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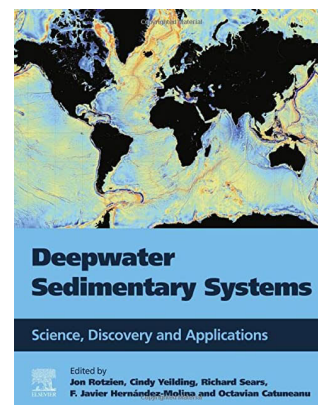
What's New with the CBTH Project in Houston, Texas and Stavanger, Norway

CBTH Annual Sponsors Meeting 2022

The CBTH Annual Sponsor Meeting was held virtually on Friday, October 7. Thanks to all 59 attendees who made this year's meeting a success!

Recent 800-page Elsevier volume on Deepwater Sedimentary Systems

Dr. Paul Mann and PhD student Md Nahidul Hasan recently published chapters in the 2022 Elsevier volume titled *Deepwater Sedimentary Systems*, edited by Jon Rotzien, Cindy Yeilding, Richard Seras, F. Javier Hernández-Molina, and Octavian Catuneanu. Their chapters, titled "Crustal structure and tectonostratigraphy of rifted-passive margins with applications for hydrocarbon exploration" and "Deepwater passive margin foldbelts," respectively, are major syntheses of CBTH data from the Gulf of Mexico and circum-Atlantic margins and are currently available for purchase through ScienceDirect. Click here for more information.



PhD graduate Rocio Bernal featured in recent article

CBTH graduate Rocio Bernal Olaya (PhD, 2014), who is now a geoscience professor at the University of Santander in Colombia, was the subject of a recent article on Subsuelo3D's website. Click here to read more.

Year-end deliverables for CBTH sponsors

CBTH Project deliverables will be sent to sponsors in January. This year's release includes all presentations from the CBTH Annual Sponsor Meeting, the year-end report to sponsors, which contains extended abstracts from all current CBTH researchers, recent publications and presentations, as well as updates to our GIS database via FTP, including updated surface grids. Please let us know if you have any questions regarding this year's delivery.



What's New

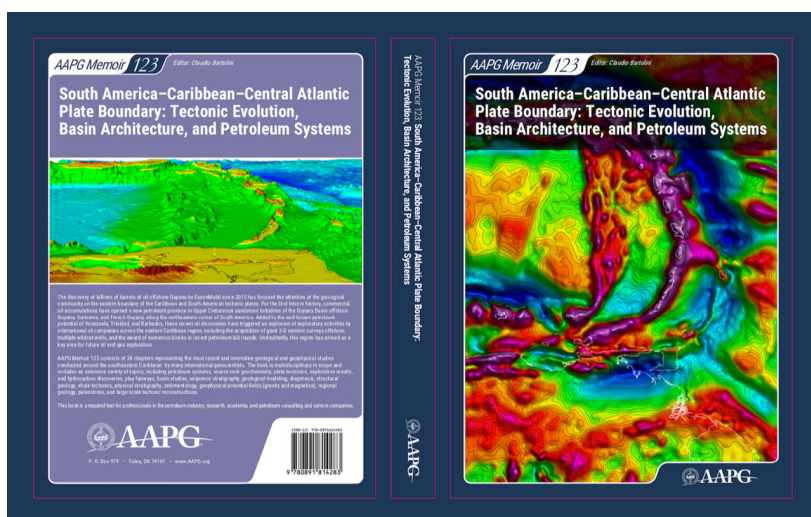
2023 summer internships at Houston exploration companies

Congrats to CBTH students who have received 2023 summer internships:

- o Mohamed Abdelfatah, PhD candidate (ExxonMobil)
- o Daniella Easley, PhD candidate (Chevron)
- o Juan Pablo Ramos, PhD candidate (BP)

MS graduate Carolina Mejia interviewed on Relatecast

CBTH graduate Carolina Mejia (MS, 2015) was recently interviewed on Relatecast about her work as an international geologist. Click here to view the full interview on YouTube.



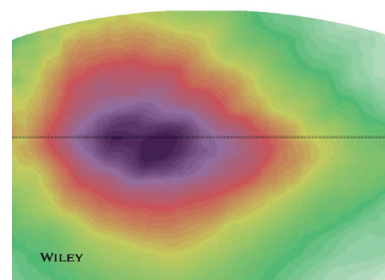
Recent CBTH publications in AAPG Memoir 123

AAPG Memoir 123 contains 18 publications by CBTH-supported MS and PhD students and is now available through the AAPG Bookstore. Digital mapped surfaces and shape files are available through our website to CBTH sponsors.

Special issue for G3 takes shape

A special issue in the AGU Journal *Geochemistry, Geophysics, and Geosystems* (G3) called "A Fresh Look at Caribbean Plate Geosystems" is being organized and edited by M. Philippon, J. Collier, P. Mann and Y. Rojas-Agramonte and will include several papers by the CBTH group focused on basin framework, gravity modeling, and insights from deeply-penetrating seismic reflection and refraction data.

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Graduating Students from the CBTH Project at UH

MUHAMMAD NAWAZ BUGTI completed his PhD dissertation, titled “*Mesozoic plate reconstruction, salt tectonics, and hydrocarbon potential of the western Gulf of Mexico basin*,” in August 2022, which included three chapters. The first is a tectonic reconstruction and opening model for the Gulf of Mexico that takes into account multiple data types for determining the continent-ocean boundaries, the second is a study of salt withdrawal basin formation in the northwestern GOM, and the third is a basin modeling study of the northwestern GOM. After graduating, Nawaz is now a post-doctoral researcher working on fault modeling with the XFrac research group of Dr. Y. Zheng in the EAS Department at UH.



MD NAHIDUL HASAN completed his PhD dissertation, titled “*Tectonostratigraphy, structural styles, and hydrocarbon prospectivity of the rifted-passive margins of the southern Gulf of Mexico and the Atlantic margin of Morocco*,” in December 2022, which includes 4 chapters. The first chapter is focused on deepwater passive margin foldbelts and was published in the 2022 Elsevier volume *Deepwater Sedimentary Systems*. The second chapter focuses on structural styles and evolution of the Campeche salt basin in the southern GOM and was published in *Marine and Petroleum Geology* in 2021. The third chapter focuses on basin-scale estimates of thermal stress and expelled petroleum from Mesozoic-Cenozoic potential source rocks in the southern Gulf of Mexico and was published in *Marine and Petroleum Geology* in 2022. The final chapter focuses on controls of tectonic evolution on source rock thermal maturity of the Moroccan salt basin and has been submitted to the journal *Basin Research*. After graduating, Nahid will begin working as an explorationist in the Gulf of Mexico for BP in January 2023.



BRYAN MOORE completed his MS thesis, titled “*Subsurface structure, stratigraphy, and hydrocarbon basin modeling of the Barbados Accretionary Prism*,” in August 2022, which included two chapters. The first chapter focuses on the effects of subducting bathymetric highs on variations in the wedge taper angles and the hydrocarbon implications of the Barbados accretionary prism, and the second chapter describes a mapping and basin modeling study of the Barbados accretionary prism. After graduating, Bryan is currently working with TotalEnergies on deepwater exploration of the Barbados prism.





New Students at UH



RUTH BELTRAN is a current employee of Ecopetrol who began a PhD study in fall 2022 with the CBTH Project focusing on deepwater area of the Campos-Santos region of Brazil. Her PhD studies at UH and research with the CBTH Project is supported by Ecopetrol.

UPAL SHARIAR began a PhD study in fall 2022 with the CBTH Project focusing on the Mauritanian offshore margin of west Africa. This project will complete the regional CBTH mapping and basin modeling study that transverses the northwestern African margin from Morocco to the Guinea Plateau and builds on completed work by Zinecker (PhD, 2020), Galhom (MS, 2020; Galholm et al. 2022), Hasan (PhD, 2022; submitted manuscript).



Recent Meetings

Project sponsors have access to all meeting presentations from 2005 to present, with updates added shortly after each conference. Please visit our website for more information.

Geological Society of Trinidad and Tobago Conference 2022 (July 10-13, 2022)

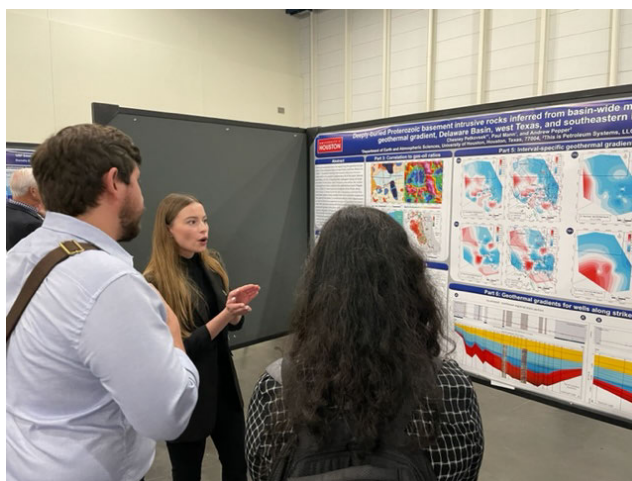
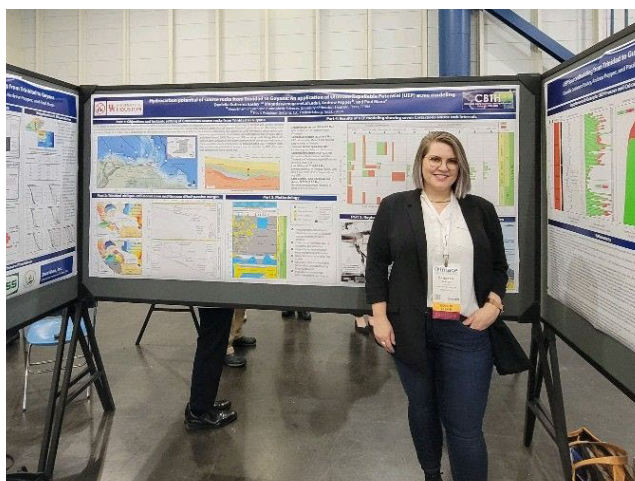
- o Paul Mann and Tricia Alvarez (former CBTH-supported PhD student now with Heritage Petroleum, Trinidad) - *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic evolution, basin architecture and petroleum systems* (Pre-Meeting Short Course on July 7)



Recent Meetings

IMAGE 2022 (August 28 - September 2, 2022)

- o Sharon Cornelius, Paul Mann, and Sumit Mukherjee - Regional variations in basement dip of the Santos, Campos and Espirito Santo Basins, offshore Brazil: and its control on structural style in the overlying detached salt and sedimentation
- o Daniella Easley, Andrew Pepper, and Paul Mann - Hydrocarbon potential of source rocks from Trinidad to Guyana: An application of Ultimate Expellable Potential (UEP) acme modeling
- o Md Nahidul Hasan, Paul Mann, and Benjamin Miller - Tectonic history and hydrocarbon potential of the Moroccan rifted-passive margin
- o James "JD" McConnell Jr. and Paul Mann - Early Cretaceous deepwater rifts of the Camamu-Almada Basin of northeastern Brazil and their implications for the distribution of deepwater source and reservoir rocks
- o Chesney Petkovsek, Paul Mann, and Andrew Pepper - Control of deeply-buried Proterozoic basement intrusive rocks inferred from a basin-wide maps of interval-specific geothermal gradient, Delaware Basin, West Texas, and southeastern New Mexico
- o Juan Pablo Ramos and Paul Mann - Paleogene Yucatan back-arc basin in the northern Caribbean: Ridge and fracture zone geometry in oceanic crust, depth-to-Moho, and Cenozoic sedimentary fill
- o Kenneth Shipper and Paul Mann - Testing rift versus transform models for the Guyana margin using 3D gravity model compared to seismic reflection data



CBTH PhD student Daniella Easley (left) presents her research on source rock modeling in the Venezuela-Trinidad-Guyana region and PhD student Chesney Petkovsek (right) presents her research on heat flow variations in the Permian basin at IMAGE 2022.

Recent Meetings



Students, sponsors, and colleagues gathered for the CBTH Sponsors Luncheon during IMAGE 2022.

HGS-PESGB Africa Conference - The Future of G&G in Africa's E&P: Skills, Transition, & Resources (September 26-28, 2022)

- o Mohamed Abdelfatah, Paul Mann, and Philip Ball - Distribution, thickness, and kinematics of Middle Miocene salt in the Northern Red Sea rift basin
- o Md Nahidul Hasan and Paul Mann - Tectonic controls on source rock thermal maturity of the Atlantic rifted-passive margin of Morocco

CBTH Annual Sponsor Meeting (October 7, 2022)

- o Mohamed Abdelfatah - Integration of gravity, magnetics and seismic stratigraphy of the continental rift zone in the northern Red Sea
- o Ruth Beltran - Tectonostratigraphic evolution of hyperextended rift systems: Implications for petroleum systems outside the Exclusive Economic Zone (EEZ) in Campos Basin, Offshore Brazil
- o Muhammad Nawaz Bugti - Salt withdrawal model and its effects on hydrocarbons in the northwestern Gulf of Mexico
- o Sharon Cornelius - The regional salt basin of Santos, Campos and Espirito Santo Basins, offshore Brazil and its reflection of crustal structural style underlying the detached salt
- o Daniella Easley, Andrew Pepper, and Paul Mann - Distinguishing petroleum source rock acme intervals across northern South America: Ultimate Expellable Potential (UEP) modeling from Venezuela to Suriname
- o Md Nahidul Hasan - Basin-scale estimates of thermal stress and expelled petroleum from Mesozoic-Cenozoic potential source rocks, southern Gulf of Mexico
- o Md Nahidul Hasan - Regional source rock thermal maturity modeling of offshore northern Morocco



Recent Meetings

CBTH Annual Sponsor Meeting (October 7, 2022)

- o Paul Mann - Focus in Phase VI, Year 3
- o Paul Mann - Welcome and overview of the CBTH Annual Sponsor Meeting (Phase VI, Year 2)
- o Paul Mann and Nawaz Bugti - Better constrained continent-ocean boundaries for the Gulf of Mexico used as a basis for a new Mesozoic opening model
- o Paul Mann and Kenneth Shipper - How continuous is the Mesozoic rift system from Trinidad to southern Brazil and what are the implications for petroleum exploration?
- o Paul Mann, Sean Romito, and J.D. McConnell - Structure and hydrocarbon potential of the ultra-thin continent-oceanic transition zone of the Camamu-Almada margin of northeastern Brazil
- o Bryan Moore - Regional structure and basin modeling of the Barbados accretionary prism
- o Chesney Petkovsek - The influence of Proterozoic basement on interval-specific geothermal gradient in Delaware Basin, west Texas, and southeast New Mexico
- o Juan Pablo Ramos - Crustal structure of the Yucatan backarc basin and its rifted continental and island arc margins
- o Juan Pablo Ramos - Regional effects of the Panama arc-South America collision and its controls on hydrocarbon distribution in Colombia and Western Venezuela
- o Upal Shahriar - Overview of the rifted-passive margin of Mauritania, West Africa, with comparisons north to Morocco and south to the Guinea Plateau
- o Kenneth Shipper - Crustal structure of the Guyana-Suriname margin based on 3D gravity inversion integrated with magnetic and seismic reflection data
- o Kenneth Shipper - Modeling of the 18-km-deep, subduction-related flexural west of the Strait of Gibraltar
- o Jeff Storms - CBTH website, deliverables to sponsors, and recent publications
- o Lei Sun - New developments with the CBTH database
- o Faith Walton - The Gulf of California obliquely-rifted margin as a modern analog to the Cretaceous oblique opening of the Equatorial Atlantic Ocean in Brazil and West Africa

First EAGE Guyana-Suriname Basin Conference (October 26-28, 2022)

- o Kenneth Shipper - Testing rift versus transform models for the Guyana margin using 3D and 2D gravity models constrained with seismic reflection data

3rd Joint SBGf/SEG Workshop on Machine Learning (November 8-9, 2022)

- o Sean Romito, Ana Krueger, and Paul Mann - Unveiling the Complex Halokinetic History of Camamu Basin



Recent Meetings

UH/HGS Robert E. Sheriff Lecture (November 14, 2022)

- o Mohamed Abdelfatah - Integration of gravity, magnetics, and seismic stratigraphy of the continental rift zone and in the northern Red Sea
- o Ruth Beltran - Tectonic controls during Late syn-rift Lacustrine environments of Campos and Santos Basin, Offshore Brazil
- o Daniella Easley - Evaluation of the tectonic, paleogeographic, and global isotopic excursions on organic deposition and preservation in Trinidad and Guyana: An application of expellable potential modeling
- o Md Upal Shahriar - Comparison of the Mauritania passive margin with Guinea Plateau and conjugates at Guyana
- o Kenneth Shipper - Crustal structure of the Guyana margin using 3D and 2D gravity models constrained with seismic reflection data
- o Faith Walton - Structural restoration and driving forces for the Oligocene-Recent opening of the Gulf of California



First-semester PhD student Upal Shahriar presents some early results of his study of Mauritania, West Africa, at the UH/HGS Robert E. Sheriff Lecture.

38th Annual GCSSEPM Foundation Perkins-Rosen Research Conference (December 5-7, 2022)

- o Sharon Cornelius - Variations in carbonate deposition along the eastern Brazilian Atlantic Margin from Sergipe Alagoas to Pelotas Basins during the Upper Cretaceous (79 to 112 Ma)

AAPG Virtual Symposium - South Atlantic Conjugate Margins: Reconnecting Basins with Recent Discoveries and Exploration Opportunities (December 6-8, 2022)

- o Kenneth Shipper - Comparing the Crustal Structure and Mesozoic Stratigraphy of Conjugate Margins of Guyana-Suriname and Mauritania-Senegal Data



Upcoming Meetings

Please visit our website for more information about these events as they become available, including lists of accepted CBTH presentations and registration links.



Caribbean 2023 Geosciences Technology Workshop: Recent Discoveries, Exploration Opportunities, and Sustainable Development Strategies in Caribbean Basins (February 8-9, 2023)



GeoGulf 2023 (April 23-25, 2023)



OTC 2023 (May 1-3, 2023)



IMAGE 2023 (August 27 - September 1, 2023)



Recent Theses and Dissertations

- Bishop, L.M., 2021, Cretaceous-Cenozoic tectonostratigraphic evolution and hydrocarbon prospectivity of the Sandino Forearc Basin, Offshore Nicaragua, Master's thesis, University of Houston, 126 p.
- Bugti, M.N., 2022, Mesozoic plate reconstruction, salt tectonics, and hydrocarbon potential of the western Gulf of Mexico basin, PhD dissertation, University of Houston, 221 p.
- Hasan, M.N., 2022, Tectonostratigraphy, structural styles, and hydrocarbon prospectivity of the rifted-passive margins of the southern Gulf of Mexico and the Atlantic margin of Morocco, PhD dissertation, University of Houston, 265 p.
- Liu, M., 2021, Mesozoic rift evolution and crustal structure of the Gulf of Mexico Basin from integration of multiple geological and geophysical datasets, PhD dissertation, University of Houston, 219 p.
- Miller, B., 2021, Tectonic evolution of the Cenozoic Lesser Antilles volcanic arc and the Mesozoic rifted-passive margin of northern Morocco using geologic, seismic reflection, and gravity data; MS thesis, University of Houston, 147 p.
- Moore, B., 2022, Subsurface structure, stratigraphy, and hydrocarbon basin modeling of the Barbados Accretionary Prism, Master's thesis, University of Houston, 117 p.
- Romito, S., 2021, Crustal structure, tectonostratigraphy, and hydrocarbon potential of the terranes underlying the Caribbean Plate and the Camamu-Almada rifted passive margin of northeastern Brazil, PhD dissertation, University of Houston, 288 p.
- Zhang, H., 2021, Gravity modeling, seismic stratigraphy, and thermal maturity modeling of hydrocarbons of the Permian Foreland Basin, USA and the Sergipe-Alagoas rifted-passive margin, Brazil, PhD dissertation, University of Houston, 213 p.

Recent and Upcoming Publications

- Alvarez, T., Mann, P., and Wood, L.J., 2021, Tectonic evolution of sedimentary basins around the arcuate southeastern margin of the Caribbean plate, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 183–238. <https://doi.org/10.1306/13692246M1233848>
- Alvarez, T., Mann, P., Vargas, C.A., and Wood, L.J., 2021, Gravity, seismic reflection and tomographic constraints on the subduction to strike-slip transition; southeastern Caribbean Plate boundary zone, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 469–512. <https://doi.org/10.1306/13692255M1233848>
- Blanco, J.M. and Mann, P., 2021, Subsurface geology of La Vela Basin, offshore Venezuela: Examples of basement and carbonate-hosted liquid and gas hydrocarbon reservoirs, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 411–440. <https://doi.org/10.1306/13692253M123861>
- Bugti, M.N., and Mann, P., 2022, Regional source rock thermal stress modeling and map-based charge access modeling of the Port Isabel passive margin foldbelt, northwestern Gulf of Mexico, Interpretation, in press.



Recent and Upcoming Publications

- Castillo, K., and Mann, P., 2021, Structure, stratigraphy and hydrocarbon potential of the easternmost part of the Eastern Venezuelan foreland basin, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 591–620. <https://doi.org/10.1306/13692259M123861>
- Cedeño, A., Ahmed, M., Escalona, A., and Abrahamson, P., 2021, Tectono-stratigraphic evolution of the western Barbados accretionary prism and the eastern Tobago Basin: Implications for petroleum systems, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 649–676. <https://doi.org/10.1306/13692261M1233854>
- Cedeño, A., Ohm, S., and Escalona, A., 2021, Barbados petroleum and its role in understanding distribution of Cretaceous source rocks in the southeastern Caribbean margin: Insights from an organic geochemistry study, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 441–468. <https://doi.org/10.1306/13692254M1233854>
- Cedeño, A., Ohm, S., Escalona, A., Narain, E., and Jager, J., 2021, Source rocks in the Guyana Basin: Insights from geochemical investigations of 15 heavy oils from onshore Suriname, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 749–776. <https://doi.org/10.1306/13692312M1233854>
- Cornelius, S., and Emmet, P., 2022, Difference in overpressure environments for the Western and Central Deep-water Gulf of Mexico, AAPG Bulletin, in press.
- Escalona, A., Ahmed, S.S., and Watson, L., 2022, Late Cretaceous-Pliocene paleogeography of the circum-Caribbean region based on quantitative plate reconstruction and georeferenced databases, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 513–538. <https://doi.org/10.1306/13692256M1233849>
- Escalona, A., Norton, I., Lawver, L., and Gahagan, L., 2022, Quantitative plate tectonic reconstructions of the Caribbean region from Jurassic to present, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 239–264. <https://doi.org/10.1306/13692247M1233849>
- Figueira, B., and Escalona, A., 2021, Overview of the subsurface structural provinces of the southern Gulf of Paria region, Trinidad-Venezuela: Implications for petroleum prospectivity, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 539–562. <https://doi.org/10.1306/13692257M1233855>
- Galhom, T., Mann, P., and Rudolph, K., 2022, Jurassic-Recent structure, stratigraphy, and basin modeling of the rifted-passive margin of the Tarfaya-Dakhla basin of southern Morocco, *Marine and Petroleum Geology*, 105626. <https://doi.org/10.1016/j.marpetgeo.2022.105626>



Recent and Upcoming Publications

- Gomez, S., Mann, P., Alvarez, T., and Krueger, A., 2021, Tectono-stratigraphic evolution of the Barbados accretionary prism and surrounding sedimentary basins within the southeastern Caribbean, arcuate, strike-slip-to-subduction transition zone, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 265–316. <https://doi.org/10.1306/13692248M1233850>
- Hasan, M.N. and Mann, P., 2021, Structural styles and evolution of the Campeche salt basin, southern Gulf of Mexico, *Marine and Petroleum Geology*, v. 133, n. 105313. <https://doi.org/10.1016/j.marpetgeo.2021.105313>
- Hasan, M.N., and Mann, P., 2022, Deepwater passive margin foldbelts, in J. Rotzien, C. Yeilding, R. Sears, F.J. Hernández-Molina, and O. Catuneanu (eds.), *Deepwater Sedimentary Systems: Science, Discovery, and Applications*, Elsevier, p. 119-147. <https://doi.org/10.1016/B978-0-323-91918-0.00016-5>
- Hasan, M.N., Mann, P., and Powney, M., 2023, Tectonic controls on source rock thermal maturity within the Triassic-Jurassic marginal rift bordering the Central Atlantic Ocean in northern Morocco, submitted to *Basin Research*.
- Hasan, M.N., Pepper, A., and Mann, P., 2022, Basin-scale estimates of thermal stress and expelled petroleum from Mesozoic-Cenozoic potential source rocks, southern Gulf of Mexico: *Marine and Petroleum Geology*, 105995. <https://doi.org/10.1016/j.marpetgeo.2022.105995>
- Hippolyte, J.C., and Mann, P., 2021, Neogene paleostress and structural evolution of Trinidad: Rotation, strain partitioning, and strike-slip reactivation of an obliquely colliding thrust belt, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 317–346. <https://doi.org/10.1306/13692249M1233851>
- Kenning, J., and Mann, P., 2021, Cenozoic structural deformation between the Lamprea fold-belt and Salina del Bravo salt province by interacting salt and shale detachments, western Gulf of Mexico, *Journal of Structural Geology*, v. 153. <https://doi.org/10.1016/j.jsg.2021.104458>
- Leslie, S., and Mann, P., 2022, Distribution and character of bottom simulating reflections in the western Caribbean offshore Guajira Peninsula, Colombia, in J. Mienert, C. Berndt, A. Tréhu, A. Camerlenghi, and C.-S. Liu (eds.), *World Atlas of Submarine Gas Hydrates in Continental Margins*, p. 333-341. <https://doi.org/10.1007/978-3-030-81186-0>
- Mann, P., 2022, Crustal structure and tectonostratigraphy of rifted-passive margins with applications for hydrocarbon exploration, in J. Rotzien, C. Yeilding, R. Sears, F.J. Hernández-Molina, and O. Catuneanu (eds.), *Deepwater Sedimentary Systems: Science, Discovery, and Applications*, Elsevier, p. 83-117. <https://doi.org/10.1016/B978-0-323-91918-0.00018-9>
- Punnette, S. and Mann, P., 2021, Subsurface structure of the Hinge Line fault zone and its control on the distribution of gas fields of the North Coast Marine Area of offshore northern Trinidad, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 357–386. <https://doi.org/10.1306/13692251M123861>



Recent and Upcoming Publications

- Punnette, S., Wood, L., and Mann, P., 2021, Pleistocene to Holocene sedimentary evolution of the North Coast Marine Area, offshore Trinidad, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 563–590. <https://doi.org/10.1306/13692258M123861>
- Romito, S., and Mann, P., 2022, Crustal structure of the Camamu-Almada margin along the northeastern rift segment of Brazil from an integration of deep-penetration seismic reflection profiles, refraction, and gravity modeling, *Tectonics*, v. 41, no. 9, e2021TC007157. <https://doi.org/10.1029/2021TC007157>
- Rodriguez, L., Mann, P., and Hall, S., 2021, Crustal structure and geologic history of the Espino rift, Venezuela, based on potential fields, seismic reflection, and well data, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 713–748. <https://doi.org/10.1306/13692265M123861>
- Sun, L. and Mann, P., 2021, Along-strike rapid structural and geomorphic transition from transpression to strike-slip to transtension related to active microplate rotation, Papua New Guinea, *Frontiers in Earth Science*, 13 May 2021. <https://doi.org/10.3389/feart.2021.652352>
- Watson, L. and Escalona, A., 2021, Creating spatial-based paleogeography from plate reconstructions: a methodology, in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 347–356. <https://doi.org/10.1306/13692250M123852>
- Zhang, H., Mann, P., Bird, D., and Rudolph, K., 2021, Integration of regional gravity modeling, subsidence analysis, and source rock maturity data to understand the tectonic and hydrocarbon evolution of the Permian Basin, west Texas, *Interpretation*, v. 9, n. 1, 1-F-Y1. <https://doi.org/10.1190/INT-2020-0065.1>
- Zhang, H., and Bird, D., 2022, Detecting hypogenic karst features in the northeastern Delaware Basin, west Texas: Applications of Full Tensor Gradient (FTG) gravity data: *Journal of Applied Geophysics*, <https://doi.org/10.1016/j.jappgeo.2022.104889>.
- Zimmermann, U., Dieset, J., Watson, L., and Lapen, T., 2021, Sedimentological constraints and provenance of Eocene and Miocene successions from Barbados, Eastern Caribbean-NE South American Boundary: in C. Bartolini (ed.), *South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems*, AAPG Memoir 123, p. 109–138. <https://doi.org/10.1306/13692244M123846>



2022 Awards

- o Daniella Easley, PhD Candidate, 1st Place Poster Presentation, Advanced PhD category, Houston Geological Society and University of Houston Robert E. Sheriff lecture series and student poster competition (\$600)
- o Md Nahidul Hasan, PhD Candidate, Best Student Presentation Award, 21st HGS PESGB Africa Conference 2022 (\$100)
- o Faith Walton, Undergraduate, Frank L. Theall scholarship (\$1,500)
- o Md Nahidul Hasan, PhD Candidate, 1st Place Presentation (Advanced PhD), UH EAS Student Research Day 2022 (\$850)
- o Juan Pablo Ramos Vargas, PhD Candidate, 1st Place Presentation (Early PhD & MS), UH EAS Student Research Day 2022 (\$750)
- o Daniella Easley, PhD Candidate, UH EAS outstanding graduate work in Geology scholarship (\$1250)
- o Md Nahidul Hasan, PhD Candidate, UH EAS outstanding graduate work in Geology scholarship (\$1250)
- o Md Nahidul Hasan, PhD Candidate, UH Alumni Association Scholarship (\$1500)
- o Mohamed Abdelfatah, PhD Candidate, UH EAS first year PhD in Geology scholarship (\$1000)
- o Mohamed Abdelfatah, PhD Candidate, UH Alumni Association Scholarship (\$1500)
- o Faith Walton, Undergraduate, UH EAS undergraduate academic excellence in geoscience scholarship (\$1000)
- o Juan Pablo Ramos Vargas, PhD Candidate, 1st Place Poster Presentation, 28th Annual Milton B. Dobrin Lecture (\$800)



CBTH PhD student Daniella Easley wins 1st Place in the Advanced PhD category for her source rock study in the southeastern Caribbean at the HGS/UH Robert E. Sheriff lecture series and student poster competition



Thanks to our sponsors!

As we continue with Phase VI of the CBTH project, we would like to thank our active and inactive company sponsors for their support in providing data, software, funding, and knowledge to further student research in geology and geophysics. Your support has provided many opportunities for CBTH students to pursue research projects in the region and your efforts are truly appreciated.

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