

Updated: June, 2018

## CURRICULUM VITAE

### **Jeffrey A. Nittrouer**

Assistant Professor

Department of Earth, Environmental and Planetary Sciences

Rice University

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### ***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

#### **Laboratory Technician**

2001-2003 Department of Earth and Space Sciences, University of Washington

### ***References***

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

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

**Dr. David Mohrig** Department of Geological Sciences, Jackson School of Geosciences, University of Texas (mohrig@jsg.utexas.edu)

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

## **Publications (published & in review)**

*\*indicates supervised student and/or post-doc study, †indicates student*

[34] \*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 Science*

[33] \*Demet, B. P., **Nittrouer, J. A.**, Anderson, J. A, and L. M. Simkins, “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.)”, *in revision at Earth Surface Processes and Landforms*

[30] 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*

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

[31] \*Dong, T. Y., **Nittrouer, J. A.**, Il’icheva, E., Pavlov, M., McElroy, B., Czapiga, M., Ma, H., and G. Parker “Roles of bank material in setting bankfull hydraulic geometry as informed by the Selenga River delta, Russia”, *in press at Water Resources Research*

[29] Maselli, V., Pellegrini, C., Del Bianco, F., Mercorella, A., Nones, M., Crose, L., Guerrero, M., and **J. A. Nittrouer** “River morphodynamic evolution under dam-induced backwater: an example from the Po River (Italy), *accepted at Journal of Sedimentary Research*

[28] 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*

[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., Garmayev, 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/NNGEO1525

[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*

\*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*

\*Phillips, J. D., Ewing, R. C., Bowling, R., Weymer, B. A., Barrineau, P., **Nittrouer, J. A.**, M. E. Everett, “Low-angle eolian deposits formed by protodune migration, and insights into slipface development at White Sands Dune Field, New Mexico”, *in preparation for submission to Aeolian Research*

### **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 Anthropogenic 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*

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**

- 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:**

[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***

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) 21<sup>st</sup> 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***

- 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](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](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*

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

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Conference, “Coastal Processes and Environments Under Sea-Level Rise and Changing Climate: Science to Inform Management”, Galveston, TX

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building in the Mississippi River delta”, Tulane Engineering Forum, New Orleans, Abstract

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[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

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- [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

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- [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
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- [5] Nittrouer, J. A., Allison, M. A., R. Campanella (2005), "Quantitative measurements of bedform transport rates and sand sheet character in the lower Mississippi River", New Zealand Marine Sciences Society Conference, Victoria University, Victoria New Zealand, Abstract
- [4] Allison, M. A., Nittrouer, J. A., and J. Galler (2005), "The supply side of Mississippi River delta restoration: can the river provide the sediment we need?", American Geophysical Union Fall 2005 Annual Meeting, San Francisco, Abstract

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