011: Implications for land management via controlled diversions”, American Geophysical Union Fall 2011 Annual Meeting, San Francisco, Abstract

[29] Chatanantavet, P., Lamb, M. P.; and J. A. Nittrouer, “Backwater controls on avulsion location on deltas”, American Geophysical Union Fall 2011 Annual Meeting, San Francisco, Abstract

[28] Nittrouer, J. A., Shaw, J., Lamb, M., and D. Mohrig (2011), “Sediment transport in the lowermost Mississippi River: implications for delta growth and coastline management”, Coastal and Estuarine Research Federation (CERF) 21st Biennial Conference, Daytona Beach FL, Abstract

[27] Nittrouer, J. A., Lamb, M., Shaw, J., and D. Mohrig (2011), “Non-uniform, gradually varied flow and bed-material transport in the backwater segment of the lower Mississippi River”, Coherent Flow Structures in Geophysical Flows at Earth’s Surface, Simon Fraser University, Vancouver BC Canada, Abstract

[26] Petter, A., Steel, R., Mohrig, D., and J. A. Nittrouer (2011), “The stratal signature of backwater hydraulic conditions in Campanian Lower Castlegate Sandstone palae-rivers, Book Cliffs, USA”, SEPM/AAPG Annual Meeting, Houston TX

[25] Mohrig, D., Lamb, M. P., and J. A. Nittrouer (2011), “Direct transfer of sand from shelf-edge deltas to the continental slope”, SEPM/AAPG Annual Meeting, Houston TX

[24] Nittrouer, J. A., Shaw, J. Lamb, M., and D. Mohrig (2011), “Predicting the time and space properties of bed-material transport in the normal-flow to backwater transition of the lowermost Mississippi River”, American Geophysical Union Chapman Conference, “Source to Sink Systems Around the World and Through Time”, Oxnard CA, Abstract

[23] Lamb, M. P., Nittrouer, J. A., Chatanantavet, P., McElroy B., Kopriva, B., Mohrig, D., and J. Shaw (2011), “The influence of fluvial-backwater and plunge-point dynamics

on hypercynal plume generation”, American Geophysical Union Chapman Conference, “Source to Sink Systems Around the World and Through Time”, Oxnard CA, Abstract

[22] Mohrig, D., Nittrouer, J. A., Straub, K. M., and M. A. Allison (2011), “Connecting the flow and sediment-transport in coastal rivers to short- and long-term patterns of delta sedimentation” American Geophysical Union Chapman Conference, “Source to Sink Systems Around the World and Through Time”, Oxnard CA, Abstract

[21] Nittrouer, J. A., Shaw, J., Lamb, M., and D. Mohrig (2010), “Modeling water-flow velocity and bed-material sediment transport in the normal-flow to backwater transition of the lowermost Mississippi River”, American Geophysical Union Fall 2010 Annual Meeting, San Francisco, Abstract

[20] Lamb, M., Nittrouer, J. A., Mohrig, D., J. Shaw (2010), “Fluvial backwater zones as filters on source to sink sediment transport”, American Geophysical Union Fall 2010 Annual Meeting, San Francisco, Abstract

[19] Nittrouer, J. A., Mohrig, D., Allison, M. A., Kim, W., and G. Parker (2010), “Backwater implications for sediment transport and channel morphology in the lowermost Mississippi River”, American Association of Petroleum Geologists 2010 Annual Meeting, New Orleans, Abstract

[18] Nittrouer, J. A., Venditti, J. G., Allison, M. A., and D. Mohrig (2009), “Sediment flux in the gravel-sand transition of the Fraser River”, American Geophysical Union Fall 2009 Annual Meeting, San Francisco, Abstract

[17] Parker, G., Nittrouer, J. A., Mohrig, D., Allison, M. A., and W. E. Dietrich (2009), “Modeling the morphodynamics of the lower Mississippi River as a quasi-bedrock river”, American Geophysical Union Fall 2009 Annual Meeting, San Francisco, Abstract

[16] Venditti, J. G., Nittrouer, J. A., Humphries, R. P., and M. A. Allison (2009), “Supply-limited bedforms in a gravel-sand transition”, American Geophysical Union Fall 2009 Annual Meeting, San Francisco, Abstract

[15] Whitman, S. K., Shaw, J. B., Mohrig, D., Nittrouer, J. A., and M. A. Allison (2009), “Partitioning sand transport between branches of channel bifurcations in deep rivers: Implications for river-diversion structures and land building in southern Louisiana”, American Geophysical Union Fall 2009 Annual Meeting, San Francisco, Abstract

[14] Roe, K. M., Rosenheim, B. E., Kolker, A., Allison, M. A., and J. A. Nittrouer (2009), “The effect of flood events on the partitioning of labile and refractory carbon in the Missouri-Mississippi River system”, American Geophysical Union Fall 2009 Annual Meeting, San Francisco, Abstract

- [13] Nittrouer, J. A., and D. Mohrig (2008), “Punctuated sand transport within the lowermost Mississippi River”, Geological Society of America Fall Meeting 2008, Houston, Abstract
- [12] Venditti, J. G., Humphries, R. P., Allison, M. A., Nittrouer, J. A., and M. Church (2008), “Gravel-sand transition in a large, lowland alluvial channel”, American Geophysical Union Fall 2008 Annual Meeting, San Francisco, Abstract
- [11] Kolker, A. S., Allison, M. A., Butcher, K. A., Fulweiler, R. W., Green, S., Nittrouer, J. A., Nyman, J. A., and B. Rosenheim (2008), “The Mississippi River flood of 2008: sediment dynamics and implications for coastal restoration”, Geological Society of America Fall Meeting 2008, Houston, Abstract
- [10] George, T. J., Mohrig, D., Straub, K. M., Nittrouer, J. A., and T. Hess (2008), “3D seismic evaluation of fault control on quaternary subsidence patterns, rates, and related surface morphology in southeastern Louisiana”, Geological Society of America Fall Meeting 2008, Houston, Abstract
- [9] Nittrouer, J. A., Mohrig, D., and M. A. Allison (2007), “Lower Mississippi River: a mixed bedrock-alluvial channel”, American Geophysical Union Fall 2007 Annual Meeting, San Francisco, Abstract
- [8] Buttles, J., Mohrig, D., Nittrouer, J. A., McElroy, B., Baitis, E., Allison, M., Paola, C., Parker, G., and W. Kim (2007), “Partitioning of water discharge by distributary channels in the prograding, Wax Lake Delta, coastal Louisiana, USA”, American Geophysical Union Fall 2007 Annual Meeting, San Francisco, Abstract
- [7] Allison, M. A., Nittrouer, J. A., Venditti, J. G., and M. Church (2007), “Tidal bedform morphology and flow field characteristics in the Fraser River, British Columbia”, American Geophysical Union Fall 2007 Annual Meeting, San Francisco, Abstract
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