CURRICULUM VITAE

JOHN M. HOLBROOK

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Highlights for Past Five Years

- Won over one million dollars in external funding in past 5 years, mostly from competitive Federal Research Grants
- AAPG Distinguished Lecturer 2015-2016, Selected from all petroleum related geological professions by American Association of Petroleum Geologists for presentations on research in sponsored lecture tour
- Served in a high proportion of the leadership posts for professional organizations dedicated to Sedimentology/Stratigraphy, including: GCSSEPM President, GSA Sedimentary Geology Division Chair, SEPM Council (Research Coordinator), and GSA Council (Councilor to Divisions), 2016/2017 Chair of GSA Publications Committee
- Served on funding panels for NSF Sedimentary Geology and Paleontology Program, PRF (Geology), and USGS EDMAP
- Graduated 4 Ph.D and 25 M.S. students, currently advising 9 M.S. students
- Won the UTA College of Science and Technology Outstanding Undergraduate Teacher award
- Teaching successful AAPG short courses in "Fluvial Stratigraphy" and "Sequence Stratigraphy" both nationally and internationally
- Leading NSF-SEES community effort in exploring potential for geothermal energy from sedimentary basins

EDUCATION AND CREDENTIALS

- 1995 Present, P.G., Registered Professional Geologist, State of Missouri
- 1992 Ph.D., Geology (Minor: Geophysics), Indiana University, advisor Donald Hattin, G.P.A. 4.0/4.0
- 1988 M.S., Geology, University of New Mexico, advisor Robyn Wright Dunbar, G.P.A. 3.7/4.0
- 1985 B.S., Geology, University of Kentucky, G.P.A. 3.6/4.0 (major), G.P.A. 3.6/4.0 (overall)

EXPERIENCE

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- 2011-Present, Professor, Texas Christian University, Department of Geology
- 2003 2011, Professor, University of Texas, Arlington, Department of Earth and Environmental Sciences
- 2003- Present, Adjunct Professor, University of Texas, Dallas, Department of Geosciences
- 1992 2003, Faculty, Southeast Missouri State University
 - 2000 2003, Professor, Department of Geosciences and Faculty of Environmental Sciences
 - **1998, Visiting Professor,** Department of Geology and Mining, Enugu State University, Nigeria. Taught Sedimentology and Field Methods as part of university faculty exchange program
 - 1996 1999, Associate Professor, Department of Geosciences
 - 1992 1995, Assistant Professor, Department of Geosciences
- **1989 1992, Associate Instructor,** Indiana University, Structural Geology lab in the Fall semesters; Sedimentation and Stratigraphy lab in the Spring semesters
- **1991, Sedimentary Consultant/Field Researcher** (field mapping and reconnaissance sedimentology), Indiana University Tectonics and Earthquake Prediction Project in Tajikistan
- 1988, Geological Assistant, Peabody Ventures (an independent petroleum company), Santa Fe, New Mexico
- 1986 1988, Teaching Assistant, University of New Mexico Department of Geology and Meteoritics

CURRENT RESEARCH INTERESTS

- Fluvial sedimentary processes in modern and ancient environments; emphasis on constraint of internal vs. external controls and rates for fluvial processes, patterns and controls on reservoir/aquifer architecture, neotectonic processes from facies proxy data, and fluvial applications to environmental mitigation and sustainability
- Mechanics of sequence deposition; emphasis on discontinuity development

TEACHING INTERESTS AND COURSES TAUGHT DURING LAST FOUR YEARS

Teaching Interests

- Teaching interests are broad, but focus on a wide range of subjects related to modern sediment-producing environments, Quaternary geology, stratigraphy, and physical and biological development of the sedimentary rock record.
- Courses taught recently include: Sedimentology/Stratigraphy, Sequence Stratigraphy, Geomorphology and Quaternary Geology, Fluvial Stratigraphy, Technical Writing for the Geosciences, Predictive Stratigraphy, Depositional Environments, Geology Field Camp, Field Methods, Earth and Life Through Time, Historical Geology, Introduction to Research, Environmental Hazards, Physical Geology

Short Courses Taught in Past Four Years

- Getting Started in Fluvial Stratigraphy, Survey course in fundamentals of stratigraphy of fluvial deposits aimed at industrial applications; Sessions Taught Canadian Society of Petroleum Geologists Education Conference, Calgary ([2 day] 2013); AAPG Education Series ([1 day] 2013, 2014); YPF in Buenos Aries ([1.5 days] 2013); AAPG Annual Meeting ([1 day] 2014); Whiting Oil, Midland ([1day] 2014); Rocky Mountain Geologist ([2 day] 2014); Canadian Naturel Resources Ltd, Calgary ([2 day] 2015); CEPSA Petroleum, Bogota ([2 day] 2015); USGS, Reston ([3 day] 2015); AAPG South-Central Section, Abilene ([1 day] 2016); Woodside Petroleum ([2 day] 2016)
- Fundamentals of Clastic Sequence Stratigraphy, Survey course on theory and practical use of sequence stratigraphy; Sessions Taught –AAPG Education Series ([1 day] 2013, 2014, 2015); YPF in Buenos Aries ([1.5 days] 2013); CEPSA Petroleum, Bogota ([2 day] 2015);

ACADEMIC AWARDS AND HONORS

- 2015, AAPG Distinguished Lecturer, Appointed by AAPG and sent on lecture circuit presenting my research in sedimentology
- 2015, Appointed to Swanson Endowment, A new donation of \$600k in permanent endowment was made specifically to support my research program at TCU at impetus of a former student based on my past research and to support future research
- 2012, GSA Fellow, Appointed a "Fellow" of the Geological Society of America
- 2009, Outstanding Teacher Award, College of Science and Mathematics, University of Texas at Arlington
- 2008, Who's Who in America
- 2006, Highlights in Science, Science Magazine
- 2006-2008, Research Excellence Award, University of Texas at Arlington
- 2006, Who's Who among Sciences Higher Education
- 2005, Who's Who among American Teachers
- 2002, Missouri Board of Geologist Registration, One of seven-member board appointed by Governor.
- 2002, EDMAP proposal to USGS ranked second nationally by USGS peer review committee among all proposals (63) submitted that year
- 1999-Present, Who's Who in Science and Engineering, Who's Who in Education
- 1994, The Outstanding Researcher Award, College of Science and Technology, Southeast Missouri State University
- **1993, Recognition of Outstanding Research Achievement,** One of three faculty granted \$500 in research allocations by Southeast Missouri State University College of Science and Technology in recognition of achievements as the most outstanding faculty in the college in the area of research
- **1992, SEPM Excellence in Oral Presentation Award,** Paper co-authored with Martin Lockley and Adrian Hunt awarded 'Best Paper' at the Society for Sedimentary Geology Mid-year Meeting
- **1991, Graduate School Alumni Association Award** for the graduate student ranked first overall, Department of Geological Sciences, Indiana University
- **1991, Outstanding Associate Instructor Award** for best teaching of upper-division courses in the Department of Geological Sciences, Indiana University
- 1991, Summer Research Fellowship, College of Arts and Sciences, Indiana University
- 1988, Graduate School Fellow (Geology), One-year paid support without duties at Indiana University
- 1985, Purdell Award, Outstanding graduating geology student, University of Kentucky
- 1985, Winner, position to attend the Grand National Karate Tournament (first round of the Olympic Karate Trials)

PROFESSIONAL SERVICE AND OFFICES HELD

- 2015-2017, GSA Academic and Applied Geoscience Relations Committee, Member and 2017 Chair, Coordinates interaction between GSA and geology-related industries
- 2015-2017, GSA Publications Committee, member and 2016-2017 Chair, GSA Editorial Board for all Journals (*Geology, GSA Bulletin, Geosphere, Lithosphere, Engineering and Environmental Geology, Special Publications*).
- 2015-2016, GSA Ad Hoc Nominations Committee, Executive committee to review the nomination process
- 2015-2016, STEPPE Advisory Board, Oversees the NSF STEPPE Program
- 2014-2016, Lead Guest Associate Editor, Geosphere, special issue on geothermal energy.
- 2014, NSF Panelist, Marine Geology and Geophysics Panelist
- 2014-2016, Chair, GSA Audit Committee, Oversees the yearly audit of GSA finances
- 2012-2016, NSF SedHeat RCN, PI for NSF Research Coordination Network for geothermal energy in sedimentary basins
- 2013-2013, GSA Ad Hoc Committee on Hydrofracking
- 2013-2013, AGI, Ad Hoc Committee on Program Classification
- 2010-2016, Associate Editor, Marine and Petroleum Geology
- 2011-2015, Geological Society of America Council
- 2010, President GCSEPM, Gulf Coast Society for Sedimentary Geology
- 2010-2016, PRF Advisory Committee, Panel reviewing and recommend proposals for funding and general input to process for American Chemical Society Petroleum Research Fund.
- 2010-2011, GSA Leadership Meeting, Participated in GSA annual strategic planning meeting, Boulder, Colorado
- 2010, GSA Council, Nominated and running for position 4 on GSA Council. Results pending.
- 2010-2012, Academic Liaisons Committee: AAPG Committee to review research proposals from industry fund to NSF for fundamental research.
- 2010, Chair, Organizing committee for AAPG/SEPM Annual Meeting, AAPG Poster Chair, 2010 New Orleans
- 2009-2011, EDMAP Panel, Appointed to review panel for USGS EDMAP grants
- 2009, President Elect GCSEPM, Gulf Coast Society for Sedimentary Geology
- 2009, Student Assistant Coordinator, South Central Section meeting, Geological Society of America
- 2009-2011, Chair, Sedimentary Geology Division of the Geological Society of America (GSA)
- 2008-2010, SEPM Council, Research Councilor for the Society for Sedimentary Geology
- 2006-2009, NSF Panel, Sedimentary Geology and Paleontology, Arlington, VA
- 2006-2009, Chair and Organizer, "Seds and Suds" forum on the future of Sedimentary Geology at GSA Annual Meeting
- 2006-2008, Second Chair/Chair Elect, Sedimentary Geology Division of the Geological Society of America (GSA)
- 2006-2007, Chair, Organizing committee for AAPG/SEPM Annual Meeting, Oral chair, 2008 San Antonio
- 2006-2007, Best Paper Committee, Journal of Sedimentary Geology
- 2006-2007, Judge, GSA Student Poster Competition, Sedimentary Geology Division
- 2005-2007, Joint Technical Program Committee representative for the Sedimentary Geology Division of GSA, approve and arrange all sessions and abstracts for sedimentary geology for the GSA Annual Meeting
- 2004-Present, Co-director (with Chris Paola) of ForSed, an NSF-sponsored forum for national discussion of future research directions in Sedimentology and Stratigraphy
- 2004-Present, SEPM Honorary Membership Committee
- 2003-Present, NSF Steering Committee for Development of Future Research Directions, Sedimentology and Paleontology
- 2003, Vice Chair and Chair Elect of Missouri Board of Geologist Registration
- 2001, SEPM Nomination Committee, One of 14 committee members that nominated and selected the 2002 slate of national SEPM executive candidates
- 1999 2000, AAPG Delegate, representing the Association of Missouri Geologists
- 1999 2000, Secretary/Treasurer, SEPM Mid-Continent Section
- 1998 1999, President, SEPM Mid-Continent Section
- 1997 1998, Vice President and President Elect, SEPM Mid-Continent Section
- 1997 2000, SEPM Research Concepts Committee, Plan and approve research initiatives and meetings
- 1999, Organizing Committee AAPG/SEPM Annual Meeting, Funding Coordinator, San Antonio, Texas
- 1998, Organizing Committee AAPG/SEPM Annual Meeting, Funding Coordinator, Salt Lake City, Utah
- 1997 1999, Secretary, Association of Missouri Geologists
- 1995 1997, SEPM Meetings Policy Committee, Oversee meeting planning activities
- 1995 1998, SEPM K-12 Earth Science Education Committee, Oversee K-12 education initiatives
- **1990 1999, Basin Leader** (Tucumcari and Dalhart basins of northeast New Mexico) for the WIK (Western Interior Cretaceous) project of the Global Sedimentary Geology Program
- **1993, North American Stratigraphic Commission (NASC)**, Presentation on codification of sequence-stratigraphic nomenclature as a visiting member of the NASC

INVITED COLLOQUIA PRESENTATIONS

• 2016, (AAPG Distinguished Lecture), Indiana Geological Society, Mt Vernon, Indiana

- 2016, (AAPG Distinguished Lecture), Wesleyan University, Middletown, Connecticut
- 2016, (AAPG Distinguished Lecture), University of Kentucky, Lexington, Kentucky
- 2016, (AAPG Distinguished Lecture), Indiana University of Pennsylvania, Indiana, Pennsylvania
- 2016, (AAPG Distinguished Lecture), Central Connecticut University, Hartford, Connecticut
- 2016, (AAPG Distinguished Lecture), McMaster University, Hamilton Ontario
- 2015, (AAPG Distinguished Lecture), Billings Geological Society, Montana
- 2015, (AAPG Distinguished Lecture), University of Utah, AAPG Student Chapter
- 2015, University of Calgary, Geology Colloquia Series, Canada
- 2015, Suncor Energy, Calgary, Canada
- 2015, CSPG Technical Lunchen, Calgary
- 2015, Devon Energy, Calgary
- 2014, BEG, University of Texas at Austin
- 2013, (Invited Keynote), FORCE, Stavanger, Norway
- 2013, NEXEN Petroleum, Calgary, Canada
- 2013, University of Oklahoma, Geology Colloquia Series, Norman
- 2013, Baylor University, Geology Colloquia Series, Waco
- 2013, Fort Worth Geological Society, Ft Worth
- 2013, FRG, Sponsors meeting, Leeds, UK.
- 2012, Statoil, Calgary, Exploration and Production
- 2012, University of Kentucky, Rast-Holbrook Colloquia Series
- 2012, Abilene Geological Society
- 2012, TCU, Energy Club speaker series
- 2011, ConocoPhillips, Houston, Upstream Clastics Research Group
- 2011, AAPG, Webinar in Educational Series
- 2010, State Petersburg University, Russia, Department of Sedimentary and Structural Geology
- 2010, Woodside Petroleum, Perth, NW Shelf Production Group
- 2009, Menoufia University, Egypt, Department of Geology
- 2009, University of Iowa, Department of Geology
- 2009, University of Houston, Department of Geology
- 2008, Kansas University, Department of Geology
- 2008, University of Texas at Arlington, EES Department
- 2007, ExxonMobil, Houston, Upstream Research Company
- 2007, Chevron, Perth, NW Shelf Production Group
- 2007, Woodside Petroleum, Perth, NW Shelf Production Group
- 2007, Stanford University, Department of Geology
- 2006, Woodside Petroleum, Perth, NW Shelf Production Group
- 2006, Baylor University, Department of Geology
- 2006, Southern Methodist University, Department of Geological Sciences
- 2006, University of Nebraska, Lincoln, Department of Geosciences
- 2005, University of Texas at Austin, Department of Geological Sciences
- 2005, University of Texas El Paso, Department of Geological Sciences
- 2004, University of Texas at Dallas, Department of Geosciences
- 2004, Santos Oil Company, Exploration Division
- 2003, University of Missouri, Rolla, Department of Geology and Geophysics
- 2003, University of Texas, Arlington, Department of Geology
- 2003, Iowa Geological Survey, University of Iowa
- 2002, West Texas Geological Society, Midland, Texas.
- 2001, University of Illinois-Chicago, Department of Geology
- 2001, Tulane University, Department of Geosciences
- 2000, University of Tulsa, Department of Geology and Geophysics
- 1999, Southern Illinois University, Carbondale, Department of Geology
- 1999, University of Missouri, Rolla, Department of Geology and Geophysics
- 1998, University of Iowa, Department of Geology
- 1996, Indiana University, Bloomington, Department of Geological Sciences
- 1996, University of Missouri, Rolla, Department of Geological Sciences
- 1995, Evansville, Indiana-Kentucky Geological Society, at University of Southern Indiana, Evansville
- **1994**, University of Illinois, Urbana, Department of Geology
- 1994, Dyersburg Community College, Community discussion on environmental issues
- 1993, Memphis State University, Center for Earthquake Research and Information

THEME SESSIONS, SYMPOSIA, WORKSHOPS, AND FIELD TRIPS ORGANIZED

- 2016, ARMA/AAPG SedHeat Workshop, Successful Engineering of Sedimentary Geothermal Systems, Conveners: Derek Elsworth (Penn State), John Holbrook (TCU), Charles Fairhurst (UM), Sid Green (UU), two day workshop affiliated with American Rock Mechanics Assoceation Annual Meeting, Houston, Texas, (32 partisipants)
- 2016, AAPG Annual Meeting, Theme 7: Oil Sands I: Facies, Conveners: John Holbrook (TCU), Rudy Strobl (NEXEN), Calgary Canada.
- 2016, GSA Annual Meeting, Sedimentology, Clasitics, Conveeners: John Holbrook (TCU), Gary Weismann (UNM)
- **2013, Penrose Conference:** Predicting and Detecting Natural and Induced Flow Paths for Geothermal Fluids in Deep Sedimentary Basins: Park City, Utah, October 19-23, Conveners: John Holbrook (TCU); Rick Allis (Utah State Geological Survey); Derek Ellsworth (Penn State); Sidney Green (Schlumberger); Joseph Moore (U Utah) (85 participants).
- 2011, NSF SEES Workshop, Tracking and Energy Elephant, PI among three co-PI's organizing research priorities for the New NSF SEES (Science, Engineering, and Education for sustainability), Emphasis Geothermal Energy form Sedimentary Basins
- 2011, NSF SEES Workshop, Natural and Engineered Carbon Sequestration, One of four co-PI's organizing research priorities for the New NSF SEES Program, Emphasis CO2 Sequestration.
- 2010, AAPG Student Poster Session Chair, Chair for student poster session at AAPG Annual Meeting
- 2010, AAPG Oral Session Chair, Reexamination of Fluvial Models
- 2009, Field Trip Leader, Reconsidering sequence boundaries and reservoir architecture: A field and flume and source to sink look at emerging models for sequence development, Cretaceous Muddy/Dakota Group, Colorado, AAPG Annual Meeting in Denver
- 2009, Field Trip Co-leader, Sedimentary Environments and Dinosaur tracks of the Woodbine Sandstone from Lake Grapvine, GSA South-Central Sectional Meeting, Dallas
- 2009, Co-Chair, Siliciclastic Sedimentology and Sequence Analysis for Improved Reservoir Prediction, All-day session at AAPG Annual Meeting in Denver.
- 2009, Keynote Speaker and Discussion Moderator, River-to-Rock SEPM Research Conference, Aberdeen, Scotland
- 2009, Chair, Session on erosion and sediment delivery rates in tropical river systems, AAPG Hedberg Conference, Jakarta, Indonesia
- 2009, Chair, Student poster presentations at AAPG Annual Meeting in Denver
- 2008, Field-trip Leader, Reservoir Architecture in Modern and Ancient Fluvial Settings: Updip vs. Downdip Variability and Potential for Reservoir Connectivity, Mississippi River and Dakota Formation Outcrops, Educational trip for Woodside Petroleum, Perth
- **2008, Proposer and Co-chair of Pardee Keynote Symposia,** Perspectives on an Emerging Workforce Crisis in Geology: Assessing a Looming Irony, GSA Annual Meeting, Houston
- 2008, Convener and Organizer, NCED, NSF, and SEPM sponsored forum, Data and model results: Opposing views of the same problem? GSA Annual Meeting, Houston
- 2008, Chair, Recent Advances in Non-Marine, Shallow Marine and Shelf Siliciclastic Facies Models, AAPG Annual Convention, San Antonio
- 2008, Panelist, Panel discussion on alternative energy issues for UTA Honors College
- 2008, Discussion Leader, Presented and lead discussion on global warming issues for UTA "Great Discussions" series
- 2007, Co-leader LEBARG Research Consortium Field Trip, Dry land river systems, Lake Eyre, Australia
- 2007, Convener and Organizer, NCED, NSF, and SEPM sponsored forum, Geological Education: Are we properly preparing the next generation? GSA Annual Meeting, Denver
- 2006, Convener and Organizer, NCED, NSF, and SEPM sponsored forum, Changing research funding levels, low geology graduation levels, and oil prices that just won't level: What will they mean for the future of Sedimentary Geology? GSA Annual Meeting, Philadelphia
- 2005, Convener and Organizer, NSF-Sponsored Workshop on Environmental Stratigraphy, Invitation-only meeting at the U.M., Minneapolis NCED facility to discuss status and future research potential of Sedimentology and Stratigraphy in environmental applications
- 2005, Co-Convener, 8th International Conference on Fluvial Sedimentology, Relative impact of tectonics, sea-level, and climate control on fluvial systems, Conveners Ronald van Balen and John Holbrook
- 2004, Field Trip Leader, GSA South Central Section, Neotectonic features of the New Madrid seismic zone: Leaders John Holbrook, Peggy Guccione, and David Hoffman.
- **2004, Symposia Co-Chair, GSA South Central Section**, New Madrid Zone: Seismicity, Tectonics, Paleoseismology and Tectonic Geomorphology, Conveners John Holbrook, Margaret Guccione, Buddy Schweig
- 2003, Symposia Co-Chair, AAPG Annual Meeting, Salt Lake City, Allocyclic versus autocyclic processes in depositional systems, Conveners Janok Bhattacharya, Brian Willis, John Holbrook.
- 2002, Theme Session Chair, GCS-SEPM Research Conference, Houston, Primary controls on sequence architecture: Appointed chairs Grant Walch and John Holbrook.
- 2001, Field Trip Leader, 7th International Conference on Fluvial Sedimentology, Lincoln, Lower Mississippi Valley of Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana, and fluvial systems of the Texas Gulf coastal plain: Leaders - Mike Blum, Peggy Guccione, John Holbrook, Andres Aslan, and Whitney Autin.

- **2001, Symposia Chair, 7th International Conference on Fluvial Sedimentology,** Lincoln, Alluvial and tectonic system interactions: Conveners John Holbrook, Anne Mather, and Martin Stokes.
- **1999, Theme Session Co-Chair, GSA Annual Meeting,** Reno, Geology and geophysics of the Lower Mississippi Valley: In memory of Roger Saucier: Conveners Juan Lorenzo, Whitney Autin, John Holbrook.
- **1996**, Field Trip Leader, GSA Annual Meeting, Denver, Sequence stratigraphy of the Dakota Group and equivalents from north-central Colorado to northeastern New Mexico: Down-dip variations in sequence anatomy: Leaders John Holbrook and Frank Ethridge.
- **1995, Theme Session Chair, GSA Annual Meeting,** New Orleans, Recognizing the impact of subtle structures on the stratigraphic record: Conveners John Holbrook and Pieter Berendsen.
- **1994, Field Trip Leader, Science Teachers of Missouri Spring Conference,** Cape Girardeau, Reconstructing the history of the world from the rocks in your hometown: Leader John Holbrook.
- 1992, Field Trip Leader, SEPM Mid-Year Meeting, Ft. Collins, The Dinosaur Freeway: A preliminary report on the Cretaceous megatracksite, Dakota Group, Rocky Mountain Front Range, and High Plains, Colorado, Oklahoma, and New Mexico: Leaders -Martin Lockley, John Holbrook, and Adrian Hunt.
- 1992, Theme Session Co-chair, SEPM Mid-Year Meeting, Ft. Collins, Biostratigraphy of Cretaceous rocks in the Western Interior: Conveners Martin Lockley and John Holbrook.
- **1987, Field Trip Leader, New Mexico Geological Society Annual Field Conference,** Clayton, Stratigraphy of northeastern New Mexico: Leaders S.G. Lucas, A.P. Hunt, B.S. Kues, B.S., and J.M. Holbrook.

EDITORSHIPS AND REVIEWS

- 2008-2016-Associate Editor: Journal of Marine and Petroleum Geology
- 2014-2016- Geosphere Guest Editor: Geothermal Energy from Sedimentary Basins: Challenges, Potential, and Ways Forward: Geosphere, Special Issue, 70p
- I have reviewed multiple articles for journals and multiple articles for most journals I reviewed. Journals for which I did article reviews include: *Tectonics, Journal of Sedimentary Research, Tectonophysics, Geology, Geomorphology, Sedimentology, SEPM Special Publications, Stratigraphy, Basin Research, QSR, Quaternary International, Sedimentary Geology, Canadian Journal of Petroleum Research, CSPG, Journal of Marine and Petroleum Geology, Geosphere, Gulf Coast SEPM Research Conference Proceedings, IAS Special Volume, Geophysical Letters, Proceedings of the 7th International Conference on Fluvial Sedimentology, Palaios, Geologische Rundschaul, GSA Bulletin, and Seismological Research Letters*
- I have served as a standing panel member for NSF, PRF, and USGS grant panels, in addition to numerous grant reviews for same.

UNDERGRADUATE/GRADUATE STUDENT RESEARCH PROJECTS UNDER PRIMARY SUPERVISION SINCE 1993

- **Graduated 25 Masters students** (Yuzhi Cui, Jeremy Lawton, Stavena Akins, Alan Gunter, Chima Nzewunwah, Faith Amadi, Justin Bagley, Scott Stoner, April Moreno, Yaqoub Al-Refaei; Michele Kashouh, Daniel Carlin, Siavash Rastaghi, Gary Tomanka, Galen Huling, Sarah Allen, Michael Eldredge, Justin Anderson, Matt Palmer, Jonathan Ney, Alex Torres, Shea Atkins, Shelby Johnston, Rachel Gray, Robert J. Horner) [**Presently Supervising** 9 active M.S. students]. Research expenses for all of my past and present graduate students have been funded from my external grants.
- **Graduated 4 Ph.D. students** (Ron Tingook, Neal Alexandrowicz, Mark Hull, and Yaqoub Alrefaei). Research expenses for all of my past and present graduate students have been funded from my external grants.
- Supervised 69 undergraduates for undergraduate research through NSF REU/USGS Missouri River Mapping Program and an additional 15 for other projects through other sources
- Two undergraduate research projects featured on Discovery Channel (Tammy Eifert and Philip Statler), First episode of *Discover* Magazine

Theses Supervised to completion

Yaqoub Alrefaei, 2016, Implications of Lithofacies Association and Architecture for Low and High-Accommodation System Tracts from the Barren Series of the Cretaceous-Paleocene Raton Formation, Trinidad, Colorado: [Ph.D. Dissertation] University of Texas at Arlington, 155p.

Shea Atkins, 2016, Fluvial Deposition in High Accommodation Floodplain Lakes, Pennsylvanian Appalachian Basin, Eastern Kentucky: [M.S. Thesis] Texas Christian University, 68p.

Rachel E. Gray, 2016, Marine Influence in the Depositional Environments of the Paluxy Formation (Carr Member), Eastern Talco Field, Franklin and Titus Counties, Texas [M.S. Thesis] Texas Christian University, 81p.

Robert J. Horner, 2016, Facies Characterization and Architectural Context of Terminal Splay Sandstone beds in the Cretaceous-Paleocene Raton Formation, Colorado: [M.S. Thesis] Texas Christian University, 110p.

Mark Hull, 2016, A Modern Reservoir Analog for a Poorly Drained "High-Accommodation" Fluvial System: Sedimentary Processes, Architecture, and Reservoir Connectivity of the Grijalva System, Tabasco State, Mexico: [Ph.D. Dissertation] University of Texas at Arlington, 138p.

Shelby Johnston, 2016, Toggling Between Expansion and Translation and the Generation of a Muddy-Normal Point Bar: [M.S. Thesis] Texas Christian University, 85p.

Alexander Torres, 2016, 3D Modeling of Accretionary Bodies on a Late Cretaceous Point Bar in Dinosaur Provincial Park, Alberta, Canada using Architectural-Element Analysis: [M.S. Thesis] Texas Christian University, 135p.

Neal Alexandrowicz, 2015, Predicting Variability of Basal Scour and Quantifying Vertical Connectivity for Channel-Belt Reservoirs using Observations from the Holocene Mississippi River and Channel-Belt: [Ph.D. Dissertation] University of Texas at Arlington, 90p.

Justin Anderson, 2015, History of the Missouri River Valley from the Late Pleistocene to Present: Climatic vs. Tectonic Forcing on Valley Architecture: [M.S. Thesis] Texas Christian University, 70p.

Jonathan Ney, 2015, Testing the Distributary Channel Model Against Predicted Changes in Fluvial Reservoir Geometry during Transitions from Low to High Accommodation Settings: Upper Pennsylvanian of the Central Appalachian Basin: [M.S. Thesis] Texas Christian University, 75p.

Matt Palmer, 2015, A High-Resolution 3-D Architecture of a Cretaceous Point Bar using Terrestrial Laser Scanning of Multiple Exposures: A Far more Complex Model of Bar Growth at the Scale of a Steam Chamber that Previously Thought: [M.S. Thesis] Texas Christian University, 84p.

Sarah Allen, 2014, Reverse Meanders, Pseudo Point Bars, and the Enigma of Meandering in Braided Rivers: M.S. Thesis, Texas Christian University, 28p.

Galen Huling, 2014, Evidence for Clustering of Delta-Lobe Reservoirs within Fluvio-Lacustrine Systems, Jurassic Kayenta Formation, Utah: M.S. Thesis, Texas Christian University, 75p.

Michael Eldredge, 2014, Oolitic Shoaling of the Salem Limestone in Ste. Genevive County, Missouri: M.S. Thesis, Texas Christian University, 117p.

Gary Tomanka, 2013, Morphology, Mechanisms, and Processes for the Formation of a Non-Bifurcating Fluvial-Deltaic Channel Prograding into Grapevine Reservoir, Texas: M.S. University of Texas at Arlington

Ron Tingook, 2012, Numerical Simulation of the Base-Level Buffers and Buttresses Conceptual Model of Fluvial Systems: [Ph.D. Dissertation] University of Texas at Arlington, TX, 109p.

Michele Kashouh, 2012, A Late Holocene Meander-Braid Transition of the Lower Missouri River Valley: [Masters Thesis] University of Texas at Arlington, TX, 88p.

Carlin, Daniel E., 2011, Morphology of the lower Missouri River: the processes involving development of highly sinuous gooseneck loop cutoffs exposed in the surficial deposits of the river floodplain: [Masters Thesis] University of Texas at Arlington, TX, 163p.

Rastaghi, Siavash, 2011, The impact of buffer zone changes on architecture of the Paleozic Lower Cutler Beds of Utah: [Masters Thesis] University of Texas at Arlington, TX, 48p.

Yaqoub, Al-Refaei, 2011, Correlation of sequence stratigraphic surfaces of the mid-Cretaceous Dakota Group from subsurface to outcrop, Southern Denver Basin, Colorado. [Masters Thesis] University of Texas at Arlington, TX, 57p.

April Moreno (2010) Leading the James: The morphological changes of the Missouri River and the subservient James River: [Masters Thesis] University of Texas at Arlington, Arlington, TX, 264p.

Scott Stoner (2010) Channel dimensions and reservoir architecture of the Triassic Mungaroo Fm of the Australian Northwest Shelf: [Masters Thesis] University of Texas at Arlington, Arlington, TX, 173p.

Justin Bagley, (2009), Sedimentology, Ichnology, Depositional Environment Interpretation, and Reservoir Characterization of the Cotton Valley Formation Sandstone: [Masters Thesis] University of Texas at Arlington, Arlington, TX, 131p.

Alan Gunter, (2004), Ichnofossil evidence of a Mowry Boreal/Tethyan connection across the Transcontinental Arch of the Western Interior seaway: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO, 96p.

Faith Amadi (2004) Investigation of emerging patterns in Missouri Valley Holocene fill: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO, 152p.

Tanksley, Nichole, (2004), Holocene development of the Missouri River in the Miami Station area: A first look: [Senior Thesis] Southeast Missouri State University, Cape Girardeau, MO.

Nzewunwah, Chima, (2003), A pilot study of the Quaternary alluvial fill of the Missouri River Valley between Kansas City and Miami Station Missouri: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO.

Akins, Stavena, 2003, Chemofacies of the Dry Creek Canyon Formation: Evidence for a previously theorized Tethyan/Boreal connection: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO.

Teeters, Sam, 2001, Sedimentary constraints on the epicentral location and degree of deformation for the New Madrid 12/16/1811 dawn earthquake, and the role of splays in tectonically driven floodplain aggradation: [Senior Thesis], Southeast Missouri State University, Cape Girardeau, MO., 25p.

Kirkwood, Susan, 1999, Relationship between soil stratigraphy and liquefaction potential: [Senior Thesis] Southeast Missouri State University, Cape Girardeau, MO., 16p.

Lawton, Jeremy, 1998, High-Resolution synthetic well-log correlation of the Mississippi Valley Holocene mud veneer: A new tool for assessing detailed floodplain history: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO., 78p.

Stevenson, Eric, 1998, Development of reliable techniques for interpretation of LandSat images to aid in mapping of Holocene Mississippi River meander belts and related sediments: [Senior Thesis] Southeast Missouri State University, Cape Girardeau, 22p.

Cui, Yuzhi, 1997, Architectural-element analysis as a tool for modeling the Dakota Sandstone in central Kansas: [Masters Thesis] Southeast Missouri State University, Cape Girardeau, MO., 92p.

Eifert, Tammy, 1996, Some unusually large, complex, and well-preserved chertified burrow structures in Mississippian strata of Mammoth Cave National Park: The case for preservation of original burrow size: [Senior Thesis] Southeast Missouri State University, Cape Girardeau, MO., 23p.

White, David, 1994, Preserved perturbation of Albian channel sinuosity resulting from Sierra Grande basement uplift: [Senior Thesis] Southeast Missouri State University, Cape Girardeau, MO., 23p.

LOCATIONS OF FIELD EXPERENCE

Teaching Activities

- 2010 St. Petersburg, Russia, Sequence Stratigraphy of Ordovician strata
- 2005-Present, Central New Mexico, Projects associated with Field Camp
- 2004-Present, Texas and Arkansas, Field trips associated with graduate and undergraduate Sedimentology and Stratigraphy courses
- **1999-Present, Missouri and Mississippi River Valleys,** Field projects associated with Sedimentation and Stratigraphy courses and EDMAP and NSF REU
- 2007-Present, Southeastern Colorado, Field teaching of stratigraphic concepts
- 2007-St Petersburg Russia, Teaching one week graduate short course in Sequence Stratigraphy
- 1994-2004, Southwest Utah area, Site of field camp (See Courses Taught section above)
- 1994-2004, Rocky Mt. Front Range and Central Kansas, Structure and stratigraphy; Regional field trip and Field Camp
- **1992-2004, Southern Missouri Ozark area**, Petrology and mining geology, structural mapping, volcanic and intrusive rocks, stratigraphy and sedimentology; Regular part of various current classes
- **1992-2004, Eastern and central Kentucky,** Pennsylvanian through Ordovician sequence stratigraphy and depositional environments; Regular part of Sedimentation and Stratigraphy course
- **1992-2004, Mississippi embayment,** Field techniques in modern sedimentary environments and Quaternary; Regular part of several current courses, regional field trips
- 1992-2004, Southern Illinois, Stratigraphy; Advanced stratigraphy course
- 1998, Southern Nigeria, Structure and Sedimentology and Field Mapping courses during tenure as visiting professor
- 1998, Florida Keys, Carbonate geology; Regional field trip
- 1994 1995, Gulf Shores and New Orleans, Coastal processes and urban geology; Regional field trip
- 1993, Four Corners area, Stratigraphy, structure, and volcanic processes; Regional field trip

- 1989 1990, Cumberland Gap, Structural geology; Structural lab field trip
- 1988 1992, Southern Indiana, Stratigraphy and Sedimentology course field area
- 1986 1988, Northern New Mexico and environs, Stratigraphy and Sedimentology; Series of advanced sedimentary lab projects

Active Research

- Present (since 2015) Svalbard Norway, Fluvial architecture and source-to-sink study of Cretaceous fluvial section
- Present (since 2015) Argentina, Study of terminal splays of Andean foreland, Salta, and Parana Delta, La Plata area
- Present (since 2014) Powder River, Montana, Modern point bar processes
- Present (since 2013) Dinosaur Proventil Park, Alberta, Architecture of river point bars in Cretaceous section
- Present (since 2012) Kentucky, Fluvial architecture and sequence stratigraphy of Pennsylvanian section
- Present (since 2009) Siberia, Sequence Stratigraphy of the Siberian Suture
- Present (since 2009) Canada, Paleoseismology of the Cretaceous of Dinosaur Provincial Park
- **Present (since 2004) Australia,** Petroleum production from the northwest shelf offshore deposits of the Triassic; modern dry-land rivers of the Lake Eyre Outback region, Carpentaria bay Mitchel River
- Present (since 2008) Mexico, Modern rivers of Tabasco State
- Present (since 1996), Mississippi and Missouri river alluvial valleys, Several projects related to the Mississippi and Missouri river sediments, their origin and controls, with particular emphasis placed on tectonic and climatic controls
- Present (since 1986), U.S. Western Interior, Several projects related to Cretaceous and Tertiary stratigraphy with emphasis on the Lower Cretaceous and Paleocene
- 2012-2014, Utah, Jurassic Kayenta Formation
- 2009, Egypt, Fluvial Stratigraphy of the Baharaya Oasis
- 2002-2006, Rhine/Maas delta, The Netherlands, Project on Holocene surficial sedimentary processes addressing compactionrelated and isostatic differential subsidence and its effects on Rhine and Maas distributary channel processes,
- 1998, Nigeria, Upper Cretaceous rocks of the Anambra Basin, and alluvium of the Niger River
- 1994 1996, Southern Illinois, Pennsylvanian strata of the Illinois Basin
- 1994 1996, Mammoth Cave National Park, Unusually large Mississippian chertified burrows
- 1992 1981, Cave exploration and mapping projects in eastern, central, and western Kentucky, New Mexico, and Indiana
- **1991, Tadjikistan,** Research Consultant, mapping structures and sediment distribution in the Tadjik Depression, and Tien Shan, Peter I, and Pamier mountains
- 1989, Northern Indiana, Coastal processes in the Indiana Dunes area
- 1987, Yellowstone National Park area, Assisted in mapping of volcanic deposits in the Absaroka Range

ADMINISTRATIVE AND/OR MAJOR COMMITTEE ACTIVITIES

- 2015-2018, GSA Academic and Applied Geoscience Relations Committee, Member and 2017 Chair
- 2014-2017, GSA Publications Committee, 2017 Chair, GSA Editorial Board for all Journals.
- 2015-2017, STEPPE Advisory Board, Appointed as member of advisory body to STEPPE, a NSF network to promote and assist research into the sedimentary carpus
- 2015-2016, Hunter-Enis Chair, search committee
- 2014-2015, GSA Ad Hoc Nominations Committee, Executive committee to redesign nominations process
- 2014-2016, Chair, GSA Audit Committee, Oversee the audit of the books for Geological Society of America
- 2013-2014, Sedimentology Search Committee, TCU
- 2011-2015, Geological Society of America Council, Elected by the full membership of GSA; Councilor to Divisions, Chair of Audit Committee
- 2010-2016, PRF Advisory Committee, Panel reviewing and recommend proposals for funding and general input to process for American Chemical Society Petroleum Research Fund.
- 2010-2012, Chair, Academic Liaisons Committee: AAPG Committee to Link academic issues with Petroleum Industry.
- 2012-2013, GSA, Ad Hoc Committee on Hydrofracking, GSA Committee to review research official statement on Hydrofracking.
- 2012-2013, AGI, Ad Hoc Committee on Program Classification, Representative from AAPG.
- 2011-2012-Co-Chair, Ph.D. program proposal committee, TCU
- 2011-2012-Chair, Search committee for Sedimentary Geology Position, TCU Geology Department
- 2008-2010-Mentor, University Faculty Mentors program
- 2010-Co-Chair, Search committee for Earth Systems position, EES Department
- 2008-Co-Chair, Search committee for Earth Systems position, EES Department
- 2008-Co-Chair, Search committee for Hydrogeology position, EES Department
- 2008-2010, Member, UTA Graduate departmental review committee (Review of English Program)
- 2006-2009, Graduate Advisor, Environmental and Earth Science Program, UTA
- 2006-2011, Graduate Advisor, Geology Program, UTA
- 2007, Chair, Search for Earth Systems History and Hydrology positions, UTA

- 2006-Present, Graduate Assembly, UTA
- 2006, Search Committee, Environmental Health, EES Department, UTA
- 2005, Tech Session Coordinator, Prepared and managed the Tech Session for the Earth and Environmental Sciences Department for Fall 2005
- 2004-2005, Science Olympiad Committee, Designed programs in association with the Science Olympiad
- 2003 2004, College Tenure and Promotion Committee, Approve departmental Tenure and Promotion Plans, and review individual tenure and promotion documents
- 2002 2004, College Honors Committee, Review and offer recommendations for faculty superlatives and other college-level honors and awards.
- 2002 Present, Museum Design Committee, Advise and aide in design of Earth-science component of the new regional Museum
- 2000 Present, Department Curriculum Committee, Oversee major adjustments to the department curricula and course rotation
- 2000 Present, Department Tenure and Promotion Committee, Revised departmental criteria and evaluated two sets of promotion materials, one for tenure and one for promotion to Full Professor
- **1999 Present, Environmental Sciences Faculty,** Standing member of multi-departmental faculty for Environmental Sciences, with full faculty duties and privileges thereof
- 1999 Present, College Beautification Committee, Approve major modifications to college façade
- **1998 & Present, College Honors Committee,** Approve honors courses, and oversee other activities of the Honors Program; evaluate candidates for all college-level faculty awards and superlatives
- 1998, College Council, Approved all major changes to curricular structure for all departments in the college
- **1998, College of Science and Technology Strategic Planning Committee,** Department representative for restructuring of College strategic plan
- 1997, Geophysicist Search Committee, Reviewed candidates for the Departmental Geophysics position
- 1997, Present, Step Program Advisory Committee, Participate in planning and execution of university orientation program
- 1996 & 1998, Geomorphologist Search Committee, Reviewed candidates for the Departmental Geomorphology position
- 1996 2001, Scholarship Committee, College of Science and Technology, Reviewed all student applications for college-level scholarships
- **1996, Department representative on College of Science and Technology Dean's Search Committee,** Reviewed candidates for the College Dean position
- 1996 1997, PM Taskforce Committee, Participated in design of University evening class offerings
- **1996 1999, Member, College of Science and Technology Professional Development Committee,** Reviewed proposals for award of College-level travel funds for faculty presentations
- 1994 1995, Chairman, College of Science and Technology Professional Development Committee, Led major reform of committee granting procedures
- 1994, University Grants Advisory Committee, Advise the grants office of faculty needs
- 1993 1994, Chair, Department of Geosciences Colloquia Committee, Solicited and arranged presentations by visiting speakers
- **1992 1994, Department of Geosciences Graduate Committee,** Coordinated graduate curricula to coincide with college guidelines and departmental resources, evaluated maximum number of graduate courses which could be offered by the Department of Geosciences based on available resources
- **1992 1994, College of Science and Technology Masters of Natural Science Development Committee,** Oversaw efforts to expand the college graduate program
- 1992 Present, Faculty Advisor for the University Grotto Club, Serve as faculty mentor to the university caving organization
- 1992 1994, Department of Geosciences Merit Committee, Evaluated faculty proposals for merit-pay increases
- **1993 1998, Director of Early Research Apprenticeship Program (ERA),** Developed and introduced the Early Research Apprenticeship (a program for promoting undergraduate research within the Department of Geosciences)
- 1993, Designed complete display layout for the Department of Geosciences

MAJOR EDUCATIONAL INITITIVES

- **2012, TCU Ph.D. Proposal,** Wrote vision statement for Ph.D. in Energy and Environment at Texas Christian University and submitted to administration. Decision pending.
- **2010-Present, Write Club,** Initiated a technical writing course specifically designed to help M.S. and Ph.D. student complete the writing required for their degree. The course specifically teaches techniques for paper and proposal preparation, oral presentation, and literature review in the geosciences.
- **2009-Present, AAPG Shortcourses,** Developed two shortcourses (Fluvial Stratigraphy, and Fundamentals of Sequence Stratigraphy) for the AAPG Education Series and teach these for AAPG and other groups regularly
- 2007-2011, NSF REU Big Muddy Expedition, Established funded field program to teach research concepts to students through a research mapping project in the northern lower Missouri River floodplain
- 2006, Distance leaning established for Sedimentology and Stratigraphy core undergraduate course between UTA and UTD Geology programs

- **2002-2004, University Museum,** Participating in the design for the planned new regional museum that will serve the university and southeast Missouri community, and will be built on the new River Campus. I am taking the lead role in advising and lobbying for the Earth-science component to insure geoscience educational outreach to the region. I also proposed the finalized theme for the museum, "The Crossroads," around which all geological, archeological, historical, and other cultural exhibits will be designed.
- **2000 Present, EDMAP,** Began integrating the USGS EDMAP Program as a funding source for undergraduate students conducting field research. Have funded four undergraduate and one graduate student to date.
- **1998 Present, Nigerian Student Feeder,** Established feeder program of Nigerian graduate students during tenure as visiting professor at Enugu State University. This involved establishing a selection process at two Nigerian schools, and discussions with the Visa Chief in person at the American Embassy in Lagos. The program has provided three graduate students to date.
- **1995 1996, Student Field Excursions,** Established cooperative outreach program with surrounding high schools to provide a series of local geology field trips for high school students interested in the Geosciences. Added four majors to department.
- **1993, Established Undergraduate Research Initiative,** Established the Early Research Apprenticeship (ERA) in the Department of Geosciences. This initiated our current emphasis on engaging students in voluntary undergraduate research. Where undergraduate research was previously rare in the department, now all students do some undergraduate research, and approximately 20% complete a Senior Thesis for Graduation with Distinction. The structure and early results of the program are published in Holbrook, et al., 1994.
- **1992 1994, Chairman, Department of Geosciences "Ad Hoc" Curricula Committee,** Led major reform to add substantial rigor and pertinence to the Geoscience undergraduate curriculum in order to better conform to the AGU and AIPG recommendations.

PROFESSIONAL MEMBERSHIPS

- Society for Sedimentary Geology (SEPM), Geological Society of America (GSA); American Association of Petroleum Geologists (AAPG); American Geothermal Society
- Registered Professional Geologist, State of Missouri

| GRANTS IN PAST NIN <u>Year Granti</u> 2016-2019 Graduate program impro John Holbrook (Lead A | ing Agency and Title Pioneer Petroleum vement grant | <u>Amount Granted</u> \$150,000 |
|---|--|-------------------------------------|
| 2015 Consortia support as Prir John Holbrook | Fluvial Research Group aciple in the Fluvial Research Group | \$30,000 |
| 2015-2018 Origin of Thin Fluvial Sa Author: John Holbroo | Pioneer Petroleum and Beds in the Raton Formation and Development of the Thin-H k | \$75,000 Bed Fluvial Play |
| 2015 Consortia support as Prir John Holbrook | Fluvial Research Group aciple in the Fluvial Research Group | \$30,000 |
| 2014 Consortia support as Prir John Holbrook | Fluvial Research Group aciple in the Fluvial Research Group | \$20,000 |
| 2013-2014USGS EDMAP Program\$18,573Isolating the Platte and the Kansas: Tributary Impact on Pattern Changes and Downstream Coupling in the Holocene Missouri Riverin the Corning to Big Lake ReachAuthor: John Holbrook | | |
| 2012-2015 Connectivity in high-acco Author: John Holbroo | Woodside Petroleum ommodation fluvial strata k | \$80,000 |
| 2013 Consortia support as Prir | Fluvial Research Group | \$20,000 |

| | Energy from Sedimentary Basins ok, Walter Snyder, Joseph Moore, Derek Ellsworth, Herbert Ein | stein |
|---|--|--|
| | Fluvial Research Group Consortia y in high-accommodation Fluvial Strata k (Share as principle of Research Consortia centered at Leeds E | \$20,000 ngland) |
| 2011-2012 Isolating the Platte and the Author: John Holbroo | USGS EDMAP Program he Kansas: Tributary Impact on Pattern Changes and Downstream Co k | \$30,975 oupling in the Holocene Missouri River |
| | National Science Foundation shant: Science and Engineering Challenges for Unlocking the Geoth ok, Walter Snyder, Joseph Moore, Charles Fairhurst, Herbert Ei | |
| 2011-2012 Predictive Modeling of F Authors: John Mcener | Texas Water Development Board Brazos River downstream of Allens Creek y and John Holbrook | \$100,000 |
| 2011 Natural and Engineered Authors: Brad Sagema | National Science Foundation Carbon Sequestration an, Stephen Meyers, John Holbrook and Catherine Petters | \$70,000 |
| 2010-2013 Proposed Connectivity P Analogs Author: John Holbroo | Woodside Petroleum Potential between Reservoir Sandstone in High-Accommodation Flux k | \$135,000 vial Sections: a Test using Modern |
| 2010-2011 Rates, Processes, and Im Author: John Holbroo | USGS EDMAP Program plications of Big Changes in the Pattern of the Missouri River: The k | \$17,704 Sioux City to Decatur leg |
| Program. | National Science Foundation e to Geo-environmental Master's for Engaged Needs-based Talented t, John Wickham, John Holbrook, Phil Cohen, and Raymond Jac | · · · · |
| 2009-2010 Rates, Processes, and Im REU project Author: John Holbroo | USGS EDMAP Program aplications of Big Changes in the Pattern of the Missouri River: A co k | \$14,293 bordination of an EDMAP and an NSF- |
| 2009 Reservoir architecture of Author: John Holbroo | Woodside Petroleum f Triassic fluvial strata in the Rankin Trend, NW Self, Australia (Sup k | \$30,000 plement) |
| 2008-2009 Rates, Processes, and Im Author: John Holbroo | USGS EDMAP Program plications of Big Changes in the Pattern of the Missouri River k | \$27,191 |
| 2007-2011 REU Site: Rates, proces Authors: John Holbro | National Science Foundation sees, and implications of big changes in the shape and style of the Mi ok and Ron Goble | \$342,000 Issouri River |

| USGS | EDMAP | Program |
|------|-------|---------|

2012-2013 Isolating the Platte and the Kansas: Tributary Impact on Pattern Changes and Downstream Coupling in the Holocene Missouri River Author: John Holbrook

\$500,000 2012 **National Science Foundation** RCN: SedHeat - Building an Interdisciplinary Community to Meet the Science, Engineering, and Educational Challenges for Sustainable Geothermal Energy from Sedimentary Basins

\$30,975

| 2007-2008USGS EDMAP ProgramComparing Bedrock vs. Alluvial Control on Holocene Missouri River MorphologyAuthor: John Holbrook | \$25,000 |
|---|--|
| 2006-2009Woodside PetroleumReservoir architecture of Triassic fluvial strata in the Rankin Trend, NW Self, AustraliaAuthor: John Holbrook | \$105,000 |
| 2006 University of Texas Arlington and University of Texas at Dallas Toward forensic reconstruction of hydrology for recent rivers: Refining methodology for constrain Authors: John Holbrook (UTA) and John Ferguson (UTD) | \$17,455 nt of paleochannel dimensions |
| 2005Goodman and AssociatesAssessment of developing stream conditions and eventual stable slope for the stream transecting VAuthor: John Holbrook | \$2023 Varmington meadows |
| 2006-2007USGS EDMAP ProgramUnraveling Holocene bedrock modification of alluvial channel morphology in the Lower MissouriAuthor:John Holbrook | \$29,343 i River Valley |
| 2005-2006USGS EDMAP ProgramTesting Preliminary Evidence for High Missouri-River Sensitivity to Late Holocene Climatic ShiftAuthor: John Holbrook | \$33,000 ts |
| 2003-2004USGS EDMAP ProgramInvestigation of EmergingPatterns in Missouri Valley Holocene FillAuthor:John Holbrook | \$32,500 |
| 2002-2003USGS EDMAP ProgramA pilot study of the Missouri Valley alluvial fillAuthor: John Holbrook | \$15,163 |
| 2002-2003Southeast Grants and Research Funding CommitteeCompactive Control on fluvial architecture in the Rhine-Maas Delta: A LAB Model calibrationAuthor: John Holbrook | \$4,830 |
| 2000-2003National Science FoundationCollaborative Research:Did the Albian/Cenomanian Mowry transgressive/regressive cycle conneAuthors:John Holbrook (PD), Bob Scott (PI) Francisca Oboh (PI), Lisa Pratt (PI) | \$166,000 cct the Tethyan and Boreal seas? |
| 2000-2001USGS EDMAP ProgramGeologic mapping of the Caruthersville splay and environs:Investigation of a newly identified siteAuthor:John Holbrook | \$11,250 te of potentially high seismic risk |
| 1997-1998American Chemical Society, (PRF)An investigation for evidence and criteria indicating impact on the sedimentary record by subtle te County upliftAuthor: John Holbrook | \$5,000 ectonics: Examination of the Lake |
| 1997-1998NASARequest for two LandSat images for research on the Missouri Bootheel regionAuthor: John Holbrook | \$8,000 |
| 1998Soil Conservation ServiceAcquisition of Gidding's probe truck for surficial mapping in the Missouri Bootheel regionAuthors: John Holbrook and Michael Aide | \$25,000 |
| 1997-1998Southeast Grants and Research Funding CommitteeAn investigation for evidence and criteria indicating impact on the sedimentary record by subtle teAuthor: John Holbrook | \$5,000 ectonics |

| County uplift Author: John Holl | arook | |
|------------------------------------|---|--|
| Author, John Hon | J1 00K | |
| 1994-1995 | Kansas Geological Survey | \$13,000 |
| | ling and computer simulation of the Dakota aquifer in Hodgeman County K | ansas: A high-resolution aquifer model |
| | nitectural-element analysis and geometric principles | |
| Authors: John Ho | lbrook and Tim Ray | |
| 1993-1994 | Southeast Grants and Research Funding Committee | \$2,143 |
| Paleontology of unio | quely preserved large burrow structures in Mammoth Cave National Park | |
| Author: John Holl | prook | |
| 1992-1994 | Petroleum Research Fund of the American Chemical Society | \$20,000 |
| Evaluative analysis | of genetic interrelationships between sequence-boundary morphology and i | nternal architecture of overlying fluvially |
| dominated strata | | |
| Author: John M. I | folbrook | |
| 1992-1993 | Southeast Grants and Research Funding Committee | \$2,630 |
| Depositional history | and sequence-stratigraphic analysis of Lower Cretaceous strata in the south | hern High Plains region of the United States |

Depositional history and sequence-stratigraphic analysis of Lower Cretaceous strata in the southern High Plains region of the United States **Author: John Holbrook**

PUBLICATIONS

Books and Monographs

Holbrook, J. 2016, Recognizing sequence boundaries and other key sequence-stratigraphic surfaces in siliciclastic rocks, in Carpenter, M.B., Keane, C.M., and Cantner, K. (eds.), The Geoscience Handbook 2016, p138-142.

Holbrook, J.M., (2006), Sequence Boundaries and other sequence stratigraphic surfaces: AGI Geosciences Handbook, section 8.5.

Holbrook, J.M., Kliem, G., Nzewunwah, C., Jobe, Z., and Goble, R., (2006), Surficial alluvium and topography of the Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge in the Missouri River Valley and its potential influence on environmental management, in, Jacobson, R.B., ed., Science to Support Adaptive Habitat Management, Overton Bottoms North Unit, Big Muddy Fish and Wildlife Refuge, Missouri: U.S. Geological Survey Scientific Investigations Report 2006-5086, p. 19-29.

Schumm, S.A., Dumont, J.F., and Holbrook, J.M., (2000), Active Tectonics and Alluvial Rivers: Cambridge University Press, 276p.

Articles and Papers in Refereed Journals and Other Refereed Publications

Bhattacharya, J.P., Copeland, P., Lawton, T.F., Holbrook, J., 2016, Estimation of source area, paleo-discharge, paleoslope, and sediment budgets of linked deep-time depositional systems and implications for hydrocarbon potential: Earth Science Reviews, v.153, p77-110.

Holbrook, J., Einstein, H., and Crowell, A., 2016, (Eds.) Geothermal Energy from Sedimentary Basins: Challenges, Potential, and Ways Forward: Geosphere, Special Issue, 70p.

Huling, G. and Holbrook, J., 2016, Clustering of elongate muddy delta lobes within fluvio-lacustrine systems, Jurassic Kayenta Formation, Utah, in Budd, D.A., Hajek, E.A., and Purkis, S.J. (eds.), Autogenic Dynamics and Self-Organization in Sedimentary Systems: SEPM Special Publication 106, 18p.

Holbrook, J.M., and Wanas, H., 2014, A Fulcrum Approach to Assessing Source-to-Sink Mass Balance using Channel Paleohydrologic Parameters Derivable from Common Fluvial Data Sets with and example from the Cretaceous of Egypt: Journal of Sedimentary Research, v. 84, p.349-372.

1996-1997 Southeast Missouri State University (FFR)

1996-1998 Petroleum Research Fund of the ACS

An investigation for evidence and criteria indicating impact on the sedimentary record by subtle tectonics: Examination of the Lake

County unlift

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Fostering Geoscience education and awareness at the senior high level Author: John Holbrook

\$3,852

\$25.000

Holbrook, J.M., Moore, J.N., Elsworth, D., Block, K.A., Allis, R., Einstein, H., 2014, An Opportunity of Geothermal Proportions in Sedimentary Basins: The Sedimentary Record, v.12, no.1, p.4-9.

<u>Holbrook, J.M.</u>, and Bhattacharya, J.P., (2012), Reappraisal of the sequence boundary in time and space: Case and considerations for an SU (subaerial unconformity) that is not a sediment bypass surface, a time barrier, or an unconformity: Earth Science Reviews, v.113, p.271-302.

Autin, W.P. and Holbrook, J.M., (2012), Is the Anthropocene an issue of stratigraphy or pop culture? GSA Today, v.22, no.7, p.61-62.

Holbrook, J.M., (2010) Valleys that never were: Time surfaces versus stratigraphic surfaces – Discussion: Journal of Sedimentary Research v.80. p. 2-3.

O. Catuneanu, J.P. Bhattacharya, M.D. Blum, R.W. Dalrymple, P.G. Eriksson, C.R. Fielding, W.L. Fisher, W.E. Galloway, P. Gianolla, M.R. Gibling, K.A. Giles, <u>J.M. Holbrook</u>, R. Jordan, C.G.St.C. Kendall, B. Macurda, O.J. Martinsen, A.D. Miall, D. Nummedal, H.W. Posamentier, B.R. Pratt, K.W. Shanley, R.J. Steel, A. Strasser and M.E. Tucker (2010) Sequence stratigraphy: common ground after three decades of development: Fast Break v.28, p.21-34.

O. Catuneanu, V. Abreu, J.P. Bhattacharya, M.D. Blum, R.W. Dalrymple, P.G. Eriksson, C.R. Fielding, W.L. Fisher, W.E. Galloway, M.R. Gibling, K.A. Giles, <u>J.M. Holbrook</u>, R. Jordan, C.G.St.C. Kendall, B. Macurda, O.J. Martinsen, A.D. Miall, J.E. Neal, D. Nummedal, L. Pomar, H.W. Posamentier, B.R. Pratt, J.F. Sarg, K.W. Shanley, R.J. Steel, A. Strasser, M.E. Tucker and C. Winker, (2009), Toward the Standardization of Sequence Stratigraphy: Earth Science Reviews, v.92, p.1-33.

Scott, R.W., Oboh-Ikuenobe, F.E., Benson, D.G., Jr. and <u>Holbrook, J.M.</u> (2009) Numerical Age Calibration of the Albian/Cenomanian Boundary: Stratigraphy, v. 6, p. 17-32.

Oboh-Ikuenobe, F., <u>Holbrook, J.M.</u>, Scott, R., Akins, S., Evetts, M., Benson, D., and Pratt, L., 2008, Anatomy of Epicontinental Flooding: Middle Cretaceous of the Southern U.S. Western Interior: Canadian Geological Society Special Paper 48, p.201-227.

Oboh-Ikuenobe, F.E., Benson, D.G., Scott, R.W., <u>Holbrook, J.M.</u>, Evetts, M.J., and Erbacher, J., 2007, Re-evaluation of the Albian-Cenomanian boundary in the U.S. Western Interior based on dinoflagellate cysts: Review of Palaeobotany and Palynology, v.144, p.77-97.

Tornqvist, T.E., Paola, C., Parker, G., Liu, K., Mohring, D., <u>Holbrook, J.M.</u>, Twilley, R.R., (2007) Comment on "Wetland sedimentation from huricanes Katrina and Rita:" Science, v.316, p.201b

Holbrook, J.M., Autin, W.J., Rittenour, T.M., Marshak, S., Goble, R.J., 2006, Stratigraphic evidence for millennial-scale temporal clustering of earthquakes on a continental-interior fault: Holocene Mississippi River floodplain deposits, New Madrid seismic zone, USA: Tectonophysics, v.420, p. 431-454.

<u>Holbrook, J.M.</u>, Scott, R.W., and Oboh-Ikuenobe, F.E., 2006, Base-level buffers and buttresses: a model for upstream verses downstream control on preservation of fluvial geometry and architecture within sequences: Journal of Sedimentary Research, v.76, no. 1-2, p.162-174.

Lockley, M., <u>Holbrook, J.</u>, Kukihara, R., and Matsukawa, M., 2006, An Ankylorsaur-dominated dinosaur tracksite in the Cretaceous Dakota Group of Colorado: Paleoenvironmental and sequence stratigraphic context in Lucas, S.G. and Sullivan, R.M., eds., Late Cretaceous vertebrates from the Western Interior: New Mexico Museum of Natural History and Science Bulletin 35, p. 95-104.

Scott, R., <u>Holbrook, J.M.</u>, Evetts, M.J., and Oboh-Ikuenobe, 2004, A revised Lower Cretaceous stratigraphy for northeastern New Mexico and environs: The Mountain Geologist, v.41, p.33-61.

Holbrook, J.M. and Oboh-Ikuenobe, F., 2002, Bounding-Surface Hierarchies and related sources of heterogeneity in seemingly uniform fluvial sandstone sheets: Research Conference Proceedings of the Gulf Coast Section, SEPM, p217-230.

Molenaar, C.M., Cobban, W.A., Pillmore, C.L., Wolfe, D.G., <u>Holbrook, J.M.</u>, and Merewether, E.A., 2002, Regional stratigraphic cross section of Cretaceous rocks from east-central Arizona to the Oklahoma panhandle: USGS Miscellaneous Field Studies Map MF-2382, 3 Sheets.

Holbrook, J.M., 2001, Origin, genetic interrelationships, and stratigraphy over the continuum of fluvial channel-form bounding surfaces: An illustration from middle Cretaceous strata, southeastern Colorado: Sedimentary Geology, v.124, p.202-246.

Scott, R.W., <u>Holbrook, J.M.</u>, Evetts, M.J., and Oboh-Ikuenobe, F.E., 2001, Albian-Cenomanian depositional cycles transgressed from Chihuahua Trough to Western Interior: NMGS Guidebook 52, p.221-228.

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