

CURRICULUM VITAE – DAVID MOHRIG

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ACADEMIC DEGREES:

- Ph.D. 1994 Geological Sciences, University of Washington, Seattle, Washington
- M.S. 1987 Geological Sciences, University of Washington, Seattle, Washington
- B.A. 1983 Geology, Pomona College, Claremont, California (Cum Laude)

PROFESSIONAL APPOINTMENTS:

- 9/20 – present Peter T. Flawn Centennial Chair in Geology, The University of Texas at Austin
- 9/11 – present Professor, Dept. of Earth & Planetary Sci., Jackson School of Geosciences, The University of Texas at Austin
- 1/18 – 9/23 Associate Dean for Research, Jackson School of Geosciences, The University of Texas at Austin
- 9/12 – 8/20 John E. “Brick” Elliott Centennial Professor in Geological Sciences, Department of Geological Sciences, Jackson School of Geosciences, The University of Texas at Austin
- 8/06 – 9/11 Associate Professor, Department of Geological Sciences, Jackson School of Geosciences, The University of Texas at Austin
- 7/06 – 8/06 Associate Professor of Geology, Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts
- 6/01 – 7/06 Assistant Professor of Geology, Cecil & Ida Green Career Development Chair, Dept. of Earth, Atmospheric, & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA
- 12/96 – 6/01 Senior Research Geologist, Exxon Production Research Company & ExxonMobil Upstream Research Company, Houston, Texas
- 6/94 – 12/96 Post-Doctoral Associate, Department of Geology & Geophysics, and St. Anthony Falls Laboratory, University of Minnesota, Minneapolis, Minnesota

SELECTED PROFESSIONAL RECOGNITION:

External:

- 2025-2026 Lecturer, American Geophysical Union College of Fellows Distinguished Lecture Series
- 2021 G.K. Gilbert Award in Surface Processes. Awarded by the American Geophysical Union in recognition of sustained and outstanding contributions to the field of Earth and planetary surface processes.
- 2019 Francis J. Pettijohn Medal for Sedimentology. Awarded by the Society for Sedimentary Geology (SEPM) in recognition of "Excellence in Sedimentology."
- 2016 elected Union Fellow – American Geophysical Union.
- 2013 Water Resources Research Editor's Choice Award: Kenney, M. A., B. F. Hobbs, D. Mohrig, H. Huang, J. A. Nittrouer, W. Kim, and G. Parker (2013), Cost analysis of water and sediment diversions to optimize land building in the Mississippi River delta, *Water Resour. Res.*, 49, 3388–3405.
- 2009 Outstanding Paper in Journal of Sedimentary Research: Straub, K.M., Paola, C., Mohrig, D., Wolinsky, M.A., and George, T., 2009, Compensational stacking of channelized sedimentary deposits: *Journal of Sedimentary Research*, v.79, p. 673-688.
- 2008-2009, NSF – MARGINS Distinguished Lecturer

Internal:

- Knebel Distinguished Teaching Award – Dept. Earth & Planetary Sci.: 2022, 2015, 2013, 2011, 2008
- 2014 Outstanding Educator Award, Jackson School of Geosciences, UT-Austin
- Excellence in Instruction Award, ExxonMobil Upstream Research Company, 2001

RESEARCH NARRATIVE

My research focuses on the flow of solids across planetary surfaces and the transport processes leading to erosion and sedimentation that evolves terrestrial, submarine, and extraterrestrial landscapes. I study construction of these landscapes at very short to very long time and space scales by combining field observations with laboratory experiments and sediment dynamics. Recent work highlights the responses of coastal rivers and deltas, barrier islands, and coastal plains to both naturally occurring and anthropogenic change, as well as the processes controlling channel formation on land and in the deep oceans. My research is inspired by the many undergraduate and graduate students I have collaborated with throughout the years.

SELECTED SCIENTIFIC PUBLICATIONS:

Google Scholar h-index = 63, total citations = 13,909 | **Web of Science** h-index = 50, total citations = 6490

^ = undergraduate student | * = graduate student | ** = post-doctoral fellow

RIVERINE SYSTEMS

- *Jerolmack, D.J., & Mohrig, D., 2007, Conditions for branching in depositional rivers: *Geology*, v. 35; no. 5; p. 463–466.
- *Jerolmack, D.J., & Mohrig, D., 2005, A unified model for subaqueous bedform dynamics: *Water Resour. Res.*, v. 41, W12421
- *Nitttrouer, J.A., Mohrig, D., & Allison, M.A., 2011, Punctuated sand transport in the lowermost Mississippi River: *Journal of Geophysical Research-Earth Surface*, v. 116, F04025, doi:10.1029/2011JF002026.
- *Shaw, J.B., Mohrig, D., & ^Whitman, S.K., 2013, The morphology and evolution of channels on the Wax Lake Delta, Louisiana, USA: *Journal of Geophysical Research – Earth Surface*, v. 118, p. 1562 – 1584, DOI: 10.1002/jgrf.20123.
- *Smith, V.B., & Mohrig, D., 2017, Geomorphic signature of a dammed sandy river: The lower Trinity River downstream of Livingston Dam in Texas, USA: *Geomorphology*, 297, 122 - 136.
- *Mason, J., and Mohrig, D., 2019, Differential bank migration and the maintenance of channel width in meandering river bends: *Geology*, doi.org/10.1130/G46651.1
- *Swartz, J.M., *Cardenas, B.T., Mohrig, D., and Passalacqua, P., 2022, From Distributary to Tributary: Formation of Channel Networks Set by Depositional Processes: *Nature Geoscience*, <https://doi.org/10.1038/s41561-022-00900-x>
- Mohrig, D., et al., 2000, Interpreting avulsion process from ancient alluvial sequences: Guadalupe-Matarranya system, northern Spain and Wasatch Formation, western Colorado: *Geol. Soc. Am. Bull.*, v. 112, p. 1787-1803.

DEEP-MARINE SYSTEMS

- Mohrig, D., Whipple, K.X., Hondzo, M., Ellis, C., and Parker, G., 1998, Hydroplaning of subaqueous debris flows: *Geological Society of America Bulletin*, v.110, p. 387-394.
- Mohrig, D., Elverhøi, A., Parker, G., 1999, Experiments on the relative mobility of muddy subaqueous and subaerial debris flows, and their capacity to remobilize antecedent deposits: *Marine Geology*, v. 154, p. 117-129.
- *Straub, K.M., Mohrig, D., Buttles, J., *McElroy, B., and Pirmez, C., 2008, Interactions between turbidity currents and topography in aggrading sinuous submarine channels: A laboratory study: *Geol. Soc. Am. Bull.*, v. 120 (3-4), p. 368–385.
- *Straub, K.M., and Mohrig, D., 2008, Quantifying the morphology and growth of levees in aggrading submarine channels: *Journal of Geophysical Research – Earth Surface*, v. 113 (F3), F03012, doi: 10.1029/2007JF000896.
- **Lamb, M.P., and Mohrig, D., 2009, Do hyperpycnal-flow deposits record river-flood dynamics?: *Geology*, v. 37; no. 12; p. 1067–1070; doi: 10.1130/G30286A.1.

AEOLIAN SYSTEMS

- *Jerolmack, D.J., Mohrig, D., Grotzinger, J.P., *Fike, D.A., & *Watters, W.A., 2006, Spatial grain size sorting in eolian ripples and estimation of wind conditions on planetary surfaces: Application to Meridiani Planum, Mars: *J. Geophys. Res.*, v. 111, E03S90.
- *Eastwood, E.N., Kocurek, G., Mohrig, D. and *Swanson, T., 2012, Methodology for reconstructing wind direction, wind speed, and duration of wind events from aeolian cross-strata: *J. Geophys. Res. Earth Surf.*, v. 117, F03035.
- *Rendall, B., *Wilson, K., Kerans, C., Helper, M., and Mohrig, D., 2022, Coriolis effect recorded in Late Pleistocene Marine Isotope Stage 5e Bahamian aeolianites: *Geology*, <https://doi.org/10.1130/G49454.1>

COASTAL SYSTEMS

- ^Ruangsirikulchai, A., *Wilson, K., & Mohrig, D., 2026, Reshaping of San Jose Island, TX, USA, by unconfined washover and channelized washout during Hurricane Harvey. *J. Geophys. Research: Earth Surface*, 131, e2025JF008876.
- *Wilson, K., and Mohrig, D., 2021, Modern coastal tempestite deposition by a non-local storm: Swell-generated transport of sand and boulders on Eleuthera, The Bahamas: *Sedimentology*. doi:10.1111/SED.12842
- *Shaw, J., *You, Y., Mohrig, D., and Kocurek, G., 2015, Tracking hurricane-generated storm surge with washover fan stratigraphy: *Geology*, v. 43, no. 2, p. 127 – 130.

PROFESSIONAL SOCIETY MEMBERSHIPS:

American Geophysical Union | Geological Society of America | Society for Sedimentary Geology (*SEPM*)