

Tim Paul. Dooley

Professional Summary

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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.

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

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

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.

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.

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

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>.

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.

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>.

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