John B. Shaw

Dept. of Geosciences shaw84@uark.edu 216 Gearhart Hall Mobile: 979-583-6869 340 N. Campus Drive @johnburnhamshaw University of Arkansas sandandmud.org Fayetteville, AR, 72701 https://orcid.org/0000-0003-0581-0857

Education

Ph. D. 2013 Geosciences, University of Texas at Austin, Austin, TX Dissertation: "The Kinematics of Distributary Channels on the Wax Lake Delta, Coastal Louisiana, USA" Advised by David Mohrig

Geology and Applied Mathematics, Oberlin College, Oberlin, OH B.A. 2007

Professional Experience

2022-2023	Interim Vice Chair, Dept. of Geosciences, University of Arkansas, Fayetteville
2021-2022	Fulbright Fellowship in Poland, at University of Warsaw Institute for Theoretical Physics
2019-	Associate Professor, Dept. of Geosciences, University of Arkansas, Fayetteville
2014-2019	Assistant Professor, Dept. of Geosciences, University of Arkansas, Fayetteville
2013-2016	NSF post-doctoral fellow, University of Wyoming
2008-2013	Research and Teaching Assistant, University of Texas at Austin
2006-2008	Research Associate, Saint Anthony Falls Laboratory, University of Minnesota
2007	Sediment Laboratory Technician, Minnesota Geological Survey, Minneapolis, MN

Research Interests

The morphodynamics of modern and ancient constructional landscapes; coastal sustainability; the effects of hurricanes on sandy coastlines; direct measurement and remote sensing of shallow coastal landforms.

Awards and Honors

JGR:ES Top-Cited Paper 2020-2021 for Hoitink et al. (2020)

ULAM Fellowship in Poland recipient, Polish National Agency for Academic Exchange (declined), 2020 Sigma Gamma Epsilon (Student Geology Society) Professor of the Year, 2016, 2018

DOE Early Career Research Award, 2016-2021

NSF Post-Doctoral Fellowship, 2013-2016

AGU Best Student Paper Award, 2011

SEPM Research Grant, 2011

BP Entrance Fellowship, 2008, Chevron Award, 2011, DeFord Field Scholarship 2010, 2011 UT Austin

Publications

(Served as research mentor for underlined names)

In Progress

Sharman, G., J.A. Covault, P.P. Flaig, R. Dunn, P. Fussee-Durham, T.E. Larson, T.M.Shanahan, K. Dubois, **J.B. Shaw**, J.K. Crowley, B. Shaulis (*in review*) Coastal Response to Global Warming during the Paleocene-Eocene Thermal Maximum *pdf available on request*

Published

<u>Chen, H.</u>, **Shaw, J. B.**, Sharman, G. R., & Marshall, J. A. (2022). Significant Human Modification of the Lower Arkansas River Sediment Budget. *Geophysical Research Letters*, 49(18), e2022GL099441. https://doi.org/10.1029/2022GL099441

Sanks, K. M., Zapp, S. M., Silvestre, J. R., Shaw, J. B., Dutt, R., & Straub, K. M. (2022). Marsh Sedimentation Controls Delta Top Morphology, Slope, and Mass Balance. *Geophysical Research Letters*, 49(12), e2022GL098513. https://doi.org/10.1029/2022GL098513

Preprint at https://doi.org/ 10.1002/essoar.10510385.1

Press: https://news.uark.edu/articles/60281/paper-explores-how-marsh-sediment-shapes-and-impacts-river-deltas

Konkol, A., Schwenk, J., Katifori, E., & Shaw, J. B. (2022). Interplay of river and tidal forcings promotes loops in coastal channel networks. *Geophysical Research Letters*, 49(10), e2022GL098284. https://doi.org/10.1029/2022GL098284

arxiv: https://arxiv.org/abs/2108.04151

Repository: https://zenodo.org/record/6079076#.YqmSHnbMJPY;

https://zenodo.org/record/5883656#.YqmSNnbMJPY

 $\label{press:https://news.uark.edu/articles/60221/study-seeks-to-explain-stability-of-loops-in-coastal-channel-networks$

- Edmonds, D. A., Chadwick, A. J., Lamb, M. P., Lorenzo-Trueba, J., Murray, A. B., Nardin, W., Salter, G., **Shaw, J. B.** (2021). Morphodynamic Modeling of River-Dominated Deltas: A Review and Future Perspectives. In *Reference Module in Earth Systems and Environmental Sciences*. Elsevier. https://doi.org/10.1016/B978-0-12-818234-5.00076-6
- Shaw, J. B., Mason, K. G., Ma, H., & McCain, G. W. (2021). Influences on Discharge Partitioning on a Large River Delta: Case Study of the Mississippi-Atchafalaya Diversion, 1926-1950. *Water Resources Research*, e2020WR028090. https://doi.org/10.1029/2020WR028090

EarthArxiv: https://osf.io/w3rxp

Figshare: https://doi.org/10.6084/m9.figshare.13645601.v1,

https://doi.org/10.6084/m9.figshare.12440279.v3

Phys.org: https://phys.org/news/2021-06-historic-mississippi-impacts-river.html

Sanks, K. M., Shaw, J. B., & Naithani, K. (2020). Field-based Estimate of the Sediment Deficit in Coastal Louisiana. *Journal of Geophysical Research: Earth Surface*, e2019JF005389. https://doi.org/10.1029/2019JF005389

- EarthArxiv: https://osf.io/vp5j7/
- **Editor's Highlight:** https://eos.org/editor-highlights/coastal-sediment-deficit-appears-smaller-than-previously-thought
- Whaling, A., & Shaw, J. B. (2020). Changes to Subaqueous Delta Bathymetry Following a High River Flow Event, Wax Lake Delta, USA. *Estuaries and Coasts*. https://doi.org/10.1007/s12237-020-00727-y
 - EarthArxiv: https://osf.io/urcyv/
- Hoitink, A. J. F., Nittrouer, J. A., Passalacqua, P., **Shaw, J. B.**, Langendoen, E. J., Huismans, Y., & van Maren, D. S. van. (2020). Resilience of river deltas in the Anthropocene. Journal of Geophysical Research: Earth Surface, e2019JF005201. https://doi.org/10.1029/2019JF005201
- Olliver, E. A., Edmonds, D. A., & **Shaw**, **J. B.** (2020). Influence of floods, tides, and vegetation on sediment retention in Wax Lake Delta, Louisiana, USA. *Journal of Geophysical Research: Earth Surface*, e2019JF005316. https://doi.org/10.1029/2019JF005316
 - EarthArxiv: https://eartharxiv.org/zx9hs/
- Cathcart, C., Shaw, J. B., & Amos, M. (2020). Validation of Streaklines as Recorders of Synoptic Flow Direction in a Deltaic Setting. *Remote Sensing*, 12(1), 148. https://doi.org/10.3390/rs12010148
- Ke, W.-T., Shaw, J. B., Mahon, R. C., & Cathcart, C. A. (2019). Distributary Channel Networks as Moving Boundaries: Causes and Morphodynamic Effects. *Journal of Geophysical Research:* Earth Surface, 2019JF005084. https://doi.org/10.1029/2019JF005084, EarthArxiv: https://doi.org/10.17605/OSF.IO/NGXF3
- **Shaw, J. B.**, Estep, J. D., Whaling, A. R., Sanks, K. M., & Edmonds, D. A. (2018). Measuring subaqueous progradation of the Wax Lake Delta with a model of flow direction divergence. *Earth Surface Dynamics*, 6(4), 1155–1168. https://doi.org/10.5194/esurf-6-1155-2018
- Ayoub, F., Jones, C. E., Lamb, M. P., Holt, B., **Shaw, J. B.**, Mohrig, D., & Wagner, W. (2018). Inferring surface currents within submerged, vegetated deltaic islands and wetlands from multi-pass airborne SAR. *Remote Sensing of Environment*, *212*, 148–160. https://doi.org/10.1016/j.rse.2018.04.035
- **Shaw, J. B.**, Miller, K. and McElroy, B. (2018). Island Formation Resulting from Radially Symmetric Flow Expansion, *J. Geophys. Res. Earth Surf.*, 2017JF004464, doi:10.1002/2017JF004464.
- Coffey, T. S., & Shaw, J. B. (2017). Congruent Bifurcation Angles in River Delta and Tributary Channel Networks. *Geophysical Research Letters*, 2017GL074873. https://doi.org/10.1002/2017GL074873
- Wagner, R. W., D. Lague, D. Mohrig, P. Passalacqua, **J. Shaw**, and K. Moffett (2017), Elevation Change and Stability on a Prograding Delta, *Geophys. Res. Lett.*, 2016GL072070, doi:10.1002/2016GL072070.
- **Shaw, J. B.**, B. McElroy (2016), Backwater number scaling of alluvial bed forms, *J. Geophys. Res. Earth Surf.*, 2016JF003861, doi:10.1002/2016JF003861.
- **Shaw, J. B.**, F. Ayoub, C. E. Jones, M. P. Lamb, B. Holt, R. W. Wagner, <u>T.S. Coffey</u>, J. A. Chadwick, and D. Mohrig (2016), Airborne Radar Imaging of Subaqueous Channel Evolution in Wax Lake Delta, Louisiana, USA, *Geophys. Res. Lett.*, 2016GL068770, doi:10.1002/2016GL068770.
- **Shaw, J. B.**, D. Mohrig, and R. W. Wagner (2016), Flow patterns and morphology of a prograding river delta, *J. Geophys. Res. Earth Surf.*, 2015JF003570, doi:10.1002/2015JF003570.

- Mahon, R. C., **J. B. Shaw**, K. R. Barnhart, D. E. J. Hobley, and B. McElroy (2015), Quantifying the stratigraphic completeness of delta shoreline trajectories, *J. Geophys. Res. Earth Surf.*, 2014JF003298, doi:10.1002/2014JF003298.
- **Shaw, J. B.**, Y. You, D. Mohrig, and G. Kocurek (2015), Tracking hurricane-generated storm surge with washover fan stratigraphy, *Geology*, 43(2), 127–130, doi:10.1130/G36460.1.
- **Shaw, J.B.**, D. Mohrig, (2014), The importance of erosion in distributary channel network growth, Wax Lake Delta, Louisiana, USA, *Geology*, 42, 31-34, doi: 10.1130/G34751.1
- **Shaw, J. B.**, D. Mohrig, and S. K. Whitman (2013), The Morphology and Evolution of Channels on the Wax Lake Delta, *J. Geophys. Res.*, 118, 1–22, doi:10.1002/jgrf.20123.
- Nittrouer, J. A., **J. Shaw**, M. P. Lamb, and D. Mohrig (2012), Spatial and temporal trends for water-flow velocity and bed-material transport in the lower Mississippi River, *Geol Soc Am Bull*, *124*, 400–414, doi:10.1130/B30497.1.
- Lamb, M. P., J. A. Nittrouer, D. Mohrig, and **J. Shaw** (2012), Backwater and river plume controls on scour upstream of river mouths: Implications for fluvio-deltaic morphodynamics, *J. Geophys. Res.*, 117(F1), F01002, doi:10.1029/2011JF002079.
- Edmonds, D. A., **J. B. Shaw**, and D. Mohrig (2011), Topset-dominated deltas: A new model for river delta stratigraphy, *Geology*, *39*(12), 1175–1178, doi:10.1130/G32358.1.
- Viparelli, E., **J. Shaw**, A. Bevington, E. Meselhe, G. Holm, D. Mohrig, R. Twilley, and G. Parker (2011), Inundation Model As an Aid for Predicting Ecological Succession on Newly-Created Deltaic Land Associated with Mississippi River Diversions: Application to the Wax Lake Delta, in *World Environmental and Water Resources Congress* 2011, pp. 2340–2349, American Society of Civil Engineers.
- Lamb, M. P., B. McElroy, B. Kopriva, **J. Shaw**, and D. Mohrig (2010), Linking river-flood dynamics to hyperpycnal-plume deposits: Experiments, theory, and geological implications, *Geol. Soc. Am. Bull.*, *122*(9-10), 1389–1400.
- **Shaw, J. B.**, M. A. Wolinsky, C. Paola, and V. R. Voller (2008), An image-based method for shoreline mapping on complex coasts, *Geophys Res Lett*, *35*, L12405.

Repositories

- Konkol, A., Schwenk, J., Katifori, E., & Shaw, J. (2022). Supplementary Data for "Interplay of river and tidal forcings promotes loops in coastal channel networks" [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6079076
- Shaw, J.B. (2020): AtchMiss. figshare. Software. https://doi.org/10.6084/m9.figshare.12440279.v1 Ke, W.-T., Shaw, J.B., (2018). MB_DCN Model, Figshare. Fileset. https://doi.org/10.6084/m9.figshare.7272422.v1
- Shaw, J. B. and A.M. Haynes (2018). Streakline analysis of the Wax Lake Delta, 1974 2016. https://doi.org/10.6084/m9.figshare.7075181.v1

Non peer-reviewed articles

Mahon, R.C., **Shaw, J.B.**. A faithful record of channel mouth bifurcation angles in river delta stratigraphy on Earth and Mars. EarthArxiv: https://doi.org/10.17605/OSF.IO/9R64A

- "What do River Deltas and Bacteria have in common? The way that they branch." (2019), medium.com, https://tinyurl.com/y48sbt9w
- "Measuring the Growth of River Deltas under Muddy Water" (2018), medium.com, https://bit.ly/2GAs0rF
- "A Recipe for Island Creation" (2018), medium.com, https://bit.ly/2LwBB1f
- "Branching Angles of river channels are similar, whether they join or split" (2017), medium.com, https://bit.ly/2ieuMbz

Grants Funded

- **2019-2021:** Chancellor's Fund for Innovation and Collaboration, "A Seed Grant Linking Transportation Economics to Geology on the Lower Arkansas River," \$118,250, PI
- **2019-2022:** National Science Foundation, GLD , "Collaborative research: An Experimental Investigation of Morphodynamic Coupling between River Deltas and Marshes," with Dr. Kyle Straub, Tulane University, \$442,960. \$281,542 to U. Arkansas, PI.
- **2016-2021:** Department of Energy Early Career Research Award, "The Dynamics and stratigraphy of distributary channel networks," \$753,000, PI
- **2017-2020:** American Chemical Society, Petroleum Research Fund, Doctoral New Investigator Award, "Investigating advective and diffusive controls on fine-grained sediment transport and deposition," \$110,000, PI
- **2017-2018:** National Center for Earth Surface Dynamics Post-doctoral Fellowship award (Post-doc Dr. Robert Mahon), \$50,000, co-PI
- **2013-2016:** National Science Foundation, Post-doctoral Fellowship, "Backwater control on the morphodynamics of delta growth," \$170,000, PI.

Courses Taught

GEOS 4223: Stratigraphy and Sedimentation, Fall 2014-2020

GEOS 3413: Sedimentary Rocks and Fossils, Spring 2016-2018

GEOS 560V/5993: Dynamics of Sediment Transport, Fall 2015, Fall 2017, Fall 2019

GEOS 436V: Spring Break Field Course to the Florida Pan-handle, Spring 2016 (with Dr. Covington)

GEOS 4686: Field Camp Summer 2017, 2018

GEOS 560V: Vector Calculus for Geoscientists Fall 2018

GEOS 5612: Research Methods Spring 2020

GEOS 410V/510V: Geoscience Careers Spring 2021

Selected Professional Service

Outside Examiner, Fulbright Senior Fellowship Program (2022)

Outside Examiner ("Contro-relatore") MsC student, University of Padova, Italy (2022)

GeoAllies Participant; NSF project improving diversity and inclusion in geosciences (2021-2022)

External Advisory Board; RESTORE Act Center of Excellence for Louisiana (2021-2023)

Organizer, Geosciences Prospective Student Visits (2018-2021)

Member, Department of Geosciences Diversity and Inclusion Committee (Fall 2020 – present)

Pod member, URGE: Unlearning Racism in the Geosciences (Spring 2021).

Associate Editor, Journal of Geophysical Research: Earth Surface (2021-2023)

Meeting organizer, International Conference on Fluvial Sedimentology (ICFS), Riva del Garda, Italy, (2022)

Review Panelist for National Science Foundation (2020)

Field Trip Leader, National Association of Black Geoscientists Technical Conference (2019)

Participant, Fort Valley State University's CDEP Mathematics, Science, and Engineering Academy (2019)

SEPM Council Nominating Committee (2019)

Departmental Search Committee Chair – Hydrology Hire (2019-2020)

Ph.D. Coordinator, Department of Geosciences (2017-2020)

Departmental Search Committee – Geography Hire (2018-2019)

Faculty convener, Geohog Research Conference (2017, 2018)

Early-Career Grant Workshop Panelist, U. of Arkansas (2017-2019)

Departmental Scholarship Committee (2017)

Departmental Search Committee Chair – Stratigraphy Hire (2016-2017)

Departmental Curriculum Committee (2016-2017)

Departmental T.A. Committee (2016-2017)

Convener for 6 Technical Sessions at American Geophysical Union Meeting (2014-2018)

Review Panelist for Texas Sea Grant (2015)

Reviewer for grant proposals from National Science Foundation, Department of Energy, American Chemical Society, National Geographic

Reviewer for over >48 scientific manuscripts published in 21 international journals since 2014, including PNAS, Geology, Nature Geosciences, Geophysical Research Letters, PLOS-ONE, Journal of Hydraulic Engineering, Nature Communications, Journal of Geophysical Research: Earth Surface

Mentorship

Post-doc adviser

Hehe Chen (2020-2021) co-advised by Jill Marshall and Glenn Sharman, presently Assistant Professor of Structural Geology, China University of Geoscience

Hongbo Ma (2020) Current Position: Assistant Professor, Tsinghua University, China.

Robert Mahon (2017-2018) Current Position: Assistant Professor, University of New Orleans

Wun-Tao Ke (2016-2018) Current Position: Engineer, Sinotech, Taipei, Taiwan

Ph.D. Students

Gift Okunbor (2021-present)

Cory Hughes (2020-present)

Chris Cathcart (2019-present)

Kelly Sanks (2016-2021) Dissertation: "The morphodynamic interaction of river deltas and their marshes" *University of Arkansas Distinguished Dissertation Award*. Currently: post-doc, Tulane-LSU-Wageningen University

Masters Students

Byongsuk "Taewoo" Chun (2019-2021) Thesis: "Modeling the Lafourche Delta network in the Mississippi Delta Complex" Currently PhD Student, Queens University, Kingston, Canada

Sam Zapp (2018-2020) Thesis: "Exploring Sediment Compaction in Experimental Deltas" Currently PhD Student, LSU College of Coast and Environment

Chris Cathcart (2017-2019) Thesis: "The Structure and Dynamics of a River Delta are Related Through its Nourishment Area, Suggesting Optimality" Currently PhD Student at U. of Arkansas

Amanda Whaling (2016-2018) Thesis: "Changes to Subaqueous Delta Bathymetry Following a High River Flow Event, Wax Lake Delta, LA" https://scholarworks.uark.edu/etd/3044/; Currently at Lower Mississippi Gulf Water Science Center, US. Geological Survey

Kelly Sanks (2016-2018) Thesis: "Marsh Monitoring Shows Minimal Sediment Deficit along the Louisiana Coast" Currently PhD Student, at U. of Arkansas

Thomas Coffey (2016-2017) Thesis: "Comparison of Flow Dynamics and Bifurcation Angles in Tributary and Distributary Channel Networks" Currently at Halliburton

Sean Parry (2015-2017) Thesis: "Utilization of Cross-sets for Paleodischarge Estimation and Paleocurrent Direction Magnitudes of the Parthenon Sandstone, Northwest Arkansas" https://scholarworks.uark.edu/etd/2010/; Currently at GHD International

Gordon McCain III (2014-2016) Thesis: "Influences of Channel Dredging on Avulsion Potential at the Atchafalaya River" https://scholarworks.uark.edu/etd/1559/; Currently Petroleum Geologist at G3 Geological Resources and President, North Texas Geological Society

Kyle Spencer (2014-2016) Thesis: "Statistical Analysis of Fluvial Channel Belts" https://scholarworks.uark.edu/etd/1604/; Currently Client Success Manager, Oseberg Oil and Gas

<u>Undergraduate Students</u>

Trent Fortier (2022)

Mary Dee (2021)

Maya Kedem (2020-2021); Mechanical Engineering, Currently Assembly Engineer, GE Aviation Adam Konkol (2019-2021; U. of Pennsylvania, Dept. of Physics, Goldwater Scholar, Dean's Scholar, NSF GRFP, presently pursuing Applied Math Ph.D. at MIT)

Christopher Schaubroeck (2019-2021, Honors: *Summa Cum Laude*), Thesis: "Rapid River Migration in the Lowermost Arkansas River, Arkansas, USA" Currently Assistant Geologist, Terracon, Indianapolis, IN

Madison Riney (2019-2020); presently Geologist Digioa Gray, Gilbert, AZ

Sam Vasquez (2018), Co-advised with Dr. Sharman

Ashlynn Haynes (2017-2019), Currently GIS expert for city of Springdale, AR

Kashauna Mason (2017-2019), Currently Ph.D. student at Texas A&M

Michael Amos (2016-2018), Currently M.S., University of New Orleans

Seth Gilchrist (2016-2018, Honors *Cum Laude*, SURF recipient), Thesis: "Analyzing Deltaic Sediment Settling Velocity Variation in a bay of the Wax Lake Delta, Louisiana" Currently PhD student: U. of California: Merced.

Kaitlyn Hurlbut (2015-2017)

Grayson Lamb (2015-2016) M.S. TCU, Currently at Oxy Petroleum

Josie Brunick (2014-2015) Currently at EOG

Justin Estep (2014-2015) PhD Texas A&M, post-doc Northern Arizona University, presently Assistant Professor at Maine Maritime Academy

Thomas Coffey (2015)

Ph.D. Committees

John Richins (2022-present)

Ryan Strickland (2020-present)

Sam Martin, Environmental Dynamics Doctoral Program, (2019-present)

Emma Menio (2017-present)

Celia Trunz (2017-2021)

Kirsty Morgan (2016-unfinished)

Max Cooper (2015-2018)

M.S. Committees

Matthew Edwards (2021-present)

Kathryn Hansen (2021-present)

Joel DeYoung (2020-2021)

Jordan Oefinger (2019-2020)

Francisco Rusconi (2017)

<u>Undergraduate Honors Committees</u>

Mason Frucci (2018)

Spencer Wilbur (2018-2020)

Faculty Mentorship

Linyin Cheng (2019-present)

Kevin Befus (2020-present)

Presentations (2014-2022)

 Ω for an invited talk, Underlined names are mentored scientists.

- **ΩJ.B. Shaw** (2022) A Necessary Condition for the stability of simple loops *Physics Seminar*, *Department of Physics, University of Arkansas*.
- **ΩJ.B. Shaw** (2022) A Necessary Condition for the stability of simple loops *Wydział Mechaniczny Energetyki i Lotnictwa Seminar*, *Warsaw University of Technology, Poland*.
- **ΩJ.B. Shaw** (2022) Necessary conditions for the stability of simple loops *Mathematics in Natural Sciences Seminar, University of Warsaw, Warsaw, Poland.*
- Ma, H., L. Vulis, **J. Shaw**, A. Tejedor, D. Feng, E. Foufoula-Georgiou (2022) Terminal condition for the growth of distributary channel networks *SoCal Geomorphology Seminar 2022*, Irvine, CA
- **ΩJ.B. Shaw** (2022) Two necessary conditions for the stability of simple loops *IFT UW Soft Matter Seminar, University of Warsaw, Warsaw, Poland.*
- **ΩJ.B. Shaw** (2022) Distributary Channel Networks, connecting Form and Function 2022 World Large River and Delta Systems Source-to-Sink Online Webinar Series, North Carolina State University

- ΩSanks, K.M., J.B. Shaw (2022) The morphodynamic interaction of river deltas and their marshes 2022 World Large River and Delta Systems Source-to-Sink Online Webinar Series, North Carolina State University
- Silvestre, J.R., Sanks, K.M., S.M. Zapp, , **J.B. Shaw**, R. Dutt, K.M. Straub (2021). Linking shoreline transgression to spatial scales of subsurface organic carbon reservoirs in deltas *AGU Fall Meeting* 2021, New Orleans and Virtual
- Sanks, K.M., S.M. Zapp, J.R. Silvestre, **J.B. Shaw**, R. Dutt, K.M. Straub (2021). Marsh deposition has a first-order control on channel kinematics in an experimental river delta *AGU Fall Meeting 2021*, *New Orleans and Virtual*
- <u>Chun B.</u>, **J.B.** Shaw, E.L. Chamberlain (2021) Modeling the Lafourche Distributary Channel Network in the Mississippi Delta Complex *AGU Fall Meeting 2021, New Orleans and Virtual*
- <u>Hughes, C.M.</u>, **J.B. Shaw** (2021) Preliminary Analysis of a Terrestrial Analog for Topographically Inverted Martian River Delta Deposits *AGU Fall Meeting 2021, New Orleans and Virtual*
- Edwards M., J.A. Marshall, **J.B. Shaw** (2021) Resolving the Meandering Path of the Lower Arkansas River, USA *AGU Fall Meeting 2021, New Orleans and Virtual*
- Noel S., R.C. Mahon, **J.B. Shaw** (2021) Sediment Re-entrainment in Fine-Grained Delta Front Systems *AGU Fall Meeting 2021, New Orleans and Virtual*
- **ΩShaw, J.B.**,(2021) Interplay of river and tidal forcings promotes loops in coastal channel networks DREAMS21: Dynamics of Random Expanding networks: Analysis, modelling and simulation of Multi-Scale spatial exploration spreading Workshop, Paris, France
- <u>Hughes, C.M.,</u> **J.B. Shaw** (2021) River delta trunk channel deposited in inverted relief, Wedington, AR, *Workshop on Terrestrial Analogs for Planetary Exploration* (Virtual).
- **ΩShaw, J.B.**, E. Katifori, A. Konkol, J. Schwenk (2021) Loops in the Channel Networks of River Deltas, *University of Paris Physics Seminar*, Paris, France (Virtual)
- Silvestre, J., <u>K.M. Sanks, S. Zapp</u>, **J.B. Shaw**, K.M. Straub, (2021), Exploring the relationship between organic deposition resulting from marshes and autogenic scales in deltaic stratigraphy, *EGU Meeting*, Virtual.
- **ΩShaw, J.B.** (January 2020), Structure and Dynamics of Branching and Looping Channels on River Deltas, *University of Pennsylvania Earth and Environmental Sciences Seminar*, Philadelphia, PA
- **ΩShaw, J.B.**, <u>C.A. Cathcart</u>, E. Katifori, A. Konkol, R.P. Hale, R.L. Bain, R.W. Wagner (2019) Controls on Branch and Loop formation in River Delta Channels, *TCU Department of Geological Sciences Seminar*, Fort Worth, TX
- **ΩShaw J.B.,** <u>C.A. Cathcart</u>, E. Katifori, A. Konkol (August 2019) Structure and Dynamics of Branching and Looping Channels on River Deltas, *DOE PI Meeting*, Gaithersburg, MD
- **Shaw, J.B.**, <u>K.G. Mason, G. McCain</u>, (2019) The Atchafalaya River Avulsion control of Nature or control of dredging?, *American Geophysical Union Meeting*, San Francisco, CA
- **ΩShaw, J.B.**, <u>C.A. Cathcart</u>, E. Katifori, A. Konkol, R.P. Hale, R.L. Bain, R.W. Wagner (2019) Controls on Branching and Looping Channels on River Deltas, *American Geophysical Union Meeting*, San Francisco, CA
- <u>Cathcart, C.A.</u>, **J.B. Shaw**, (2019). The Structure and Dynamics of a River Delta are Related Through its Nourishment Area, Suggesting Optimality, *American Geophysical Union Meeting*, San Francisco, CA

- Zapp, S.M., J.B. Shaw, K.M. Straub, <u>K.M. Sanks</u>, R. Dutt (2019). Consolidation of Deltaic Marsh Sediments and Their Contribution to Coastal Subsidence in Physical Experiments, *American Geophysical Union Meeting*, San Francisco, CA
- Sanks, K.M., J.B. Shaw, K.M. Straub, S.M. Zapp, R. Dutt (2019). The Influence of Marsh Sediment Accumulation on Deltaic Surface Processes in a Physical Experiment, *American Geophysical Union Meeting*, San Francisco, CA
- Amos, M.A., R.C. Mahon, **J.B. Shaw**, <u>C.A. Cathcart</u> (2019). Sediment transport dynamics and the evolution of subaqueous delta channel levees, *American Geophysical Union Meeting*, San Francisco, CA
- **ΩShaw, J.B.**, <u>Ke, W.-T.</u>, <u>Mahon, R.C., Cathcart, C.A.</u>, (2019). Insights on Channel and Sediment Dynamics from the Wax Lake Delta, *U. of Arkansas ENDY/Geosciences Seminar*, Fayetteville, AR
- **ΩShaw, J.B.**, <u>Ke, W.-T.</u>, <u>Mahon, R.C., Cathcart, C.A.</u>, (2019). Insights on Channel and Sediment Dynamics from the Wax Lake Delta, *LSU Geology & Geophysics Seminar*, Baton Rouge, LA
- Mahon, R.C., J.B. Shaw, (2018). EP31D-2379 A Faithful Record of Channel Mouth Bifurcation Angles in River Delta Stratigraphy on Earth and Mars, *American Geophysical Union Meeting*, Washington, DC
- **Shaw J.B.**, W-T Ke, R.C. Mahon, C.A. Cathcart (2018). Distributary Channel Networks Modeled Using Non-linear Viscous Fingering, *American Geophysical Union Meeting*, Washington, DC
- <u>Cathcart, C.A.</u>, **J.B. Shaw**, (2018). Nourishment Area Asymmetry Relates A Distributary Channel Network's Structure and Dynamics, *American Geophysical Union Meeting*, Washington, DC
- Sanks, K.M., J.B. Shaw, (2018). Keeping Pace with Relative Sea Level Rise: Marsh Platform Monitoring Shows Minimal Sediment Deficit along the Louisiana Coast, *American Geophysical Union Meeting*, Washington, DC
- Mason, K.G., J.B. Shaw, (2018). Who wins? Mississippi vs Atchafalaya, *American Geophysical Union Meeting*, Washington, DC
- **ΩShaw, J.B.,** W-T. Ke, R.C. Mahon (2018) Modeling Deltaic Distributary Networks, *Department of Energy Basic Energy Science PI conference*, Gaithersburg, MD
- **ΩShaw, J.B.**, <u>Coffey, T.S.</u>, <u>Ke, W.-T.</u>, <u>Mahon, R.C.</u>, (2018). Processes and Stratigraphic Products of River Delta Channel Networks, *University of Tulsa GeoSeminar Series*, Tulsa, OK
- **ΩShaw, J.B.**, <u>T.S. Coffey, W-T. Ke</u>, (2018) An Emergent Bifurcation Angle on River Deltas, *Geological Society of America Meeting*, Indianapolis, IN
- <u>ΩWhaling, A.R., Shaw, J.B.,</u> (2018) Changes to subaqueous delta bathynetry following a high river flow event, Wax Lake Delta, LA, *USGS Lower Mississippi Gulf Web Seminar*, Fayetteville, AR
- ΩSanks, K.M., Shaw, J.B., (2018) Keeping Pace with Relative Sea Level Rise: Marsh Platform Monitoring Shows Minimal Sediment Deficit along the Louisiana Coast, USGS Lower Mississippi Gulf Web Seminar, Fayetteville, AR
- Amos, M., A.R. Whaling, J.B. Shaw, (2017). Flow Field Measurements around Distributary Channels on Wax Lake Delta, Louisiana, USA, *American Geophysical Union Meeting*, New Orleans, Louisiana
- <u>Ke W-T</u>, **J.B. Shaw**, (2017). The geometry of the numerical distributary channel network on the river delta, *American Geophysical Union Meeting*, New Orleans, Louisiana
- **Shaw, J.B.**, <u>T.S. Coffey</u>, (2017) An Emergent Bifurcation Angle on River Deltas, *American Geophysical Union Meeting*, New Orleans, Louisiana

- Olliver, E., D. Edmonds, **J.B. Shaw**, (2017). The influence of vegetation on the transport pathways and residence time of surface water on the deltaic islands of Wax Lake Delta, LA, *American Geophysical Union Meeting*, New Orleans, Louisiana
- Sanks, K.M., J.B. Shaw, (2017). Field Monitoring Shows Smaller Sediment Deficit to the Louisiana Coast, *American Geophysical Union Meeting*, New Orleans, Louisiana
- Whaling A. R., J.B. Shaw, (2017) Changes to subaqueous delta bathymetry following a high river flow event, Wax Lake Delta, LA, USA, *American Geophysical Union Meeting*, New Orleans, Louisiana
- **Shaw, J.B.**, <u>T.S. Coffey, W-T. Ke</u>, (2017). Congruent Bifurcation Angles in River Delta and Tributary Channel Networks, *River, Coastal Estuarine Morphodynamics Meeting*, Padua, Italy
- Ω<u>Ke, W.-T.</u>, **J.B. Shaw** (2017), "Numerical Model for the growth of distributary channel bifurcations on river deltas" Japan Geophysical Union Conference, Tokyo, Japan
- **ΩShaw, J.B.,** Miller K., McElroy, B., (2016). Predicting river mouth channel bifurcation length scale using conservation of fluid mass, *Community Surface Dynamics Modelling Software Annual Conference*, University of Colorado, Boulder, CO
- **ΩShaw, J.B.,** Coffey, T.S., (2016) The dynamics of distributary networks, *Department of Energy Basic Energy Science PI conference*, Gaithersburg, MD
- **ΩShaw, J.B.,** (2016). Lengths and Angles, progress understanding delta morphodynamics, *Texas A&M Geology Seminar*, College Station, TX
- **Shaw, J.B.,** McCain. G., (2016) The Atchafalaya River Avulsions Control of Nature of Control of Dredging?, *American Geophysical Union Fall Meeting*, San Francisco, CA
- Hurlbut, K.E., J.B. Shaw, Estep, J.D., Edmonds, D.A, (2016). Measuring delta volumetric change and composition using a streakline-based method on the Wax Lake Delta, *American Geophysical Union Fall Meeting*, San Francisco, CA
- Wagner, R. W., Lague, D., Mohrig, D. C., Passalacqua, P., **Shaw, J.**, Moffett, K., (2016). The Time-Lapse Delta: Quantifying Landscape Change on a Prograding Delta Top, *American Geophysical Union Fall Meeting*, San Francisco, CA
- Coffey, T. S., Shaw, J. B. (2016), Role of Unchannelized Flow in Determining Bifurcation Angle in Distributary Channel Networks, *American Geophysical Union Fall Meeting*, San Francisco, CA
- **Shaw, J. B.,** Miller K., McElroy, B., (2015), Predicting river mouth channel bifurcation length scale using conservation of fluid mass, *American Geophysical Union Fall Meeting*, San Francisco, CA
- Estep, J.D., J.B. Shaw, Edmonds, D.A, (2015). Measuring Delta Progradation Using Delta Front Flow Patterns: A New Method of Remote Imagery Analysis on the Wax Lake Delta, *American Geophysical Union Fall Meeting*, San Francisco, CA
- **Shaw, J.B.**, McElroy, B., Dec. 19, 2014, Scaling Bed Forms Using the Backwater Number, American Geophysical Union Fall Meeting, San Francisco, CA
- **ΩShaw, J.B.**, Mohrig, D., Sept. 12, 2014, Bathymetry and Flow patterns at channel tips on the Wax Lake Delta, Tulane University Department Seminar, New Orleans, LA
- **ΩShaw, J.B.**, Mohrig, D., July 21-24, 2014, The End (and Beginning) of Channels on the Wax Lake Delta, International Deltas Meeting, Istomino, Russia

Public Presentations

Shaw, J.B., Coffey, T.S., Ke, W.-T., Mahon, R.C., (2018). Processes and Stratigraphic Products of River Delta Channel Networks, *Tulsa Geological Society*, Tulsa, OK

Shaw, J.B., Mohrig, D., (2014). Bathymetry and Flow patterns at channel tips on the Wax Lake Delta, *Fort Smith Geological Society*, Fort Smith, AR