

Tim Paul. Dooley

Professional Summary

August 23, 2025

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Professional Preparation

Academic Background

Ph.D. Geology, University of London, Royal Holloway and Bedford New College, 1994

B.S., Honors Degree, 1st Class, Natural Sciences-Geology, University of Dublin, Ireland, 1988

Professional Appointments

Senior Research Scientist, Bureau of Economic Geology (September 2018-Present)

Present Position: Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (December 2005 - Present). Structural geology and analog modeling, Applied Geodynamics Laboratory.

Postdoctoral Fellow, Bureau of Economic Geology, The University of Texas at Austin (December 2003 - December 2005). Structural geology and analog modeling, Applied Geodynamics Laboratory.

Senior Researcher/Laboratory Manager, Analogue Modelling Laboratories, Department of Geology, Royal Holloway, University of London, Egham, Surrey, England (1994 - 2003). Dynamics and kinematics of fault systems using scaled analog modeling, field studies, remote sensing, seismic data, and comparison with published examples.

Theses

Solid geology of the Louisburgh area, County Mayo, Ireland

Dissertations

The 3D dynamics and kinematics of strike-slip fault systems: insights from analogue modelling and field studies

Areas of Expertise

Areas of Expertise

3D Geometries and kinematics of strike-slip fault systems using innovative analog modeling techniques

Dynamics and kinematics of fault systems using scaled analog modeling, field studies, remote sensing, seismic data, and comparison with published examples

Modeling of delta tectonics, salt tectonics, and segmented strike-slip and extensional fault systems

Awards

Awards and Honorary Societies

2019 Tinker Family BEG Publication Award for Exemplary Publication of Scientific or Economic Impact: "Structural evolution of salt-influenced fold-and-thrust belts: a synthesis and new insights from basins containing isolated salt diapirs," Journal of Structural Geology, 2018, v. 11, p 206-221.

AAPG/SEG IMAGE's Poster Paper Honorable Mention (runner up) at IMAGE 2023 for "What makes Campeche tick? Evaluating controls on deformation patterns and styles in the salt-detached Campeche Basin, southern Gulf of Mexico: insights from physical models", 2023

2022 Robert Mitchum Award for best paper published in Basin Research journal in 2021, 2022

AAPG Top-Ten Poster Award for "Canopy Evolution: Deformation Processes and Subsidence Patterns," which was presented at the 2011 AAPG Annual Convention, 2011

AAPG Top-Ten Poster Award for "Deformation Styles and Linkage of Salt Walls during Oblique Shortening," presented at the 2009 AAPG Annual Convention, Denver, Colorado, 2009

Jules Braunstein Memorial Award for best poster at AAPG Annual Convention, Dismembered Sutures Formed during Asymmetric Salt-Sheet Collision, 2008

Service

Published Interviews

Thomas Smith, Dooley, T. P., and Hudec, M. R., 2015, Cover story for GEOExPro Article: Puzzling Salt Structures

Proposal Review Panels Participation

Journal of Structural Geology (Article), 2009

Tectonophysics (Article), 2009

Tectonophysics (Article), 2009

Applied Geophysics (Article), 2008

Basin Research (Article), 2008

GSA Bulletin (Article), 2008

Tectonophysics and Marine & Petroleum Geology (Two peer reviews), 2007

Presentations

Invited Presentations

Exploring shale margins: Challenges and open questions vs. salt systems: presented to TOTAL Energies, presented at TOTAL Energies, Pau (France), January 23, 2025.

Salt Tectonics in Fold-and-Thrust Belts: From the Betics to the Hellenides-Albanides: presented to EPOS Multi-Scale Laboratories Seminars, presented at EPOS Multi-Scale Laboratories Seminars, November 26, 2024.

Mobile shales vs salt - Structural styles under contraction: presented to Workshop on outstanding issues in Salt Tectonics, presented at Workshop on outstanding issues in Salt Tectonics, Sivas (Turkey), July 2-8, 2024.

What we know about mobile shales? Seismic expression and processes: presented to National Central University, presented at Invited talk by the College of Earth Sciences (National Central University, Taiwan), Taoyuan City (Taiwan), May 31, 2024.

Mobile shales in compressional settings: Mechanical behavior and structural styles: presented to Institute of Earth Sciences, Academia Sinica, presented at Invited talk by the Institute of Earth Sciences (Academia Sinica, Taiwan), Taipei (Taiwan), May 28, 2024.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Salt as Store, Seal, Trap, and Repository Session, presented at Energy Geoscience Conference, Aberdeen, UK, May 16-18, 2023.

The Role of Salt Tectonics on Underground Storage: presented to SPE RWTH Aachen, presented at Online, April 14, 2023.

Growth and evolution of salt canopies on a salt-detached slope: insights from physical models: presented to AAPG Salt Basins TIG Webinar, <https://www.youtube.com/watch?v=GitNImFAnDM>, December 7, 2021.

Salt Tectonics in the Southern Gulf of Mexico: a Window into Basin Opening: presented to AMGE, online, November 8, 2021.

Growth and Evolution of Salt Canopies on a Salt-Detached Slope: Insights from Physical Models: presented to AAPG Asia Pacific, presented at Online and Free Webinar Series, September 16, 2021.

Salt Tectonics in the Southern Gulf of Mexico: a Window into Basin Opening: presented to AAPG Salt Basins Technical Interest Group, webinar, August 31, 2021.

The Subsidence and Mobility of Minibasins: presented to Shell PG/PS Forum, presented at Online Seminar, June 3, 2021.

Renaissance of North Sea Salt Tectonics: Permian and Triassic Salt Tectonics of the Central North Sea: presented to Norwegian Petroleum Directorate FORCE group (consortium of Norwegian oil companies), presented at Salt Tectonics Webinar, online webinar, December 9, 2020.

Loading Complex Salt Isopachs: Progradational Loading of Salt-Filled Rift Systems: presented to Deutsches GeoForschungsZentrum Geodynamische Modellierung Sektion [German Research Center for Geosciences Geodynamic Modeling Section], presented at Rifts and Rifted Margins Online Seminar, https://www.youtube.com/watch?v=ln4jTw6yhzo&list=PLVfj9WkLxeDb2OeuFUqi2XZ_mv6E_H8w6&index=3, October 5, 2020.

The Subsidence and Mobility of Minibasins: Insights from Natural Examples and Physical Modelling: presented to The American Association of Petroleum Geologists, presented at AAPG Salt Basins Technical Interest Group, Online Seminar, July 21, 2020.

Jurassic Opening of the Gulf of Mexico, and Its Influence on Variations in Salt Structures around the Basin Margins: presented to Repsol, presented at Circum-GoM Workshop, Houston, Tex., February 26-27, 2020.

Loading Complex Salt Isopachs: Progradation Across Segmented Salt-Filled Rift Systems: presented at GCSSEPM, December 4-6, 2019.

Extension and inversion of salt-bearing rift systems: presented to Geological Society of America, presented at GSA Annual Meeting, Phoenix, AZ, September 22-25, 2019.

The Subsidence and Mobility of Minibasins: A Synthesis of Recent Findings: presented to Tulane University Department of Earth and Environmental Sciences, presented at departmental seminar, New Orleans, September 6, 2019.

Basement-driven strike-slip deformation involving a salt-stock canopy system: presented at European Geosciences Union, General Assembly, Vienna, Austria, April 17-22, 2016.

The effects of base-salt relief on salt flow and suprasalt deformation patterns: presented at The Roberts Conference: Passive Margins, Royal Holloway University of London, Egham, Surrey, UK, April 6-8, 2016.

Modeling salt tectonics: presented at Analog Modeling of Tectonic Processes workshop, University of Massachusetts at Amherst, May 13-15, 2015.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Multi-scale Laboratories Seminars, presented at Online, March 14, 2023-Present.

Presentations

Assessing the Impacts of sediment dynamics and salt deposition timing on the resultant salt-detached system: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, Tex., November 7-8, 2024.

De-risking hydrogen storage in salt caverns using physical and seismic modeling: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, Tex., November 7-8, 2024.

Deformation styles in salt- and shale-bearing sequences in contraction: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, TX, November 7-8, 2024.

Maintaining critical taper in multi-detachment salt-shale systems: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, TX, November 7-8, 2024.

Structural styles revealed on ultra-long-offset, FWI data in the northern Gulf of Mexico: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, TX, November 7-8, 2024.

Structures relating to the growth and amalgamation of salt canopies: a review: presented to AGL Consortium Members, presented at AGL Annual Review Meeting, Austin, TX, November 7-8, 2024.

Ice-sheet induced salt movements in Germany - Physical modeling results: presented to German Society for Geomorphology, presented at 50th Annual Meeting of the German Society for Geomorphology, Leipzig, Germany, October 9-12, 2024.

The Seismic Imageability of Internal Salt Architectures and Inclusions: presented to Salt Tectonics in the Energy Transition, presented at Geological Society of London, London, UK, September 23-24, 2024.

Flow-parallel folds in the Messinian salt: Evidence for rotation of shale-canopy feeders in offshore Cyprus?: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2023, Austin, Tex., November 9-10, 2023.

Physical and Numerical Models of Halokinetic Induced Topographic Controls on Sediment Routing in Salt-Bearing Basins: Current Status and Future Work: presented to 2023 AGL Annual Meeting, Austin, Texas, November 9-10, 2023.

Physical Models of Mobile Shale and Salt in Shortening: presented to Applied Geodynamics Laboratory Industrial Associates, presented at Applied Geodynamics Laboratory Industrial Associates Annual Meeting, November 9-10, 2023.

Salt-sheet buttressing and complex roof deformation near the Eratosthenes Seamount, Eastern Mediterranean: presented to Applied Geodynamics Laboratory Industrial Associates, presented at Applied Geodynamics Laboratory Industrial Associates Annual Meeting, November 9-10, 2023.

Seismic Modelling of Sandbox Analogues: a Feasibility Test for Utilizing Sandbox Models for Seismic Modelling and Imaging: presented to Applied Geodynamics Laboratory Industrial Associates, presented at Applied Geodynamics Laboratory Industrial Associates Meeting 2023, Austin, Tex., November 9-10, 2023.

Bedded salt formations of the Delaware Basin and their significance for salt cavern placement: presented at IMAGE, Houston, TX, August 28-September 1, 2023.

What makes Campeche tick? Evaluating controls on deformation patterns and styles in the

salt-detached Campeche Basin, southern Gulf of Mexico: insights from physical models: presented to AAPG / SEG, presented at IMAGE 2023, Houston, Tex., August 27-31, 2023.

Ice sheet induced salt tectonics - the example of surface cracks in northern Germany: presented to EGU, EGU23-15122, presented at EGU General Assembly, Vienna, Austria, April 24-28, 2023.

Carbopol! An analog for mobile shale? Preliminary modeling results under contraction: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Contractional mobile-shale structures near salt diapirs in East Breaks, northern Gulf of Mexico: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Deformation and stresses in layered evaporite systems: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Ice sheet induced salt movements in Northern Germany - combining geomorphological investigations and physical modeling to understand the involved mechanisms: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Internal structure of the Great Kavir salt diapirs (Iran); reevaluation with new imagery and new concepts: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Revisiting the Campeche Salt Basin: assessing controls on deformation patterns and styles: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Salt-Detached Thrusting near the Eratosthenes Seamount, Eastern Mediterranean: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Salt-tectonic induced topographic controls on sediment routing in salt-bearing basins: a combined physical and numerical modeling approach: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Shortening salt diapirs: how to generate a zig-zag weld: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

The Importance of Active Rise Triggers in the Central North Sea: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Texas, November 10-11, 2022.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Texas, November 10-11, 2022.

Potential Controls on the Origin, Nature, and Distribution of Shear Zones in Salt Stocks: Salt Tectonic Insights with a Solution Mining Perspective: presented to Solution Mining Research Institute, presented at Solution Mining Research Institute Spring Technical Conference 2022,

Rapid City, S. Dak., May 4, 2022.

Hydrogen Storage Potential in Salt Caverns: The Role of Salt Tectonics: presented to The University of Texas at Austin, Bureau of Economic Geology, presented at Bureau Seminar Series, Austin, Tex., December 10, 2021.

Regional geology of the East Breaks fold-and-thrust belt, northwestern Gulf of Mexico: presented at AGL annual meeting, online, November 5, 2021.

Complex secondary welding during shortening of salt walls with highly irregular salt-sediment interfaces: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Preliminary modeling of detached extension in a layered evaporite sequence (LES): impact of LES on extensional styles and diapirism: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Revisiting the Bay of Campeche: Oblique dips in a narrowing basin during shortening: Part 1: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Revisiting the Bay of Campeche: Oblique dips in a narrowing basin during shortening: Part 2* (*to hell with scaling!): presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

The Origin, Nature, and Distribution of Shear Zones in Salt Stocks: presented to Applied Geodynamic Laboratory Consortium, presented at Applied Geodynamic Laboratory Annual Meeting (2021), Virtual, November 3-5, 2021.

Contrasting styles of salt-tectonic processes in the Ionian Fold and Thrust Belt (NW Greece and S Albania): presented to AAPG Europe Region, presented at AAPG Europe Region GTW (Evaporite Processes and Systems), Salzburg and Vienna, Austria, October 18-20, 2021.

Renaissance of North Sea Salt Tectonics: Late Permian and Triassic Salt Tectonics of the Central North Sea: presented to AAPG Europe, presented at Stratigraphic and Reservoir Challenges with Triassic Plays in the North Sea - Workshop, Online conference, January 26, 2021.

3D Geometries of Natural and Physically Modelled Salt Walls: Salt Stocks, Salt Sheets, and Perched Minibasins: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Geometry and Evolution of a Salt Wall and Flanking Minibasins in the Central North Sea: Along- and Across-Wall Variability: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Renaissance of North Sea Salt Tectonics: Permian and Triassic Salt Tectonics of the Central North Sea: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Salt tectonics in the southern Gulf of Mexico: a window into basin opening: presented to WesternGeco, Houston, Tex., February 3, 2020.

The Subsidence and Mobility of Minibasins: A Synthesis of Recent Findings: presented to Basin Research Group Seminar, presented at Imperial College London, Royal School of Mines, January 8, 2020.

Salt-Tectonic Processes in the Ionian Fold and Thrust Belt (NW Greece and S Albania): presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2019, Austin, Tex., November 7-8, 2019.

Minibasin Obstruction by Base-Salt Welding on a Salt-Detached Slope: An Example from the Northern Gulf of Mexico: presented at AAPG ACE, San Antonio, Tex., May 19-22, 2019.

Lateral Mobility of Minibasins During Shortening: Insights from the SE Precaspian Basin, Kazakhstan: presented to AAPG Europe Region, presented at AAPG Geoscience Technology Workshop: Euroasian Mature Salt Basins, Krakow, April 16-18, 2019.

Minibasin Obstruction by Base-Salt Welding on a Salt-Detached Slope: An Example from the Northern Gulf of Mexico: presented to European Geosciences Union, presented at EGU General Assembly, Vienna, April 7-12, 2019.

Deformation in and around an array of translating minibasins with variable mobility: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Progradational loading of segmented salt-bearing rifts: presented to Applied Geodynamics Laboratory, presented at 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Revisiting the Salina del Bravo system, western GOM: a simpler model: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Shale-Tectonic Geometries on Continental Margins, with Comparison to Salt: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2018, Austin, Tex., November 8-9, 2018.

Bricks, Ellipses, and Hourglasses: A Tale of Contrasting Welding During Shortening: presented to GSA Penrose Conference in honor of Martin P. A. Jackson, presented at Advances in Salt Tectonics: Observations, Applications and Perspectives, Ein Boqueq, Israel, February 11-16, 2018.

Shortening of Diapir Provinces: Translation, Tilting and Rotation of Minibasins in Linked-Diapir Systems: presented to GSA Penrose Conference in honor of Martin P. A. Jackson, presented at Advances in Salt Tectonics: Observations, Applications, and Perspectives, Ein Boqueq, Israel, February 11-16, 2018.

Complex intrasalt deformation in the Santos Basin, offshore Brazil: the role of density inversion: presented at European Geosciences Union, General Assembly 2016, Vienna, Austria, April 17-22, 2016.

Dismembered sutures formed during asymmetric salt-sheet collision: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

Superposed deformation and structural control of salt breakout in radially expanding canopies: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to GeoH2 Consortium Members, presented at GeoH2 Annual Consortium Meeting, Austin, Texas, October 18, 2022-Present.

Publications

Peer Reviewed Journal Articles

Schuba, C. N., Moscardelli, L., Dooley, T. P., Peel, F. J., Martinez-Doñate, A., Lawton, T. F., Apps, G., and Schuba, J. P., 2025, Geophysical characterization of dissolution features and deformation in bedded salt formations in the northeast Delaware Basin: Interpretation, v. 13, no. 2, p. T367-T386, <http://doi.org/10.1190/int-2024-0063.1>.

Dooley, T. P., and Hudec, M. R., 2024, Evaluating controls on deformation patterns and styles in the salt-detached Sureste Basin, southern gulf of Mexico: insights from physical models: Journal of Structural Geology, v. 179, no. 105046, 24 p., <http://doi.org/10.1016/j.jsg.2023.105046>.

Dooley, T. P., Soto, J. I., Reber, J. E., Hudec, M. R., Peel, F. J., and Apps, G. M., 2024, Modeling mobile shales under contraction--critical analyses of new analog simulations of shale

tectonics and comparison with salt-bearing systems: *Interpretation*, v. 12, no. 4, p. SF17-SF38, <http://doi.org/10.1190/int-2024-0025.1>.

Hardt, J., Dooley, T. P., and Hudec, M. R., 2024, Physical modeling of ice-sheet-induced salt movements using the example of northern Germany: *Earth Surface Dynamics*, v. 12, no. 2, p. 559-579, <http://doi.org/10.5194/esurf-12-559-2024>.

Soto, J. I., Dooley, T. P., Hudec, M. R., Peel, F. J., and Apps, G. M., 2024, Shortening a mixed salt and mobile shale system: a case study from East Breaks, northwest Gulf of Mexico: *Interpretation*, v. 12, no. 4, p. SF77-SF103, <http://doi.org/10.1190/INT-2024-0049.1>.

Soto, J. I., Tranos, M. D., Bega, Z., Dooley, T. P., Hernández, P., Hudec, M. R., Konstantopoulos, P. A., Lula, E., Nikolaou, K., Pérez, R., Pita, J. P., Titos, J. A., Tzimeas, C., and Herra Sánchez de Movellán, A., 2024, Contrasting styles of salt-tectonic processes in the Ionian Zone (Greece and Albania): integrating surface geology, subsurface data, and experimental models: *Tectonics*, v. 43, no. 1, article no. e2023TC008104, 46 p., <http://doi.org/10.1029/2023TC008104>.

Willacy, C., and Dooley, T. P., 2024, Seismic modeling using pseudo-impedance derived from physical models: *The Leading Edge*, v. 43, no. 7, p. 444-452, <http://doi.org/10.1190/tle43070444.1>.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2023, Growth and evolution of salt canopies on a salt-detached slope: insights from physical models: *AAPG Bulletin*, v. 107, no. 12, p. 2053-2089, <http://doi.org/10.1306/08072222013>.

Duffy, O. B., Hudec, M. R., Peel, F., Apps, G., Bump, A., Moscardelli, L., Dooley, T. P., Fernandez, N., Bhattacharya, S., Wisian, K., and Shuster, M. W., 2023, The role of salt tectonics in the energy transition: an overview and future challenges: *Tektonika*, v. 1, no. 1, p. 18-48, <http://doi.org/10.55575/tektonika2023.1.1.11>.

Fernandez, N., Duffy, O. B., Jackson, C. A.-L., Kaus, B. J. P., Dooley, T., and Hudec, M., 2023, How fast can minibasins translate down a slope? Observations from 2D numerical models: *Tektonika*, v. 1, no. 2, p. 177-197, <http://doi.org/10.55575/tektonika2023.1.2.22>.

Zhang, J., Moscardelli, L., Dooley, T. P., and Schuba, N., 2023, Halokinetic induced topographic controls on sediment routing in salt-bearing basins: a combined physical and numerical modeling approach: *GSA Today*, v. 33, no. 6, p. 4-9, <http://doi.org/10.1130/GSATG561A.1>.

Duffy, O. B., Dooley, T. P., Hudec, M. R., Fernandez, N., Jackson, C. A.-L., and Soto, J. I., 2021, Principles of shortening in salt basins containing isolated minibasins: *Basin Research*, v. 33, no. 3, p. 2089-2117, <http://doi.org/10.1111/bre.12550>.

Hudec, M. R., Dooley, T. P., Burrell, L., Teixell, A., and Fernandez, N., 2021, An alternative model for the role of salt depositional configuration and preexisting salt structures in the evolution of the Southern Pyrenees, Spain: *Journal of Structural Geology*, v. 146, no. 104325, 16 p., <http://doi.org/10.1016/j.jsg.2021.104325>.

Dooley, T. P., and Hudec, M. R., 2020, Extension and inversion of salt-bearing rift systems: *Solid Earth*, v. 11, no. 4, p. 1187-1204, <http://doi.org/10.5194/se-11-1187-2020>.

Duffy, O. B., Fernandez, N., Peel, F. J., Hudec, M. R., Dooley, T. P., and Jackson, C. A.-L., 2020, Obstructed minibasins on a salt-detached slope: an example from above the Sigsbee canopy, northern Gulf of Mexico: *Basin Research*, v. 32, no. 3, p. 505-524, <http://doi.org/10.1111/bre.12380>.

Fernandez, N., Hudec, M. R., Jackson, C. A.-L., Dooley, T. P., and Duffy, O. B., 2020, The competition for salt and kinematic interactions between minibasins during density-driven subsidence: observations from numerical models: *Petroleum Geoscience*, v. 26, no. 1, p. 3-15, <http://doi.org/10.1144/petgeo2019-051>.

Hudec, M. R., Dooley, T. P., Peel, F. J., and Soto, J. I., 2020, Controls on the evolution of

passive-margin salt basins: structure and evolution of the Salina del Bravo region, northeastern Mexico: *Geological Society of America Bulletin*, v. 132, no. 5/6, p. 997-1012, <http://doi.org/10.1130/B35283.1>.

Jackson, C. A.-L., Duffy, O. B., Fernandez, N., Dooley, T. P., Hudec, M. R., Jackson, M. P. A., and Burg, G., 2020, The stratigraphic record of minibasin subsidence, Precaspian Basin, Kazakhstan: *Basin Research*, v. 32, no. 4, p. 739-763, <http://doi.org/10.1111/bre.12393>.

Pichel, L. M., Jackson, C. A.-L., Peel, F., and Dooley, T. P., 2020, Base-salt relief controls salt-tectonic structural style, São Paulo Plateau, Santos Basin, Brazil: *Basin Research*, v. 32, no. 3, p. 453-484, <http://doi.org/10.1111/bre.12375>.

Reber, J. E., Cooke, M. L., and Dooley, T. P., 2020, What model material to use? a review on rock analogs for structural geology and tectonics: *Earth-Science Reviews*, v. 202, no. 103107, 21 p., <http://doi.org/10.1016/j.earscirev.2020.103107>.

Soumaya, A., Kadri, A., Ben Ayed, N., Kim, Y.-S., Dooley, T. P., Rajabi, M., and Braham, A., 2020, Deformation styles related to intraplate strike-slip fault systems of the Saharan-Tunisian Southern Atlas (North Africa): new kinematic models: *Journal of Structural Geology*, v. 140, no. 104175, 20 p., <http://doi.org/10.1016/j.jsg.2020.104175>.

Duffy, O. B., Dooley, T. P., Hudec, M. R., Jackson, M. P. A., Fernandez, N., Jackson C. A.-L., and Soto J. I., 2018, Structural evolution of salt-influenced fold-and-thrust belts: a synthesis and new insights from basins containing isolated salt diapirs: *Journal of Structural Geology*, v. 114, p. 206-221, <http://doi.org/10.1016/j.jsg.2018.06.024>.

Dooley, T. P., and Hudec, M. R., 2017, The effects of base-salt relief on salt flow and suprasalt deformation patterns -- Part 2: Application to the eastern Gulf of Mexico: *Interpretation*, v. 5, no. 1, p. SD25-SD38, <http://doi.org/10.1190/INT-2016-0088.1>.

Dooley, T. P., Hudec, M. R., Carruthers, D., Jackson, M. P. A., and Luo, G., 2017, The effects of base-salt relief on salt flow and suprasalt deformation patterns -- Part 1: Flow across simple steps in the base of salt: *Interpretation*, v. 5, no. 1, p. SD1-SD23, <http://doi.org/10.1190/INT-2016-0087.1>.

Duffy, O. B., Fernandez, N., Hudec, M. R., Jackson, M. P. A., Burg, G., Dooley, T. P., and Jackson, C. A.-L., 2017, Lateral mobility of minibasins during shortening: Insights from the SE Precaspian Basin, Kazakhstan: *Journal of Structural Geology*, v. 97, p. 257-276, <http://doi.org/10.1016/j.jsg.2017.02.002>.

Fernandez, N., Duffy, O. B., Hudec, M. R., Jackson, M. P. A., Burg, G., Jackson, C. A.-L., and Dooley, T. P., 2017, The origin of salt-encased sediment packages: observations from the SE Precaspian Basin (Kazakhstan): *Journal of Structural Geology*, v. 97, p. 237-256, <http://doi.org/10.1016/j.jsg.2017.01.008>.

Corti, G., and Dooley, T. P., 2015, Lithospheric-scale centrifuge models of pull-apart basins: *Tectonophysics*, v. 664, p. 154-163, <http://doi.org/10.1016/j.tecto.2015.09.004>.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2015, Breakout of squeezed stocks: dispersal of roof fragments, source of extrusive salt and interaction with regional thrust faults: *Basin Research*, v. 27, p. 3-25, <http://doi.org/10.1111/bre.12056>.

Dooley, T. P., Jackson, M. P. A., Jackson, C. A.-L., Hudec, M. R., and Rodriguez, C. R., 2015, Enigmatic structures within salt walls of the Santos Basin-Part 2: Mechanical explanation from physical modeling: *Journal of Structural Geology*, v. 75, p. 163-187, <http://doi.org/10.1016/j.jsg.2015.01.009>.

Weijermars, R., Hudec, M. R., Dooley, T. P., and Jackson, M. P. A., 2015, Downbuilding salt stocks and sheets quantified in 3-D analytical models: *Journal of Geophysical Research: Solid Earth*, v. 120, no. 6, p. 4616-4644, <http://doi.org/10.1002/2014JB011704>.

Weijermars, R., Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2014, Rankine models for

time-dependent gravity spreading of terrestrial source flows over subplanar slopes: *Journal of Geophysical Research: Solid Earth*, v. 119, p. 7353-7388, <http://doi.org/10.1002/2014JB011315>.

Weijermars, R., Jackson, M. P. A., and Dooley, T. P., 2014, Quantifying drag on wellbore casings in moving salt sheets: *Geophysical Journal International*, v. 198, p. 965-977, <http://doi.org/10.1093/gji/ggu174>.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2013, Coeval extension and shortening above and below salt canopies on an uplifted, continental margin: Application to the northern Gulf of Mexico: *AAPG Bulletin*, v. 97, no. 10, p. 1737-1764.

Dooley, T. P., Hudec, M. R., and Jackson, M. P. A., 2012, The structure and evolution of sutures in allochthonous salt: *AAPG Bulletin*, v. 96, no. 6, p. 1045-1070.

Dooley, T., and Schreurs, G., 2012, Analogue modelling of intraplate strike-slip tectonics: a review and new experimental results: *Tectonophysics*, v. 574-575, p. 1-71.

Moscardelli, L., Dooley, T., Dunlap, D., Jackson, M., and Wood, L., 2012, Deep-water polygonal fault systems as terrestrial analogs for large-scale Martian polygonal terrains: *Geological Society of America Today*, v. 22, no. 8, p. 4-6, <http://doi.org/10.1130/GSATG147A.1>.

Jackson, M. P. A., Adams, J. B., Dooley, T. P., Gillespie, A. R., and Montgomery, D. R., 2011, Modeling the collapse of Hebes Chasma, Valles Marineris, Mars: *Geological Society of America Bulletin*, v. 123, no. 7/8, p. 1596-1627.

Jackson, M. P. A., Hudec, M. R., and Dooley, T. P., 2010, Some emerging concepts in salt tectonics in the deepwater Gulf of Mexico: intrusive plumes, canopy-margin thrusts, minibasin triggers and allochthonous fragments: *The Geological Society, London, Petroleum Geology Conference Series*, v. 7, p. 899-912. doi: 10.1144/0070899

Adams, J. B., Gillespie, A. R., Jackson, M. P. A., Montgomery, D. R., Dooley, Tim, Combe, J. -P., and Schreiber, B. C., 2009, Salt tectonics and collapse of Hebes Chasma, Valles Marineris, Mars: *Geology*, v. 37, no. 8, p. 691-694.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2009, Inflation and deflation of deeply buried salt stocks during lateral shortening: *Journal of Structural Geology*, v. 31, no. 6, p. 582-600.

Wu, J. E., McClay, K. R., Whitehouse, P., and Dooley, T., 2009, 4D analogue modelling of transtensional pull-apart basins: *Marine and Petroleum Geology*, v. 26, p. 1608-1623.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2007, Initiation and growth of salt-based thrustbelts on passive margins: results from physical models: *Basin Research*, v. 19, p. 165-177.

McDonnell, Angela, Loucks, R. G., and Dooley, Tim, 2007, Quantifying the origin and geometry of circular sag structures in northern Fort Worth Basin, Texas: paleocave collapse, pull-apart fault systems, or hydrothermal alteration? *AAPG Bulletin*, v. 91, no. 9, p. 1295-1318.

Dooley, T., McClay, K. R., Hempton, M., and Smit, D., 2005, Salt tectonics above complex basement extensional fault systems: results from analogue modelling, in Doré, A. G., and Vining, B. A., eds., *Petroleum geology: north-west Europe and global perspectives--Proceedings of the 6th Petroleum Geology Conference*: Geological Society, London, p. 1631-1648.

McClay, K. R., Dooley, T., Whitehouse, P., and Anadon-Ruiz, S., 2005, 4D analogue models of extensional fault systems in asymmetric rifts: 3D visualisations and comparisons with natural examples, in Doré, A. G., and Vining, B. A., eds., *Petroleum geology: north-west Europe and global perspectives--Proceedings of the 6th Petroleum Geology Conference*: Geological Society, London, p. 1543-1556.

McClay, K. R., Dooley, T., Whitehouse, P., Fullarton, L., and Chantraprasert, S., 2004, 3D analogue models of rift systems: templates for 3D seismic interpretation, in Davies, R. J., Cartwright, J. A., Stewart, S. A., Lappin, M., and Underhill, J. R. (eds.), *3D seismic technology*:

application to the exploration of sedimentary basins: Geological Society of London, Memoirs 29, p. 101-115.

McClay, K. R., Whitehouse, P. S., Dooley, Tim, and Richards, M., 2004, 3D evolution of fold and thrust belts formed by oblique convergence: *Marine and Petroleum Geology*, v. 21, p. 857-877.

Dooley, Tim, McClay, K. R., and Pascoe, R., 2003, 3D analogue models of variable displacement extensional faults: applications to the Revfallet fault systems, Mid-Norway, in Nieuland, D. A., ed., *New insights into structural interpretation and modelling*: Geological Society of London, Special Publication 212, p. 151-167.

McClay, K. R., Dooley, Tim, and Zamora, G., 2003, Analogue models of delta systems above mobile shales, in Van Rensbergen, P., Morley, C., Hillis, R., and Cartwright, J., eds., *Geological Society of London, Special Publication 216*, p. 411-428.

McClay, K. R., Dooley, Tim, Whitehouse, P., Mills, M., and Khalil, S., 2002, 4D Evolution of rift systems: insights from scaled physical models: *AAPG Bulletin*, v. 86, p. 935-960.

McClay, K. R., Dooley, Tim, Ferguson, A., and Poblet, J., 2000, Tectonic evolution of the Sanga Sanga Block, Mahakam Delta, Kalimantan, Indonesia: *AAPG Bulletin*, v. 84, no. 6, p. 765-786.

Dooley, Tim, McClay, K. R., and Bonora, M., 1999, 4D Evolution of segmented strike-slip fault systems: applications to N.W. Europe, in fleet, A. J., and Boldy, S. A. R., eds., *Petroleum geology of northwest Europe: Proceedings of the 5th Conference*, p. 215-225.

McClay, K. R., Dooley, Tim, and Lewis, G., 1998, Analog modeling of progradational delta systems: *Geology*, v. 26, no. 9, p. 771-774.

Dooley, Tim, and McClay, K. R., 1997, Analog modeling of pull-apart basins: *AAPG Bulletin*, v. 81, no. 11, p. 1804-1826.

Dooley, Tim, and McClay, K. R., 1996, Strike-slip deformation in the Confidence Hills, Southern Death Valley Fault Zone, Eastern California, USA: *Journal of the Geological Society*, v. 153, p. 375-387.

Parkinson, C., and Dooley, Tim, 1996, Basin formation and strain partitioning along strike-slip fault zones: *Bulletin of Geological Survey Japan*, v. 47, p. 427-436.

McClay, K. R., and Dooley, Tim, 1995, Analog models of pull-apart basins: *Geology*, v. 23, p. 711-714.

Palmer, D., Johnston, J. D., Dooley, Tim, and Maguire, K., 1989, The Silurian of Clew Bay, Ireland: part of the Midland Valley of Scotland?: *Journal of the Geological Society of London*, v. 146, p. 385-389.

Peer Reviewed Book Chapters

Dooley, T. P., Hudec, M. R., Pichel, L. M., and Jackson, M. P. A., 2020, The impact of base-salt relief on salt flow and suprasalt deformation patterns at the autochthonous, paraautochthonous and allochthonous level: insights from physical models, in McClay, K. R., and Hammerstein, J. A., eds., *Passive margins: tectonics, sedimentation and magmatism*: London, Geological Society of London, Special Publication, v. 476, p. 287-315.

Dooley, T. P., Hudec, M. R., Pichel, L. M., and Jackson, M. P. A., 2018, The impact of base-salt relief on salt flow and suprasalt deformation patterns at the autochthonous, paraautochthonous and allochthonous level: insights from physical models, in McClay, K. R., and Hammerstein, J. A., eds., *Passive margins: tectonics, sedimentation and magmatism*: Geological Society, London, Special Publications, v. 476, 29 p., <http://doi.org/10.1144/SP476.13>.

Cartwright, J. A., Jackson, M. P. A., Dooley, T., and Higgins, S., 2012, Strain partitioning in gravity-driven shortening of a thick, multilayered evaporite sequence, in Alsop, G. I., Archer, S. G., Hartley, A. J., Grant, N. T., and Hodgkinson, R., eds., *Salt tectonics, sediments and prospectivity*: London, Geological Society, Special Publication 363, p. 449-470.

Non Peer Reviewed Journal Articles

Duffy, O. B., Moscardelli, L., Hudec, M. R., Dooley, T. P., Peel, F., Loeff, Kurt, Apps, G., and Shuster, M., 2022, Potential controls on the origin, nature, and distribution of shear zones in salt stocks: salt tectonic insights with a solution mining perspective: Solution Mining Research Institute Spring 2022 Technical Conference, 25 p.

Ferrer, O., Dooley, T. P., Corti, G., Vidal-Royo, O., Hearon, T. E., Reber, J., and Graveleau, F., 2017, Introduction to special section: analog modeling as an aid to structural interpretation: Interpretation, v. 5, no. 1, p. SDi-SD2, <http://doi.org/10.1190/INT-2016-1219-SPSEINTRO.1>.

Reber, J., Dooley, T. P., and Logan, E., 2017, Analog modeling recreates millions of years in a few hours: EOS, v. 98, <http://doi.org/10.1029/2017EO085753>.

Moscardelli, L., Dooley, T., Dunlap, D. B., Jackson, M. P. A., and Wood, L. J., 2012, Deep-water polygonal fault systems as terrestrial analogs for large-scale Martian polygonal terrains: GSA Today, v. 22, no. 8, p. 4-9. doi:10.1130/GSATG147A.1.

Dooley, Tim, 2009, Physical models of salt tectonics, in Laubach, S. E., and Tinker, S. W., eds., 2009, Earth's art: celebrating the Centennial of the Bureau of Economic Geology, 1909-2009: The University of Texas at Austin, Bureau of Economic Geology, p. 38-39.

Dooley, T., Monastero, F., Hall, B., McClay, K., and Whitehouse, P., 2004, Scaled sandbox modeling of transtensional pull-apart basins-applications to the Coso geothermal system: Geothermal Resources Council Transactions, v. 28, 637-641.

Dooley, Tim, McClay, Ken, Hempton, Mark, and Smit, Dirk, 2004, Basement controls on salt tectonics: results from analog modeling in Post, P. J., Olson, D. L., Lyons, K. T., Palmes, S. L., Harrison, P. F., and Rosen, N. C., eds., Salt-sediment interactions and hydrocarbon prospectivity: concepts, applications, and case studies for the 21st century: 24th Annual GCSSEPM Foundation Bob F. Perkins Research Conference, p. 1138-1174.

McClay, K. R., Dooley, Tim, Gloaguen, R., Whitehouse, P., and Khalil, S., 2001, Analogue modelling of extensional fault architectures: comparisons with natural rift fault systems, in Hill, K. C., and Bernecker, T., eds., East Australian Basins Symposium: The Australian Institution of Mining and Metallurgy, p. 573-584.

Non Peer Reviewed Book Chapters

Wu, J. E., McClay, K. R., Whitehouse, P., and Dooley, T., 2012, Chapter 25. 4D analogue modelling of transtensional pull-apart basins, in Roberts, D. G., and Bally, A. W., eds., Regional geology and tectonics phanerozoic passive margins, cratonic basins, and global tectonic maps: Amsterdam, Elsevier, p. 701-726.

Conference Proceedings

Moscardelli, L., Schuba, N., Dooley, T. P., and Hattori, K., 2023, Bedded salt formations of the Delaware Basin and their significance for salt cavern placement, IMAGE, Houston.

Duffy, O. B., Moscardelli, L., Hudec, M. R., Loeff, K., Dooley, T. P., Peel, F., Apps, G., and Shuster, M., 2022, Potential controls on the origin, nature, and distribution of shear zones in salt stocks: salt tectonic insights with a solution mining perspective, Solution Mining Research Institute Spring 2022 Technical Conference, 24 p.

Contract Reports

Peel, F., Dooley, T. P., Soto, J. I., Nikolinakou, M. A., Apps, G., Duffy, O. B., Hudec, M. R., Tollestrup, A. K., and Heidari, M., 2023, Applied Geodynamics Laboratory (AGL) annual report to Industrial Associates (slide set 42, video): Bureau of Economic Geology, The University of Texas at Austin, Annual Report prepared for BP, Chevron, Eni, Exxonmobil and 16 other sponsors.

Dooley, T. P., Peel, F., Soto, J., Hudec, M. R., Nikolinakou, M. A., Heidari, M., Apps, G., Duffy,

O. B., and Fernandez, N., 2021, Applied Geodynamics Laboratory (AGL) annual report to industrial associates (slide set 40, video): The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for BP, Chevron, Eni, ExxonMobil, Petrobras, and 16 other AGL sponsors.

Duffy, O. B., Fernandez, N., Peel, F., Soto, J. I., Heidari, M., Dooley, T. P., Hudec, M. R., Nikolinakou, M. A., and Apps, G., 2020, Applied Geodynamics Laboratory (AGL) annual report to industrial associates (slide set 39, video): The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for BP, Chevron, Eni, ExxonMobil, Petrobras, and 16 other AGL sponsors.

Peel, F., Dooley, T. P., Hudec, M. R., Fernandez, N., Duffy, O. B., Nikolinakou, M. A., Heidari, M., Gao, B., and Apps, G., 2019, Applied Geodynamics Laboratory (AGL) annual report to industrial associates (slide set 38): The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for AGL industrial associates.

Dooley, T. P., Peel, F., Nikolinakou, M. A., Duffy, O. B., Fernandez, N., Heidari, M., Hudec, M. R., and Apps, G., 2018, 2017 Applied Geodynamics Laboratory Annual Report to industrial associates (slide set 37): Bureau of Economic Geology, The University of Texas at Austin, prepared for <http://www.beg.utexas.edu/agl/sponsors>.

Dooley, T. P., Peel, F., Nikolinakou, M. A., Duffy, O. B., Fernandez, N., Heidari, M., Hudec, M. R., and Apps, G., 2018, Applied Geodynamics Laboratory Contract Report to Industrial Associates 2018 (slide set 37): Bureau of Economic Geology, The University of Texas at Austin, prepared for <http://www.beg.utexas.edu/agl/sponsors>.

Peel, F., Dooley, T. P., Hudec, M. R., Nikolinakou, M. A., Moghadam, M. H., Fernandez, N., Duffy, O. B., and Apps, G., 2017, Applied Geodynamics Laboratory annual report to industrial associates 2017, slide set 36: Bureau of Economic Geology, The University of Texas at Austin, Annual Report prepared for Anadarko, Apache, BHP Billiton, BP, CGG, Chevron, Cobalt, Condor, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Freeport-McMoRan, Fugro, Hess, ION Geophysical, Lukoil, Maersk, Marathon, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Rockfield, Samson, Saudi Aramco, Shell, Statoil, Stone Energy, TGS-Nopec, Total, and Woodside. CD-ROM.

Dooley, T. P., Peel, F., Curry, M., Duffy, O. B., Fernandez, N., Moghadam, M. H., Nikolinakou, M. A., Apps, G., and Hudec, M. R., 2016, Applied Geodynamics Laboratory annual report to industrial associates 2016, slide set 35: Bureau of Economic Geology, The University of Texas at Austin, Annual Report prepared for Anadarko, Apache, BHP Billiton, BP, CGG, Chevron, Cobalt, Condor, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Freeport-McMoRan, Fugro, Hess, ION Geophysical, Lukoil, Maersk, Marathon, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Rockfield, Samson, Saudi Aramco, Shell, Statoil, Stone Energy, TGS-Nopec, Total, and Woodside. CD-ROM.

Fernandez, N., Nikolinakou, M. A., Dooley, T. P., Duffy, O. B., Moghadam, M. H., Ellis, M., Hudec, M. R., and Jackson, M.P.A., 2015, Applied Geodynamics Laboratory annual report to industrial associates 2015, slide set 34: Bureau of Economic Geology, The University of Texas at Austin, Annual Report prepared for Anadarko, Apache, BHP Billiton, BP, CGG, Chevron, Cobalt, Condor, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Freeport-McMoRan, Fugro, Hess, ION Geophysical, Lukoil, Maersk, Marathon, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Rockfield, Samson, Saudi Aramco, Shell, Statoil, Stone Energy, TGS-Nopec, Total, and Woodside.

Dooley, T. P., Hudec, M. R., Carruthers, D., Nikolinakou, M. A., Heidari, M., Norton, Ian, Flemings, P. B., and Jackson, M. P. A., 2014, Applied Geodynamics Laboratory annual report to industrial associates 2014, slide set 33: Bureau of Economic Geology, The University of Texas at Austin, annual report prepared for Anadarko, Apache, BHP Billiton, BP, CGG, Chevron, Cobalt, Condor, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Freeport-McMoRan, Fugro, Hess, ION Geophysical, Lukoil, Maersk, Marathon, Murphy, Nexen, Noble, Pemex, Petrobras, PGS,

Repsol-YPF, Rockfield, Samson, Saudi Aramco, Shell, Statoil, Stone Energy, TGS-Nopec, Total, and Woodside, CD-ROM.

Hudec, M. R., Dooley, T. P., Nikolinakou, M. A., Jackson, M. P. A., Carruthers, D., Weijermars, R., Luo, G., Moghadam, M. H., and Flemings, P. B., 2013, Applied Geodynamics Laboratory annual report to industrial associates 2013, slide set 32: The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for prepared for Anadarko, Apache, BHP Billiton, BP, CGG, Chevron, Cobalt, Condor, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Fugro, Global Geophysical, Hess, ION Geophysical, Korea National Oil Corporation, McMoRan, Maersk, Marathon, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, Statoil, TGS-Nopec, Talisman, Total, WesternGeco, and Woodside, CD-ROM.

Dooley, T. P., Jackson, M. P. A., Hudec, M. R., Nikolinakou, M. A., Jackson, C. A., Weijermars, R., Luo, G., and Flemings, P. B., 2012, Applied Geodynamics Laboratory annual report to industrial associates 2012, slide set 31: The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for Anadarko, Apache, BHP Billiton, BP, CGGVeritas, Chevron, Cobalt, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Fugro, Global Geophysical, Hess, ION Geophysical, Korea National Oil Corporation, McMoRan, Maersk, Marathon, Murphy, Nexen, Noble, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, Statoil, TGS-Nopec, Talisman, Total, WesternGeco, and Woodside, CD-ROM.

Dooley, T., Jackson, M. P. A., Hudec, M. R., Nikolinakou, M. A., Luo, G., Norton, I., Flemings, P. B., Mueller, K., and Snedden, J., 2011, Applied Geodynamics Laboratory annual report to Industrial Associates for 2011, slide set 30: The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for Anadarko, Apache, BHP Billiton, BP, CGGVeritas, Chevron, Cobalt, ConocoPhillips, EcoPetrol, ENI, ExxonMobil, Fugro, Global Geophysical, Hess, IMP, Ion, Korea National Oil Corporation, McMoRan, Maersk, Marathon, Murphy, Nexen, Noble, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, Statoil, TGS-Nopec, Total, WesternGeco, and Woodside, CD-ROM.

Dooley, Tim, Hudec, M. R., Jackson, M. P. A., Nikolinakou, M. A., Luo, Gang, Braunscheidel, M., Norton, Ian, McDonnell, Angela, Wagner, Bryce, and Flemings, P. B., 2010, Applied Geodynamics Laboratory annual report to Industrial Associates for 2010: slide set 29: The University of Texas at Austin, Bureau of Economic Geology,, annual report prepared for Anadarko, BHP Billiton, BP, CGGVeritas, Chevron, Cobalt, ConocoPhillips, Devon, ENI, ExxonMobil, Fugro, Global Geophysical, GX Technology, Hess, IMP, INEXS, Maersk, Marathon, Mariner, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, StatoilHydro, TGS-Nopec, Total, WesternGeco, and Woodside, CD-ROM.

Dooley, Tim, 2009, Kinematic and dynamic studies of the Coso Geothermal and surrounding areas: evolution of releasing stepover arrays along the eastern boundary of the Sierra Nevada micro-plate--implications for geothermal prospect exploration and prediction: The University of Texas at Austin, Bureau of Economic Geology, contract report, prepared under contract no. N68936-06-C-0055, 80 p.

Jackson, M. P. A., Dooley, Tim, Hudec, M. R., Wagner, Bryce, McDonnell, Angela, Flemings, P. B., Luo, Gang, Nikolinakou, M. A., and Loucks, R. G., 2009, Applied Geodynamics Laboratory annual report to Industrial Associates for 2009: slide set 28: The University of Texas at Austin, Bureau of Economic Geology, annual report prepared for Anadarko, BHP Billiton, BP, CGGVeritas, Chevron, Cobalt, ConocoPhillips, Devon, ENI, ExxonMobil, Fugro, GX Technology, Hess, IMP, Maersk, Marathon, Mariner, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, StatoilHydro, TGS-Nopec, Total, WesternGeco, and Woodside, CD-ROM.

Hudec, M. R., Jackson, M. P. A., Dooley, Tim, Wagner, Bryce, McDonnell, Angela, Pequeno, Monica, Norton, Ian, and Moscardelli, Lorena, 2008, Applied Geodynamics Laboratory annual report to Industrial Associates for 2008: slide set 27: The University of Texas at Austin, Bureau

of Economic Geology, annual report prepared for Anadarko, BHP Billiton, BP, CGGVeritas, Chevron, Cobalt, ConocoPhillips, Devon, ENI, ExxonMobil, Fugro, GX Technology, Hess, IMP, Maersk, Marathon, Mariner, Murphy, Nexen, Noble, Pemex, Petrobras, PGS, Repsol-YPF, Samson, Saudi Aramco, Shell, StatoilHydro, TGS-Nopec, Total, WesternGeco, and Woodside, CD-ROM.

Hudec, M. R., Jackson, M. P. A., Dooley, Tim, Dirkzwager, J., Cartwright, J., Harrison, C., Montoya, Patricia, and Heyn, T., 2007, Applied Geodynamics Laboratory annual report to Industrial Associates for 2006: slide set 25: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Amerada Hess, Anadarko Petroleum Corporation, BHP Billiton, BP Production, Chevron, Cobalt, ConocoPhillips, ENI, EnCana, ExxonMobil, Hydro Oil and Energy, Maersk, Marathon Oil Company, Petrobras, Repsol, Samson, Shell, Statoil, Total, and Woodside, CD-ROM, CD-ROM.

Hudec, M. R., Jackson, M. P. A., Dooley, Tim, Hooker, John N., Wood, L. J., and Montoya, Patricia, 2006, Applied Geodynamics Laboratory annual report to Industrial Associates for 2005: slide set 24: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Amerada Hess, Anadarko Petroleum Corporation, BHP Billiton, BP Production, Chevron, ConocoPhillips, ENI, EnCana, ExxonMobil, Hydro Oil and Energy, Marathon Oil Company, Petrobras, Repsol, Shell, Total, and Woodside, CD-ROM.

Jackson, M. P. A., Dooley, Tim, and Hooker, J. N., 2005, Fault intensity around exposed salt diapirs: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for BP, 14 p. + apps.

Jackson, M. P. A., Hudec, M. R., Dooley, Tim, and Wood, L. J., 2005, Applied Geodynamics Laboratory annual progress report to Industrial Associates for 2004: slide set 23: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Amerada Hess, Anadarko Petroleum Corporation, BHP Billiton, BP Production, Chevron, ConocoPhillips, ENI, EnCana, ExxonMobil, Hydro Oil and Energy, Marathon Oil Company, Petrobras, Repsol, Shell, Total, and Woodside, CD-ROM.

Published Abstracts

Jackson, C. A.-L., Rodriguez, C., Hudec, M. R., Bell, R., Rotevatn, A., Pichel, L., Dooley, T. P., and Francis, M., 2021, Recent insights into the linked deposition, deformation, and dissolution of Aptian (Lower Cretaceous) evaporites on the Sao Paulo Plateau, Santos Basin, offshore Brazil (abs.): Goldschmidt2021, 1 p.

Dooley, T. P., and Hudec, M. R., 2019, Extension and inversion of salt-bearing rift systems (abs.): Geological Society of America Abstracts with Programs, v. 51, no. 5, abs. no. 48-3, 1 p., <http://doi.org/10.1130/abs/2019AM-338651>.

Dooley, T., and Hudec, M., 2019, Loading a complex salt isopach: progradation across a salt-filled rift system (abs.): 2019 AAPG Annual Convention and Exhibition, San Antonio, Tex., May 19-22, 1 p.

Dooley, T., Hudec, M., Duffy, O., and Fernandez, N., 2019, Shortening of diapir provinces: translation, tilting and rotation of minibasins in isolated minibasin systems (abs.): 2019 AAPG Annual Convention and Exhibition, San Antonio, Tex., May 19-22, 1 p.

Duffy, O. B., Fernandez, N., Peel, F. J., Hudec, M. R., Dooley, T. P., and Jackson, C. A.-L., 2019, Minibasin obstruction by base-salt welding on a salt-detached slope: an example from the northern Gulf of Mexico (abs.): Geophysical Research Abstracts, v. 21, no. EGU2019-18928, 1 p.

Duffy, O., Fernandez, N., Peel, F., Hudec, M., and Dooley, T., 2019, Minibasin obstruction by base-salt welding on a salt-detached slope: an example from the northern Gulf of Mexico (abs.): 2019 AAPG Annual Convention and Exhibition, San Antonio, Tex., May 19-22, 1 p.

Hudec, M. R., Dooley, T. P., and Peel, F., 2019, Evolution of the Salina del Bravo region,

Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt (abs.): 2019 AAPG Annual Convention and Exhibition, San Antonio, Tex., May 19-22, 1 p.

Hudec, M., Dooley, T. P., and Peel, F. J., 2019, Evolution of the Salina del Bravo, Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt (abs.): Geological Society of America Abstracts with Programs, v. 51, no. 5, abs. no. 211-2, 1 p., <http://doi.org/10.1130/abs/2019AM-330979>.

Kernen, R., Dooley, T., Giles, K., Rowan, M., Peel, F., and Hudec, M., 2019, Using seismic and physical modeling to characterize the origin and deformation of sediment clasts within Patawarta diapir, Flinders Ranges, South Australia (abs.): 2019 AAPG Annual Convention and Exhibition, San Antonio, Tex., May 19-22, 1 p.

Dooley, T. P., and Hudec, M. R., 2017, Bucket welding: where does all that salt go? (abs.): AAPG Datapages/Search and Discovery Article #90291, AAPG Annual Convention and Exhibition, Houston, Texas, April 2-5, <http://www.searchanddiscovery.com/abstracts/html/2017/90291ace/abstracts/2612236.html>.

Dooley, T. P., Hudec, M. R., and Jackson, M. P. A., 2015, Formation, rotation, and translation of thrust systems formed at basement ramps during early-stage salt flow: application to the eastern Gulf of Mexico (abs.): AAPG Annual Convention and Exhibition, Denver, Colorado, AAPG Search and Discovery Article #90216.

Dooley, Tim, Jackson, M. P. A., Hudec, M. R., 2014, Squeezing a large canopy on a slope: suturing patterns, subsalt thrusting and suprasalt extension and salt expulsion (abs.): AAPG Datapages/Search and discovery Article #90189, AAPG Annual Convention and Exhibition, Houston, Texas, USA, April 6-14, 2014.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2012, Coeval shallow extension and deep shortening above and below a salt canopy: a model for the ultradeep Miocene of the northern Gulf of Mexico (abs.): American Association of Petroleum Geologists, Annual Convention, Abstract 1235523, 1 p.

Jackson, M. P. A., and Dooley, Tim, 2012, Internal deformation of layered evaporites: flow profiles and deformation styles (abs.): Gulf Coast Association of Geological Societies Transactions, v. 62, p. 733.

Jackson, M. P. A., Dooley, T. P., and Hudec, M. R., 2012, Coeval extension and shortening above and below salt canopies on an uplifted continental margin: application to the northern Gulf of Mexico: Industrial structural geology: principles, techniques and integration (abs.), in The Geological Society, London, Programme and Abstract Volume, p. 28.

Moscardelli, Lorena, Dooley, Tim, Dunlap, D. B., Wood, L. J., and Jackson, M. P. A., 2012, Deepwater polygonal fault systems as terrestrial analogs for Martian polygonal terrains (abs.): American Association of Petroleum Geologists, Annual Convention, Abstract 1225531, 1 p.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2011, Canopy evolution: deformation processes and subsidence patterns (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20, p. 47.

Jackson, M. P. A., Dooley, Tim, Hudec, M. R., and McDonnell, Angela, 2011, The pillow fold belt: a key subsalt structural province in the northern Gulf of Mexico (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20, p. 91.

Cartwright, J. A., Jackson, M. P. A., Higgins, S., and Dooley, Tim, 2010, Role of multilayered salt in gravity-driven collapse of thick salt sheets (abs.), in Salt tectonics, sediments and prospectivity, meeting held at Burlington House, London, January 20-22: The Geological Society's Petroleum Group and SEPM.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2010, Roof breakup and extrusion of shallow

salt stocks during lateral shortening (abs.), in Salt tectonics, sediments and prospectivity, meeting held at Burlington House, London, January 20-22: The Geological Society's Petroleum Group and SEPM.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2010, Roof breakup and extrusion of shallow salt stocks during lateral shortening (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition, v. 19, p. 61.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2009, Deformation styles and linkage of salt walls during oblique shortening (abs.): American Association of Petroleum Geologists Annual Convention, v. 18, p. 57.

Jackson, M. P. A., Hudec, M. R., and Dooley, T., 2009, Unfolding concepts in salt tectonics: intrusive plumes, salt-sheet thrusts, minibasin triggers, and exotic wanderers (abs.): 7th Petroleum Geology Conference, Geological Society of London and the Energy Institute, London, United Kingdom, Program and Abstracts, p. 52.

Dirkzwager, Jozina, and Dooley, Tim, 2008, In situ stress modeling of a salt-based gravity driven thrust belt in a passive margin setting using physical and numerical modeling (ext. abs.), in 42nd U.S. Rock Mechanics Symposium and 2nd U.S.-Canada Rock Mechanics Symposium, San Francisco, June 29-July 2, ARMA 08-270, 6 p.

Dooley, Tim, Hudec, M. R., and Jackson, M. P. A., 2008, Dismembered sutures formed during asymmetric salt-sheet collision (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 46.

Dooley, Tim, Jackson, M. P. A., and Hudec, M. R., 2008, Superposed deformation and structural control of salt breakout in radially expanding canopies (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 46.

Dooley, Tim, Jackson, M. P. A., Cartwright, J. A., and Hudec, M. R., 2008, Modeling of strain partitioning during gravity-driven deformation of multilayered evaporites and overburden (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 46.

Dooley, Tim, Monastero, F. C., and McClay, K. R., 2007, Effects of a weak crustal layer in a transtensional pull-apart basin: results from a scaled physical modeling study: *Eos*, v. 88, no. 52, Abstract V53F-04.

Gloaguen, R., McClay, K. R., and Dooley, T., 2007, Remote sensing potential for oil exploration. example of the Zagros Mountains (Iran) (ext. abs.), in Geoscience and Remote Sensing Symposium, p. 1625-1628.

McDonnell, Angela, Loucks, R. G., and Dooley, Tim, 2007, Quantifying paleocave collapse from 3D seismic data: examples from the Paleozoic section in the northern Fort Worth Basin, Texas (abs.): *Acta Carsologica*, v. 36, no. 1, p. 226.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2006, Allochthonous salt extrusion, roof dispersion, and intrusive import and export of salt in squeezed stocks (abs.): American Association of Petroleum Geologists Annual Convention, v. 15, p. 27.

Gloaguen, R., McClay, K. R., and Dooley, T., 2006, Potential of remote sensing for oil exploration in the Zagros Mountains (Iran) (abs.), in Geomonitoring in the energy and mineral resources industry using remote sensing methodologies: Proceedings of the 57th Berg- und Hüttenmännischer Tag--Freiberger Forschungsforum, Freiberg, Germany, June.

Jackson, M. P. A., Dooley, T. P., and Hudec, M. R., 2006, Salt extrusion, roof dispersion, and deep intrusion of salt into and out of squeezed stocks (abs.), in 43rd Brazilian Geological Congress, September 3-8, Aracaju, Brazil, p. 91.

McDonnell, Angela, Dooley, Tim, and Loucks, Robert, 2006, Collapse/sag features in northern Fort Worth Basin, Texas: suprastratal deformation associated with coalesced paleocave system collapse or wrench fault sags? (abs.): American Association of Petroleum Geologists Annual

Convention, v. 15, p. 71.

McDonnell, Angela, Loucks, R. G., and Dooley, Tim, 2006, Effects of collapse structures on Barnett Shale continuity in the northern Fort Worth Basin: are deformation structures associated with coalesced paleocave system collapse or pull-apart basins? (abs.), in Barnett Shale IV Symposium, Dallas, October 11: Ellison Miles Geotechnology Institute, unpaginated.

McDonnell, Angela, Loucks, R. G., and Dooley, Tim, 2006, Paleocollapse megastructures (suprastratal deformation) related to Lower Ordovician Ellenburger coalesced, collapsed-paleocave systems in the northern Fort Worth Basin, Texas (abs.), in Southwest Section AAPG annual meeting: Permian Basin oil: good to the last drop, May 22-24, Midland, Texas, unpaginated.

McDonnell, Angela, Loucks, Robert, and Dooley, Tim, 2006, Effects of collapse structures on Barnett Shale continuity in the northern Fort Worth Basin: are deformation structures associated with coalesced paleocave system collapse or pull-apart basins? (abs.), in Barnett Shale IV Symposium, Dallas, October 11: Ellison Miles Geotechnology Institute, unpaginated.

Dooley, T., Monastero, F., Hall, B., McClay, K., and Whitehouse, P., 2004, Scaled sandbox modeling of transtensional pull-apart basins-applications to the Coso geothermal system (ext. abs.): Geotherman Resources Council Transactions, v. 28, p. 637-641.

Dooley, Tim, McClay, Ken, Hempton, Mark, and Smit, Dirk, 2004, Basement controls on salt tectonics: results from analog modeling (abs.), in Post, P. J., Olson, D. L., Lyons, K. T., Palmes, S. L., Harrison, P. F., and Rosen, N. C., eds., Salt-sediment interactions and hydrocarbon prospectivity: concepts, applications, and case studies for the 21st century: 24th Annual GCSSEPM Foundation Bob F. Perkins Research Conference Program and Abstracts, p. 48.

McClay, K. R., Dooley, T., Whitehouse, P., de Vera, J., and Gloaguen, R., 2003, 4D Evolution of fold and thrust belts: comparisons of analogue models with the Zagros (abs.), in AAPG International Conference, Barcelona, Spain, September 21-24, AAPG Search and Discovery Article #90017.

McClay, K. R., Dooley, T., Gloaguen, R., Whitehouse, P., and Khalil, S., 2001, Analogue modelling of extensional fault architectures: comparisons with natural rift fault systems (ext. abs.), in Eastern Australasian Basins Symposium 2001: a refocused energy perspective for the future, volume 1, p. 573-584.

Rolet, J., Gloaguen, R., Dooley, Tim, and McClay, K. R., 2001, Pre-existing discontinuities and oblique rifting in the Kenya rift: comparisons with analogue models. Eos, v. 82, abstract t51b-0873, p. T51B-0873.