

Dr. Russell T. Johns
Department of Energy and Minerals Engineering
Curriculum Vitae (May 6, 2024)

MAILING ADDRESS:

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TITLE: Professor of Petroleum and Natural Gas Engineering, The George E. Trimble Chair in Earth and Mineral Sciences

CITIZENSHIP: U.S.A.

EDUCATION:

- Stanford University, Ph.D. Petroleum Engineering, Analytical theory of multicomponent gas drives with two-phase mass transfer, June 1992, Advisor: F.M. Orr, Jr..
- Stanford University, Ph.D. minor Water Resources, June 1992.
- Stanford University, MS Petroleum Engineering, Comparison of pressure transient response in intensely and sparsely fractured reservoirs, June 1989. Advisor: Younes, Jalali-Yazdi.
- Northwestern University, BS Electrical Engineering, June 1982.

PROFESSIONAL REGISTRATION: Petroleum Engineering in California.

CURRENT AND PREVIOUS ACADEMIC POSITIONS:

- Acting Department Head, Dept. of Energy and Minerals Engineering, The Pennsylvania State University, 2023 – 2024.
- Professor, Dept. of Energy and Minerals Engineering, The Pennsylvania State University, 2010 – present.
- Chair, Petroleum and Natural Gas Engineering Program, Dept. of Energy and Minerals Engineering, The Pennsylvania State University, 2015 – 2018. Managed nearly 900 students. The program moved from 6th to 3rd in US News and World Rankings over this time.
- Professor, Dept. of Petroleum and Geosystems Engineering, The University of Texas at Austin, 2008 – 2010.
- Associate Professor, Dept. of Petroleum and Geosystems Engineering, The University of Texas at Austin, 2001 - 2008.
- Assistant Professor, Dept. of Petroleum and Geosystems Engineering, The University of Texas at Austin, 1995 - 2001.
- Teaching Assistant, Dept. of Petroleum Engineering, Stanford University, Fall, 1990.
- Graduate Research Assistant, Dept. of Petroleum Engineering, Stanford University, 1987-1992.

OTHER PROFESSIONAL EXPERIENCE:

- External Advisory Board member (2023 - 2024)
- Pometis Technology, Science Advisor, 2017 – 2018
- InPetro Technologies Inc., Director, 2013 – 2017
- Colenco Power Consulting Ltd. (1992-1995), Baden, Switzerland, Hydrogeologist-Task Leader. Directed hydrogeological modelling project for Konrad and Morsleben nuclear waste disposal sites. Modelled two-phase flow for German BFS and Swiss co-operative for nuclear waste disposal (NAGRA). Developed new well-testing

solutions and inverse-modelling methodology for interpretation of hydraulic tests in low-permeability formations. Analysed over 100 well tests for NAGRA.

- Shell Oil Company (1982-1987), New Orleans, LA, Houston, TX, and Bakersfield, CA, Petrophysical Engineer. Designed log/core evaluation methodology for carbon-dioxide pilot, alkaline pilot, and water floods. Supervised evaluation of exploration wildcats and production wells in LA and CA. Conducted field reviews. One of a few BS engineers selected to work at the Shell Bellaire Research Center; pioneered research on nuclear magnetism logging, CAT scan, and core analyses for residual oil saturation determination. Provided major contribution to study teams, which identified significant potential in older abandoned wells. Top student in Shell's Advanced Petrophysical Engineering class.
- Cincinnati Milacron (summers 1978 - 1981), Cincinnati, Ohio, Electrical Engineer. Worked on all aspects of assembling computer numerical controls in the robot division.

CONSULTING AND INDUSTRY SHORT COURSES:

1. Enhanced Oil Recovery Gas Flooding, Chevron in-house, Petroskills, Houston, TX, July 10 – 14, 2023.
2. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, June 5 - 9, 2023.
3. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, June 13 – 17, 2022.
4. Critical Evaluation of NAGRA Reports on Gas Transport Mechanisms, Scale Dependencies, and Gas-Rock Interactions in the Opalinus Clay, Swiss Federal Nuclear Safety Inspectorate (ENSI), October 25th 2019.
5. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 12 – 16, 2019.
6. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, June 24 - 28, 2019.
7. Physical Fluid Rock Interactions in Fractured and Unfractured Rocks, ETH, Zurich, March 14 – 22, 2019.
8. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 13 – 17, 2018.
9. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, July 16 – 20, 2018.
10. Cantrell Energy, Screening Study of Potential Tertiary Methods for Mature Reservoirs, Oklahoma, 2017.
11. Johns, R.T., Skauge, A., King, M., Geiger, S., and MacKay, E., Foundation CMG School, Team Building, Geology and Reservoir Characterization, and Enhanced Oil Recovery, Calgary, Canada, September 11 – 13th, 2016.
12. Johns, R.T., Lake L.W., Hirasaki, G., Rossen, W., and Dindoruk, B., Gas and Solvent Enhanced Oil Recovery, 4th Delft Summer School, Department of Geosciences and Engineering, Delft University of Technology, July 11 – 15, 2016.
13. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, May 16 – 20, 2016.
14. Tatweer Petroleum, Enhanced Oil Recovery Gas Flooding, Petroskills, Al-Rumamin, Bahrain, November 15 – 20, 2015.
15. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, May 18 – 22, 2015.
16. Hess Oil, Oil Recovery Enhancement Techniques Houston, TX, March, 2015
17. Enhanced Oil Recovery Gas Flooding, Petroskills, Vienna, Austria, December 2014.
18. Oil Recovery Enhancement Techniques Houston, TX, December 2014.
19. Enhanced Oil Recovery Gas Flooding, Petroskills, Perm, Russia, August, 2014.
20. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, July 2014.
21. Waterflooding from A to Z, Petroskills, London, England, June 2014.
22. Oil Recovery Enhancement Techniques, Petroskills, London, England, June 2014.
23. Occidental Petroleum, Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, December 2013.
24. Enhanced Oil Recovery Gas Flooding, Petroskills, Vienna, Austria, December 2013.
25. PetroChina, Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, November 2013.
26. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, July 2013.
27. Oil Recovery Enhancement Techniques, Petroskills, Houston, TX, June 2013.
28. Waterflooding from A to Z, Petroskills, London, England, May 2013.
29. Oil Recovery Enhancement Techniques, Petroskills, London, England, May 2013.
30. Enhanced Oil Recovery Gas Flooding, Petroskills, Vienna, Austria, December, 2012.
31. Tellus, Enhanced Oil Recovery Gas Flooding, Petroskills, Ridgeland, MS, September, 2012.

32. Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, July – August, 2012.
33. Petrom/OMV, Waterflooding from A to Z, Petroskills, Bozua, Romania, July 2012.
34. Oil Recovery Enhancement Techniques, Petroskills, London, England, June 2012.
35. Waterflooding from A to Z, Petroskills, London, England, June 2012.
36. Oil Recovery Enhancement Techniques, Petroskills, Calgary, Canada, May 2012.
37. Petrom/OMV, Waterflooding from A to Z, Petroskills, Bucharest, Romania, March 2012.
38. Chevron, Waterflooding from A to Z, Petroskills, Bakersfield, CA, December 2011.
39. Luks Oil, Enhanced Oil Recovery Gas Flooding, Petroskills, Houston, TX, October 2011.
40. British Petroleum, Research Workshop on Gas Flooding, Sunbury, England, August 2011.
41. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 2011.
42. Waterflooding from A to Z, Petroskills, London, England, August, 2011.
43. University of Texas at Austin, Equation-of-State Development for New Compositional Simulation Code, June, 2011.
44. Oil Recovery Enhancement Techniques, Petroskills, Calgary, Canada, May 2011.
45. Petrom/OMV, Waterflooding from A to Z, Petroskills, Ploeista, Romania, December 2010.
46. Waterflooding from A to Z, Petroskills, London, England, September 2010.
47. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 2010.
48. Chevron Indonesia, Waterflooding from A to Z, Petroskills, Rumbai, Indonesia, May 2010.
49. Bureau of Economic Geology (2009 to 2010) – Fluid Characterization for CO₂ Sequestration
50. Shell Oil India, Enhanced Oil Recovery Gas flooding, Petroskills, Bangalore, India, February, 2010
51. YPF, Waterflooding from A to Z, Petroskills, Buenos Aires, Argentina, January 2010.
52. Tullow Oil, Waterflooding from A to Z, Cape Town, South Africa, November 2009.
53. PDO/Shell Oil Oman, Oil Recovery Enhancement Techniques, Petroskills, Muscat, Oman, May 2009.
54. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 2009.
55. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 2008.
56. Chevron Oil Company (2008). Fluid Characterization.
57. Shell Oil India, Oil Recovery Enhancement Techniques, Petroskills, Bangalore, India, July/Aug 2008.
58. Oil Recovery Enhancement Techniques, Petroskills, Houston, Texas, June 16th – 18th, 2008.
59. Oil Recovery Enhancement Techniques, Petroskills, Houston, Texas, November 2007.
60. Oil Recovery Enhancement Techniques, Petroskills, London, England, August 2007.
61. Oil Recovery Enhancement Techniques, Petroskills, Calgary, Canada, May 2007.
62. University of Trinidad and Tobago, Advanced Reservoir Engineering, University of Texas Training, Spring 2007
63. Enhanced Oil Recovery, University of Texas at Austin, November/December 2006.
64. University of Trinidad and Tobago, Fluid Flow in Porous Media, University of Texas Training, Summer 2005
65. Golder Associates, Germany (2004)
66. Shell Oil Company (2003) – MMP Estimation.
67. Colenco Power Consulting Ltd. (1995 - present) – New well test simulator.
68. Australian Petroconsultants (1996 - 1997) – Paper reviews.

MAJOR HONORS AND AWARDS:

- International SPE Anthony F. Lucas Gold Medal for technical leadership, 2023.
- SPE IOR PIONEER Award for 2022
- 2019 - 2020 Distinguished Lecturer for Society of Petroleum Engineers (SPE)
- 2019 Cedric K. Ferguson Certificate from the Society of Petroleum Engineers (SPE) for best international technical paper for an author under 36 years old (my student)
- Wilson Award for Excellence in Research from the EMS college (2018)
- Appointed as SPE Editor-in-Chief (2018 – 2020)
- Sabbatical, Colorado School of Mines Visiting Scholar, The University of Texas at Austin Hildebrand Visiting Scholar (2018- 2019)
- George E. Trimble Chair in Energy and Mineral Sciences (2017 to present)

- Faculty Marshall for EMS Spring Graduation (2018)
- 2017 SPE Technical Editor Award
- 2016 SPE Technical Editor Award
- 2016 SPE Reservoir Description and Dynamics Award, presented at the International SPE conference in Dubai, September 2016.
- Selected in April 2016 for “LaunchBox”. This is a Penn State initiative to start a new company. Together with three graduate students, we are launching “Simulation Building Blocks” as a company to provide a new generation of simulation software for reservoir engineering.
- 2015 SPE Technical Editor Award
- Faculty Marshall for EMS Spring Graduation (2015)
- Energy Simulation Chair (2014 – 2019, formerly CMG Foundation Chair)
- SPE Faculty Pipeline Award (2013)
- Victor and Anna Mae Beghini Faculty Fellowship in PNGE (2010 to 2017)
- SPE Distinguished Membership (awarded in 2009).
- B.J. Lancaster Professorship in Petroleum Engineering, The University of Texas at Austin (2008 to 2010)
- BSF Leadership (2006 to 2010)
- “A Peer Apart”, SPE honors for reviewing more than 100 technical papers, *JPT*, December 2007.
- 25 year club, Society of Petroleum Engineers (SPE)
- 2004 SPE Outstanding Technical Editor Award
- Dean’s Fellow, The University of Texas at Austin, fall 2004.
- 2003-2004 Departmental Teaching Award, The University of Texas at Austin
- Appointed by the Society of Petroleum Engineers (SPE) to serve a two-year term as Executive Editor for SPEREE journal
- Appointed by the Society of Petroleum Engineers (SPE) to serve a two-year term as a Review Chairman for the Editorial Review Committee (2001)
- 2000 Engineering Foundation Young Faculty Award for overall program development, teaching excellence, research leadership, and graduate student program development, The University of Texas at Austin
- Selected by the Society of Petroleum Engineers (SPE) to be editor of SPE CO2 Flooding monograph (1999)
- 1998 SPE Best Technical Editor
- 1997 SPE Best Technical Editor
- 1997 Halliburton Engineering Foundation Faculty Excellence Award
- Pioneer Corporation Faculty Fellowship in Petroleum Engineering, UT Austin (1997 - 2008)
- 1994 Cedric K. Ferguson SPE Award for best technical paper by a young investigator under the age of 33
- Church elder in Switzerland (1993 – 1995)
- Selected as the top student in Shell’s Advanced Petrophysical Engineering class (1984)
- Elected to Tau Beta Pi (1981)

MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:

- Society of Petroleum Engineers (SPE)
- American Geophysical Union (AGU)
- American Chemical Society (ACS)
- Tau Beta Pi national engineering honor society
- Eta Kappa Nu electrical engineering honor society
- Pi Epsilon Tau petroleum engineering honor society

UNIVERSITY/COLLEGE COMMITTEE OR OTHER ASSIGNMENTS:

- Representative, Graduate Council Committee on Fellowships and Awards (2021 – 2023)
- Member, EMS Curriculum Committee (2021 – 2023)

- Member, Graduate Admissions Committee (2021 – 2022)
- Faculty Senate Alternate (2020 – 2021)
- Member, EMS Distinguished Faculty Committee (2020)
- Member, EMS Strategic Planning Committee (2019-2020)
- Chair, EMS Academic Integrity Committee (2017-2018)
- Honors thesis advisor for PNGE (2016 – 2018)
- Member, Khazakhstan Task Force (2017 – 2018)
- Member, Institute of Natural Gas Research at Penn State (INGAR) (2012 – 2018)
- Member, EMS College FT&R Faculty Promotion Committee (2012 – 2018)
- Member, Graduate Faculty Membership Committee (2015 – 2017)
- Member, EMS Academic Integrity Committee (2015 – 2017)
- Member, INGAR Umbrella Search Committee (2014-2015)
- Member, INGAR Department Search Committee (2014-2015)
- Member, Faculty Activity Committee (2014 for year 2013)
- Member, Penn State's Global Engagement Network (GEN), Petrobras partnership (2012 – 2014)
- Member, EMS College Advisory Search Committee for EME Head (2012 - 2013)
- Member, EMS Faculty Representative for PSIEE Dean's Advisory Council (2011 – 2012)
- Member, EME Representative for NSF PIRE Committee (2011 – 2012)
- Member, EME Representative for College Committee on Faculty Nominations (2010 – 2014)
- Member, Accreditation and Assessment Committee (2008 – 2010)
- Member, Tenure Review (2008 – 2010)
- College Selection Committee for the Lockheed Martin Aeronautics Company Award for Excellence in Engineering Teaching and the Outstanding Engineering Teaching by an Assistant Professor Award (Spring 2008)
- University's Graduate School's Outstanding Dissertation Award (Spring 2007)
- PGE Chairman Search (2007 – 2008)
- PGE Chairman Search (2006)
- Nuclear Reactor (1997 - 2004)
- Scholastic Appeals (1995 - 2001)
- College Strategic Planning (1997 - 1998)
- EOE Faculty Advisory (1997 - 1998)
- PGE Chairman Search (1997)
- Honors Colloquium Faculty Mentor (1996)

DEPARTMENTAL COMMITTEE OR OTHER ASSIGNMENTS:

- Acting Department Head for John and Willie Leone Department of Energy and Mineral Engineering (2023-2024)
- Sponsor for Dr. Frank Male for Courtesy Appointment (2023)
- EME Graduate Admissions Committee (2022-2023)
- PNG Undergraduate Advisor (2021 – 2023)
- Member, EME Awards Committee (2021-2022)
- Chair and Member, EME Promotion and Tenure Committee (2019-2021)
- Member, EME Graduate Program and Research Committee (2015 – present)
- Member, Faculty Search Committee for Mining Engineering (2021 – 2022)
- Reviewed EMS Miller and Wilson proposals from EME (2020)
- Organizer for Fall and Spring EME Seminar Speaker Series (2019-2020)
- Member, EME Strategic Planning Committee (2019)
- Undergraduate advisor for PNGE students (2010 – 2018)
- Undergraduate advisor for PNGE Schreyer College students (2017-2018)

- Member, Faculty Activity Report Committee (2018)
- Member, EME Undergraduate Programs and ABET Committee (2014 – 2018)
- Penn State representative, Petroleum Engineering Department Head Association, SPE, 2014 – 2017
- Chair, Petroleum and Natural Gas Engineering Program (2015 – 2018)
- Chair, Faculty Workload Committee (2017 – 2018)
- Chair, EME Faculty Search Committee (2017)
- Chair, Faculty Activity Analysis Committee (2016)
- Member, EME Promotion and Tenure Committee (2015 – 2017)
- Member, Faculty search committee (2015)
- Member, INGAR Departmental Search Committee (2014-2015)
- Member, Faculty Activity Analysis Committee (2014)
- Member, ABET committee (2013 – 2015)
- Chair, Leone chair committee (2013 – 2014)
- Member, Deitke chair committee (2013 – 2014)
- Member, Promotion and Tenure Committee (2011 – 2013)
- SPE Faculty Representative for Field Trip to Drilling Well (2012)
- SPE Faculty Representative for Field Trip to Drake's Well (2011)
- Chairman, Graduate Studies, The University of Texas at Austin (2001 – 2010)
- Program Manager, Fundamental Processes Research Program, UT Austin (2006 – 2010)
- Program Manager, Subsurface Environmental Engineering Research Program, UT Austin (1997 - 2010)
- Assistant Graduate Advisor, UT Austin (2005 – 2010)
- Member, Geosystems Engineering and Hydrogeology, UT Austin (1996 - 2010)
- Member, Faculty Awards, UT Austin (2008 – 2010)
- Member, ABET/SACS Faculty Liaison, UT Austin (2008 – 2010)
- Member, Faculty Evaluations Committee, UT Austin (2009 – 2010)
- Member, Ad Hoc Faculty Recruiting Committee, UT Austin (2006 – 2008)
- Member, Graduate Recruiting & Admissions, UT Austin (1996 - 2003)
- Member, Remote Program, UT Austin (2001 – 2002)
- Member, Minority Liaison, UT Austin (2000 – 2002)
- Chairman, Ph.D. Qualifying Exam, UT Austin (1997 - Petrophysics, 1998 -Transport, 2000 – Petrophysics, 2001 – Petrophysics, 2002 - Mathematics)
- Member, Ad Hoc Faculty Recruiting Committee, UT Austin (2001 – 2002)
- Member, Laboratory & Computer Subcommittee, UT Austin (1998 - 2001)
- Member, Laboratory, Safety and Space, UT Austin (1997 - 2000)
- Chairman, Ad hoc PGE 310 Committee, UT Austin (1999)
- SPE Student Faculty Advisor, UT Austin (1995 - 1998)
- Member, ABET Committees- Laboratory and Space, Course Requirements, UT Austin (1997 - 1998)
- Member, Safety, UT Austin (1996 - 1997)
- Faculty Meetings Recorder, UT Austin (1995)

PROFESSIONAL SOCIETY AND MAJOR GOVERNMENTAL COMMITTEES:

- Member, SPE IOR Technical Committee for 2024 (2023 – 2024)
- Member, SPE Reservoir Advisory Committee (2021 – 23)
- Member, SPE Awards and Recognition Committee (A&RC) (2021-22)
- Member, Tulsa SPE IOR, Technical Committee (2021-22)
- Member, SPE Engineering Professionalism Committee (2022)
- Chair, Reservoir Description & Dynamics Award Committee (2021)
- SPE Editor-in-Chief (2018 – 2020)

- Member, Editorial Board for numerous journals (2019 – present)
- Member, SPE Editorial Review Committee (1996 - present)
- Member and Chair, SPE Awards and Recognition Committee (2017 – 2020)
- Cedric K. Ferguson Medal Awards Committee (2016 - 2018)
- Member, Reservoir Description & Dynamics Advisory (2002 – 2018)
- Journal of Petroleum Science and Engineering Technical Editor (2008 - 2018)
- Faculty Tenure Promotion Reviews at Other Universities (2011 - 2018)
- Associate Editor, *SPEJ* journal (2011 – 2017)
- Member, Editorial Board for Fuel (2014 – 2017)
- Member, Editorial Board for Journal of Unconventional Oil and Gas Resources (2012 – 2017)
- Transport in Porous Media Technical Editor (2005 - 2017)
- PetroWiki Moderator for SPE (2013 – 2015)
- Subcommittee Member, ATCE Recovery Mechanisms and Flow in Porous Media (2011 - 2014)
- ITB Journal (2012)
- Journal of Hydrology Technical Editor (2006)
- Journal of Greenhouse Gas Control Technical Editor (2006)
- Journal of Canadian Petroleum Technology Technical Editor (2005)
- Executive Editor, *SPEREE* journal (2002 – 2005)
- Member, 2004 SPEDOE IOR Program Committee and Session Chairman (2003-2004).
- Review Chairman, SPE Editorial Review Committee (2001 – 2002), two-year term
- Member, SPE Monograph Committee (1999 – 2002), three-year term
- Editor, SPE CO₂ Flooding Monograph (1999 – 2001)
- Water Resources Research Technical Editor (1997 - 2001)
- Environmental & Engineering Geoscience Technical Editor (2001 – 2002)
- ASME Journal of Energy Resources Technology Technical Editor (2001)
- ASCE Technical Editor (1997 - 1999)

COMMUNITY ACTIVITIES:

- Boy Scouts assistant (2006 – 2009)
- Bible study fellowship (BSF) leadership (2005 – 2010)
- Church choir (2005 – 2007)
- Sunday school teacher (1999 – 2002)
- Church elder (Zurich, Switzerland 1993-1995)

PUBLICATIONS:

A. Refereed Archival Journals

1. Purswani, P., Johns, R.T., and Karpyn, Z, Relationship Between Residual Saturations and Wettability Using Pore-network Modeling, SPE Annual Technical Conference and Exhibition (ATCE), SPEJ, <https://doi.org/10.2118/206379-PA>, 2024.
2. Purswani, P., Johns, R. T., & Karpyn, Z. T. (2024). Impact of wettability on capillary phase trapping using pore-network modeling. *Advances in Water Resources*, 184, 104606. <https://doi.org/10.1016/j.advwatres.2023.104606>,
3. Yoga, H.F., Johns, R.T., and Prakash P., Predictive Model for Relative Permeability Using Physically-Constrained Artificial Neural Networks, *SPE J.* (2023): 1-15, SPE-209420-PA, doi: <https://doi.org/10.2118/209420-PA>.

4. Magzymov, Daulet, Johns, Russell T., Hashim, Hafsa, and Birol Dindoruk. "Modeling of High-Pressure and High-Temperature Microemulsion Experiments using HLD-NAC-Based Equation of State." *SPE J.* 28 (2023): 1202–1215. doi: <https://doi.org/10.2118/209470-PA>
5. Magzymov, D., Ratnakar, R. R., Dindoruk, B., & Johns, R. T. (2022). Evaluation of machine learning methodologies using simple physics based conceptual models for flow in porous media. *Journal of Petroleum Science and Engineering*, 219, [111056]. <https://doi.org/10.1016/j.petrol.2022.111056>
6. Tawfik, M. S., Karpyn, Z. T., & Johns, R. T. (2022). Effect of oil chemistry on the performance of low-salinity waterflooding in carbonates: An integrated experimental approach. *Fuel*, 329, [125436]. <https://doi.org/10.1016/j.fuel.2022.125436>
7. Mukherjee, S., & Johns, R. T. (2022). Sensitivity Analysis of Fluid–Fluid Interfacial Area, Phase Saturation and Phase Connectivity on Relative Permeability Estimation Using Machine Learning Algorithms. *Energies*, 15(16), [5893]. <https://doi.org/10.3390/en15165893>
8. Magzymov, D., & Johns, R. T. (2022). Inclusion of variable characteristic length in microemulsion flash calculations. *Computational Geosciences*, 26(4), 995-1010. <https://doi.org/10.1007/s10596-022-10158-2>
9. Magzymov, D., Purswani, P., Karpyn, Z. T., & Johns, R. T. (2022). Modeling the Effect of Reaction Kinetics and Dispersion during Low-Salinity Waterflooding. *SPE Journal*, 26(5), 3075-3093. <https://doi.org/10.2118/193909-PA>
10. Tawfik, M. S., Adishesha, A. S., Hsi, Y., Purswani, P., Johns, R. T., Shokouhi, P., Huang, X., & Karpyn, Z. T. (2022). Comparative Study of Traditional and Deep-Learning Denoising Approaches for Image-Based Petrophysical Characterization of Porous Media. *Frontiers in Water*, 3, [800369]. <https://doi.org/10.3389/frwa.2021.800369>
11. Duffy, T. S., Gamwo, I. K., Johns, R. T., & Lvov, S. N. (2021). Modeling Contact Angle vs. Temperature for the Quartz-Water-Decane System. *SPE Journal*, 26(6), 3668-3680. <https://doi.org/10.2118/205518-PA>
12. Dindoruk, B., Johns, R., & Orr, F. M. (2021). Measurement and modeling of minimum miscibility pressure: A state-of-the-art review. *SPE Reservoir Evaluation and Engineering*, 24(2), 367-389. <https://doi.org/10.2118/200462-PA>
13. Magzymov, D., Clemens, T., Schumi, B., & Johns, R. T. (2021). Experimental analysis of alkali-brine-alcohol phase behavior with high acid number crude oil. *SPE Reservoir Evaluation and Engineering*, 24(2), 390-408. <https://doi.org/10.2118/201369-PA>
14. Duffy, T. S., Li, J., Johns, R. T., & Lvov, S. N. (2021). Capillary contact angle for the quartz-distilled water-normal decane interface at temperatures up to 200 °C. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 609, [125608]. <https://doi.org/10.1016/j.colsurfa.2020.125608>
15. Khorsandi, S., Li, L., and Johns, R.T., A New Way of Compositional Simulation Without Phase Labeling, *SPE J.*, 26 (02), pp. 940-958. 2021.
16. Purswani, P., Johns, R. T., Karpyn, Z. T., & Blunt, M.. Predictive Modeling of Relative Permeability Using a Generalized Equation of State. *SPE Journal*, <https://doi.org/10.2118/200410-PA>, 26(01), pp. 191-205, 2021.
17. Cronin, M., Emami-Meybodi, H., & Johns, R. T. Multicomponent Diffusion Modeling of Cyclic Solvent Injection in Ultra-Tight Reservoirs. *SPEJ* 26 (03), pp. 1213-1232, doi:10.2118/196008-PA. 2021.
18. Khodaparast, P., and Johns, R.T., A Continuous and Predictive Viscosity Model Coupled to a microemulsion Equation of State, doi:10.2118/190278-PA, *SPEJ*, 25(03), pp. 1070-1081, 2020.
19. Zhang, K., Nojabaei, B., Ahmadi, K., and Johns, R. T., Effect of Gas/Oil Capillary Pressure on Minimum Miscibility Pressure for Tight Reservoirs. *Society of Petroleum Engineers*. doi:10.2118/199354-PA, *SPEJ*, 25(02), pp. 820-831, 2020.
20. Purswani, P., Tawfik, M.S., Karpyn, Z.T. and Johns, R.T., On the development of a relative permeability equation of state. *Comput Geosci*, <https://doi.org/10.1007/s10596-019-9824-2>, 24(2), pp. 807-818, 2020.
21. Cronin, M., Emami-Meybodi, H., and Johns, R. T. Unified Theory of Ultimate Hydrocarbon Recovery for Primary and Cyclic Injection Processes in Ultra-Tight Reservoirs (reference number: SREP-19-17522), *Scientific Reports*, 9(1), pp. 1-14, 2019
22. Duffy, T., Raman, B., Hall, D., Machesky, M., R.T. Johns, and Lvov, S., Experimentation and Modeling of Surface Chemistry of the Silica-Water Interface for Low Salinity Waterflooding at Elevated Temperatures,

- Colloids and Surfaces A: Physicochemical and Engineering Aspects, 570, pp. 233-243, doi: 10.1016/j.colsurfa.2019.03.007, March 4, 2019.
23. Khorsandi, S., Johns, R. T., Robust Flash Calculation Algorithm for Microemulsion Phase Behavior, *Journal of Surfactants and Detergents*, Errata, 10.1002/jsde.12265, 22(4), pp. 929-930. 2019.
 24. Cronin, M., Emami-Meybodi, H., and Johns, R. T., Diffusion-Dominated Proxy Model for Solvent Injection in Ultra-Tight Oil Reservoirs. *SPE J*, doi:10.2118/190305-PA, 24(02), pp. 660-680, April 1, 2019.
 25. Torrealba, V. A., Johns, R. T., and Hoteit, H.. Curvature-Based Equation of State for Microemulsion-Phase Behavior. *SPEJ*, 24(02), pp. 647-659, doi:10.2118/194022-PA, April 1, 2019.
 26. Torrealba, V. A., and Johns, R. T., Partition-Coefficient Relations for Improved Equation-of-State Description of Microemulsion-Phase Behavior. *SPEJ*, doi:10.2118/179845-PA, 23(05), pp. 1899-1908, October 1, 2018.
 27. Torrealba, V., Hoteit, H., and Johns, R., Description of Micellar Radii for Phase Behavior and Viscosity Modeling of Aqueous Surfactant Solutions and Microemulsions, *Langmuir*. 10.1021/acs.langmuir.8b02828, pp. 15327 – 15334, 34(50), 2018.
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385. Justus, J.R., Christensen, D.C., Johns, R.T., Platt, B.C., and Ghauri, W.K., Reservoir study and waterflood proposal "D" and "N" block (east) riverbottom area Ventura field, California, Shell California Production Inc., West Coast Division Report, confidential, May, 1986.
386. Johns, R.T. and Vogiatzis, J.P., NML processing of stationary T2 records at White Castle field, Technical Progress Report BRC 80-85, Shell Research Center, Houston, TX, December, 29 pp., confidential, 1985.
387. Johns, R.T., A guide for ROS determination, Technical Information Record BRC-1185, 240 pp., Shell Research Center, Houston, TX, 240 pp., confidential, 1985.

ORAL PRESENTATIONS:

A. Professional Society Presentations

(papers which were included in conference Proceedings volumes or which were accepted for journal publication are listed with publications above)

1. Yoga, H., and Johns, R.T., Reliable EACN Determination for Dead and Live Crude in Microemulsion Systems, Annual Pints and Posters, student poster exhibition, SPE, Carnegie, PA, April 18, 2024.
2. Mukherjee, S., and Johns, R.T., Application of Physically Constrained Neural Networks to Relative Permeability Modeling, Annual Pints and Posters, student poster exhibition, SPE, Carnegie, PA, April 18, 2024.
3. Tawfik, M., Karpyn, Z. and Johns, R.T., Machine Learning and Big Data in Porous Media, InterPore2022, Khalifa University in Abu Dhabi, UAE, 30 May - 2 June 2022.
4. Tawfik, M., Karpyn, Z., and Johns, R.T., Effect of Oil Chemistry on the Performance of Chemically-Tuned Waterflooding in Oil-Wet Carbonates: A Multi-Scale Imaging Approach, AGU Fall Meeting, 2019.
5. Khorsandi, S., R.T. Johns, Robust flash calculation algorithm for microemulsion phase behavior, 9th annual postdoctoral research exhibition, Penn State, Oct 4th 2016.
6. Li .L., Khorsandi, S., and R.T. Johns, Analytical solutions of WAG injection with effect of hysteresis and phase behavior for CO₂ sequestration, American Geophysical Union, Paper no H13F-1438, San Francisco, December 12 – 16, 2016.
7. Khorsandi, S., Li, L., and R.T. Johns, Compositional effects on relative permeability and hysteresis for enhanced oil recovery, American Geophysical Union, Paper no H51O-07, San Francisco, December 12 – 16, 2016.

8. Qiao, C, Li Li, and R.T. Johns, Development of a New and Fast Linear Solver for Multi-component Reactive Transport Simulation, AGU fall meeting, San Francisco, CA, December 9th, 2013
9. Subramanian, S., Dindoruk, B., Johns, R.T., Fractional flow heterogeneity in compositional systems: Accuracy of numerical weighting schemes, 4th SIAM conference on Mathematical and Computational Issues in the Geosciences, June 16 - 18, 1997.
10. Johns, R.T., Analytical solution for sequential hydraulic tests in low-conductivity fractured formations, AGU conference, San Francisco, December, 1996.
11. Ri Lake, L.W., Johns, R.T., Rossen, B., and Pope, G., Fundamentals of Enhanced Oil Recovery, Society of Petroleum Engineers, pp. 496, ISBN:978-1-61399-328-6, Richardson, TX, 2014. vera, A. and Johns, R., Reverification of the hydrocoin test case 5 with NAMMU6.2 and comparison with TOUGH2, ICA Modeling and Computation in Environmental Sciences - 1st GAMM Seminar, Stuttgart, Germany, October 12-13, 1995.

B. Invited Lectures, Presentations, or Posters (not listed above)

12. Johns, R.T., A Way Forward in Modeling Relative Permeability, University of Tulsa seminar, Tulsa, OK, February 23, 2024.
13. Mukherjee, S., and Johns, R.T., Role of Fluid-Fluid Interfacial Area in Hysteresis for CO₂ Storage, John and Willie Leone Family Department of Energy and Mineral Engineering and The EMS Energy Institute, Open House, The Pennsylvania State University, October 13, 2023.
14. Yoga, H.F., Johns, R.T., and Purswani, P., Predictive Model for Relative Permeability using Physically-Constrained Artificial Neural Networks, John and Willie Leone Family Department of Energy and Mineral Engineering and The EMS Energy Institute, Open House, The Pennsylvania State University, October 13, 2023.
15. Johns, R.T., Rethinking Relative Permeability, Texas A&M Graduate Seminar, February 28th, 2023.
16. Mukherjee, S. and Johns, R.T., Role of Fluid-Fluid Interfacial Area in Hysteresis for CO₂ Storage, Gordon Research Seminars, Les Diablerets, Switzerland, July 17 – 22, 2022.
17. Johns, R.T., Chemical EOR Modeling Insights an Challenges, SPE Workshop: Complex Reservoir Fluids, Snekkersten Denmark, May 18 – 20, 2022.
18. Yoga, H., Purswani, P., and Johns, R.T., Comparison of Response Surface and Artificial Neural Network Model for Relative Permeability using Saturation and Phase Connectivity, InterPore 2021, Poster at minisymposium (MS15) Machine Learning and Big Data in Porous Media at InterPore2021, held online, 31 May - 4 June 2021.
19. Johns, R.T., Technical Challenges for CO₂ EOR in the Age of Carbon Storage, ANPERC/KAUST Research Conference, *Enabling CO₂ Geological Storage within a Low-Carbon Economy*, Saudi Arabia, February 22 – 24, 2021. <https://anperc.kaust.edu.sa/KAUST-Research-Conference-2021/Pages/Agenda.aspx>
20. Johns, R.T., Viscous Oil Recovery – How to describe the interaction of alkali and High TAN number oils, OMV, October 28 2020.
21. Johns, R.T., Introduction to the EOR JIP, OMV, October 28 2020.
22. Johns, R.T., Transforming Petrophysics for Better Predictions, NETL, SMART Task 2, Online, July 29 2020.
23. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Japan Section, Tokyo, Japan, May 27, 2020.
24. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Golden Gate Section, San Ramon, California, May 19, 2020.
25. Cronin, M., Emami-Meybodi, H., and Johns, R.T., Multicomponent Diffusion Modeling in Ultratight Reservoirs for Cyclic Solvent Injection, Poster for Marcellus Coalition, The Pennsylvania State University, March 4, 2020.
26. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Madrid Spain, October 21, 2019.
27. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Trondheim, Norway, October 22, 2019.
28. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Krakow, Poland, October 24, 2019.
29. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Vienna, Austria, October 28, 2019.

30. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Kać, Serbia, October 29, 2019.
31. Johns, R.T., Compositional Simulation that is Truly Compositional, SPE Distinguished Lecturer, Tel Aviv, Israel, October 31, 2019.
32. Johns, R.T., New State Function Technology for Petrophysical Interpretation and Scaling, Fluid Behavior and Rock Interactions, Energi Simulation Summit, Calgary, Canada, October 3 – 4, 2018.
33. Johns, R.T., Update on SPE Journals, SPE Editorial Review Board Meeting, Calgary, CA, October 1, 2019.
34. Johns, R.T., SPE Journals: Peer Review and Strategic Directions, SPE International Board, Calgary, Canada, September 2019.
35. Johns, R.T., Update on SPE Journals, SPE International Board, Houston, TX, April, 2019.
36. Johns, R.T., Update on SPE Journals, SPE Editorial Review Board Meeting, Houston, TX, April 2019.
37. Tawfik, M. S., Karpyn, Z. T., and R. T. Johns, Using Micro-computed Tomography for In-situ Wettability Quantification in Carbonate Rocks, The EME Research showcase, student poster competition, October 3, 2019.
38. Purswani P., Karpyn Z.T., Johns R.T., An Equation-of-State Approach for Modeling Relative Permeability, presented at Clean Fossil fuel Seminar, Department of Earth Science and Engineering, Royal School of Mines, Imperial College, London, 2019.
39. Johns, R.T., Myths and Truths about the Petroleum Industry and the Environment, “Add on” to Engineering-Geology Seminar, ETH-Zurich, April 23, 2019.
40. Johns, R.T., Mechanisms for Oil and Gas Recovery in Hydraulically Fractured Ultra-Tight Reservoirs, Engineering-Geology Seminar, ETH-Zurich, April 23, 2019
41. Johns, R.T., New Equation of State for Microemulsions, Ultimate EOR, Austin, TX, January 28, 2019.
42. Johns, R.T., Unconventional Thinking on Unconventionals, Ultimate EOR, Austin, TX, January 28, 2019.
43. Johns, R.T., How to Make Compositional Simulation Truly Compositional, 3rd Hildebrand Scholar Seminar, Graduate Seminar, The University of Texas at Austin, Austin, Texas, February 11th, 2019.
44. Johns, R.T., New Equation of State for Microemulsions, 2nd Hildebrand Scholar Seminar, The University of Texas at Austin, Austin, Texas, January 30, 2019.
45. Johns, R.T., Unconventional Thinking on Unconventionals, 1st Hildebrand Scholar Seminar, The University of Texas at Austin, Austin, Texas, January 23, 2019.
46. Johns, R.T., Update on SPE Journals, SPE Editorial Review Board Meeting, Dallas, TX, September, 2018.
47. Johns, R.T., Update on SPE Journals, SPE Editorial Review Board Meeting, Houston, TX, July 2018
48. Johns, R.T., Update on SPE Journals, SPE Editorial Review Board Meeting, Houston, TX, April 2018.
49. Johns, R.T., How to Make Compositional Simulation Truly Compositional, Seminar, Colorado School of Mines, Golden, Colorado, November 2, 2018.
50. Johns, R.T., New Equation of State for Surfactant Enhanced Oil Recovery, Seminar, Colorado School of Mines, Golden, Colorado, October 12, 2018.
51. Johns, R.T., Shale Physics, Computer Modeling Group, October 4 2018.
52. Johns, R.T., Relative Permeability as a State Function, Fluid Behavior and Rock Interactions, Energi Simulation Summit, Calgary, Canada, October 2 – 3, 2018.
53. Johns, R.T., Transport Mechanisms for Oil Shale and Implications for the Solvent Huff'n'Puff Process, Distinguished Seminar, Colorado School of Mines, Golden, Colorado, September 21, 2018.
54. Johns, R.T., How to Make Compositional Simulation More Compositional, University of Wyoming, Laramie, Wyoming, September 13 2018.
55. Magzymov, D., Khodaparast, P., and R. T. Johns, Compositional Dependence of Viscosity in Microemulsion Systems, The EME Research showcase, student poster competition, September 10, 2018.
56. Khodaparast, P, and R. T. Johns, A Continuous and Predictive Viscosity Model Coupled to a Microemulsion Equation of State, The [EME Research showcase](#), student poster competition, September 10, 2018.
57. Purswani, P., On the Development of a Relative Permeability Equation of State, The [EME Research showcase](#), student poster competition, September 10, 2018.
58. Purswani, P., Karpyn, Z., and Johns, R.T., Correlating Transport Parameters Impacting Multi-Phase Flow Through Permeable Media, Gordon Research Seminars, Newry, ME, July 2018.

59. Johns, R.T., Unconventional Thinking on Solvent EOR for Oil Shales, SPE Workshop: Smart Integration in Production System Modeling, Galveston, TX, June 19-20, 2018.
60. Cronin, M, Emami-Meybodi, H., and Johns, R. T. Solvent Injection to Improve Recovery in Oil and Gas Shale Reservoirs, Energy Days at The Pennsylvania State University, University Park, PA May 30-31 2018.
61. Purswani, P, Karpyn, Z., and Johns, R. T. Effect of Porous Media Topology on Transport Properties during Two-Phase Flow in Permeable Media, Energy Days at The Pennsylvania State University, University Park, PA May 30-31 2018.
62. Johns, R.T., Thinking out of the box on unconventional, PNGE program at Penn State, Marcellus Shale Coalition, Penn State University, University Park, PA, April 11 2018.
63. Cronin, M., Emami-Meybodi, H, and R. T. Johns, Solvent Injection to Improve Recovery in Oil and Gas Shale Reservoirs, Marcellus Shale Coalition poster, Penn State University, University Park, PA, April 10, 2018.
64. Cronin, M., Emami-Meybodi, H, and R. T. Johns, Solvent Injection to Improve Recovery in Oil and Gas Shale Reservoirs, 2nd annual Pints and Posters, student poster exhibition, SPE, Carnegie, PA, April 9, 2018.
65. Khodaparast, P, and R. T. Johns, A continuous and predictive viscosity model coupled to a microemulsion equation-of-state, 2nd annual Pints and Posters, student poster exhibition, SPE, Carnegie, PA, April 9, 2018.
66. Johns, R.T., Thinking out of the box on unconventional, EME Seminar, Penn State University, University Park, PA, March 29, 2018.
67. Johns, R.T., Kuwait Oil Company, Seminar on Enhanced Oil Recovery, Kuwait City, Kuwait, March 19, 2018.
68. Johns, R.T., Abu Dhabi National Oil Company, Seminar on Enhanced Oil Recovery, Abu Dhabi, The Emirates, March 20-21, 2018.
69. Johns, R.T., Fluid Behavior and Rock Interactions: Enhanced Oil Recovery, Foundation CMG, Calgary, Canada, September 2017.
70. Zhenke Xi and Johns, R.T., Analytical composition paths for surfactant polymer flooding, Energi Simulation Summit, Calgary, CA, September 2017.
71. Liwei, L, Khorsandi, S., and Johns, R.T., Mastering the Subsurface Through Technology Innovation, Partnerships & Collaboration: Carbon Storage & Oil & Natural Gas Technologies Review Meeting, NETL Conference, Poster presentation, Front-Tracking Solutions for CO₂ Injectivity Analysis Considering Gas Trapping, Pittsburgh, PA, August 1 - 3, 2017
72. Khorsandi, S., Liwei Li, and Johns, R.T., Mastering the Subsurface Through Technology Innovation, Partnerships & Collaboration: Carbon Storage & Oil & Natural Gas Technologies Review Meeting, NETL Conference, Poster presentation, Equation of State Approach for Modeling of Relative Permeabilities, August 1 - 3, 2017
73. Khorsandi, S. and Johns, R.T., Mastering the Subsurface Through Technology Innovation, Partnerships & Collaboration: Carbon Storage & Oil & Natural Gas Technologies Review Meeting, NETL Conference, Poster presentation, Robust Flash Calculation Algorithm for Microemulsion Phase Behavior, August 1 - 3, 2017
74. Johns, R.T., Microemulsion Phase Behavior Modeling, 3rd International Conference on Enhanced Oil Recovery, Daqing, China, July 26 – 27, 2017.
75. Johns, R.T., Equation of State for Relative Permeability, Northeast Petroleum University Seminar, Daqing, China, June 28, 2017.
76. Johns, R.T., Petroleum and Natural Gas Engineering Research at Penn State, Nazarbayev University, Astana, Kazakhstan, June 20 2017.
77. Johns, R.T., A Predictive EoS for ASP Phase Behavior, Nazarbayev University, Astana, Kazakhstan, June 21 2017.
78. Johns, R.T., A New and Robust Approach for Relative Permeability Modeling, Nazarbayev University, Astana, Kazakhstan, June 21 2017.
79. Johns, R.T., Petroleum and Natural Gas Engineering Research at Penn State, Kazakhstan National Technical University, Almaty, Kazakhstan, June 22 2017.
80. Johns, R.T., A Predictive EoS for ASP Phase Behavior, Kazakhstan National Technical University, Almaty, Kazakhstan, June 23 2017.
81. Johns, R.T., A New and Robust Approach for Relative Permeability Modeling, Kazakhstan National Technical University, Almaty, Kazakhstan, June 23 2017.

82. Khorsandi, S., Li, L., & Johns, R. T. An Equation-of-State Approach to Model Relative Permeability Including Hysteresis and Wettability Alteration, Energy Days at The Pennsylvania State University, University Park, PA May 22-23 2017.
83. Khorsandi, S., Johns, R. T. Robust Flash Calculation Algorithm for Microemulsion Phase Behavior, Energy Days at The Pennsylvania State University, University Park, PA May 22-23 2017.
84. Magzymov, D. and Johns, R. T., Microemulsion phase behavior model: extension of HLD-NAC based equation of state to include impure excess phases, 6th Annual ShaleGas Innovation Contest Saouthpointe, PA, May 9, 2017.
85. Johns, R.T., Tulsa University, Seminar on New Equation-of-State for Relative Permeability, Tulsa, Oklahoma, February 10, 2017
86. Johns, R.T., Tulsa University, Seminar on Equation-of-State for Microemulsion Phase Behavior, Tulsa Oklahoma, February 10, 2017
87. Khorsandi, S. and Johns, R., Robust Solution of Composition Paths and MMPs Using Tie-Line Space, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
88. Li, L, Khorsandi, S. and Johns, R., WAG Optimization Considering Heterogeneity and Hysteresis, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
89. Siripatrachai, N., Ertekin, T., and Johns, R., Compositional Simulation of Tight Fractured Rocks Including Capillary Pressure in Flash Calculations, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
90. Qiao, C., Li, L, Xu, J., and Johns, R., Low Salinity Water Flooding in Carbonates Considering Mineralogy, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
91. Khorsandi, S., Qiao, C., and Johns, R., Displacement Efficiency for Low Salinity Polymer Flooding Including Wettability Alteration, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
92. Raman, B., Hall, D., Lvov, S., and Johns, R., High Temperature Zeta Potential Measurements: Understanding Low Salinity Water Flooding, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
93. Khorsandi, S., Li, L., and Johns, R., Compositionally-Based Relative Permeability, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
94. Ghosh, S. and Johns, R., Dimensionless HLD-NAC EOS for Surfactant Floods, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
95. Khorsandi, S. and Johns, R., Robust Microemulsion Phase Behavior Modeling and Simulation of Surfactant-Polymer (SP) Flooding, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
96. Torrealba, V. and Johns, R., Partitioning Relations, Phase Behavior and Interfacial Tensions of Microemulsion Systems, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
97. Magzymov, D., Qiao, C., and Johns, R., Impact of Surfactant Mixtures on Microemulsion Phase Behavior, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
98. Khodaparast, P. and Johns, R., Predicting Viscosity of Winsor Microemulsions, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
99. Khorsandi, S., Magzymov, D., Qiao, C., and Johns, R.T., Demonstration of How to Use PennSim, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
100. Johns, R.T., Basics of Alkali Flooding and Soap Generation, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016.
101. Al-Saffar, M., Li, L, and Johns, R., Impact of Iron (III) Minerals on Microbial Sulfate Reduction and Reservoir Souring, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
102. Cronin, M., Emami-Meybodi, H., and Johns, R., Diffusion as a Limiting Case to Analyze Fracture Networks, The Pennsylvania State University, Enhanced Oil Recovery IAP, October 28 2016
103. Johns, R.T., EOR IAP, Over 150 presentations at Penn State and the University of Texas at Austin from 2004 to 2015.
104. Johns, R.T., Fluid Behavior and Rock Interactions: Enhanced Oil Recovery, Foundation CMG, Calgary, Canada, September 2016.
105. Johns, R.T., Kuwait Oil Company, Seminar on Enhanced Oil Recovery, Kuwait City, Kuwait, September 29, 2016.
106. Johns, R.T., Simulation of Surfactant-Polymer Floods with a Predictive and Robust Microemulsion Flash Calculation, Shell Oil, Rijswijk, The Netherlands, July 14, 2016.

107. Johns, R.T., Low Salinity Polymer Flooding, Shell Oil, Rijswijk, The Netherlands, July 14, 2016.
108. Johns, R.T., Lake L.W., Hirasaki, G., Rossen, W., and Dindoruk, B., Gas and Solvent Enhanced Oil Recovery, 4th Delft Summer School, Department of Geosciences and Engineering, Delft University of Technology, July 11 – 15, 2016
109. Johns, R.T., Seminar for UD Sturm Law School on The Myths of Fossil Fuels and the Environment, October 2016.
110. Qiao, C., Li Li, and Johns, R.T., Modeling Low Salinity Enhanced Oil Recovery in Carbonates, Energy Days at Penn State University, State College, PA, May 19 2016.
111. Wen, H., Qiao, C., Li Li, and Johns, R.T., Reservoir souring: experiments, simulation and understanding, Energy Days at Penn State University, State College, PA, May 19 2016.
112. Khorsandi, S., Qiao, C., and Johns, R.T., Displacement efficiency for low salinity polymer flooding, Energy Days at Penn State University, State College, PA, May, 19, 2016
113. Li, L, Khorsandi, S., Johns, R.T., and Dilmore, R.M., New technique both enhances oil recovery and sequesters carbon dioxide, Energy Days at Penn State University, State College, PA, May, 19, 2016
114. Johns, R.T., Khorsandi, S., and Qiao, C., Simulation of Surfactant-Polymer Floods with a Predictive and Robust Microemulsion Flash Calculation, Foundation CMG, EAGE Conference, Vienna, Austria, June 2nd 2016.
115. Johns, R.T., Li, L., and Khorsandi, S., CO₂ Storage and EOR, Foundation CMG, Vienna, Austria, May 31st 2016.
116. Johns, R.T., Khorsandi, S., and Qiao, C., Simulation of Surfactant-Polymer Floods with a Predictive and Robust Microemulsion Flash Calculation, FloTek, The Woodlands, TX, May 23 2016.
117. Johns, R.T., Khorsandi, S., and Qiao, C., Simulation of Surfactant-Polymer Floods with a Predictive and Robust Microemulsion Flash Calculation, Chevron Oil Company, Houston, TX, May 23 2016.
118. Johns, R.T., Siripatrachai, N., and Ertekin, T., Impact of Capillary Pressure on Unconventional Recovery, Chevron Oil Company, Houston, TX, May 23 2016.
119. Weng, H., Qiao, C., Li Li, and Johns, R.T., Reservoir Souring: Experiments, Modeling, and Understanding, Energy Day, The Pennsylvania State University, May 2016.
120. Qiao, C., Li Li, and Johns, R.T., Modeling Low Salinity Enhanced Oil Recovery in Carbonates, Energy Day, The Pennsylvania State University, May 2016.
121. Li, L, Khorsandi, K., and Johns, R.T., Seminar for Aera Energy, Bakersfield, CA February 24, 2016.
122. Johns, R.T., Advances in MMP Prediction Using Method of Characteristics (MOC), EOR Technical Symposium for Franklin M. Orr, Stanford University, November 6 2015.
123. Johns, R.T., World EOR Forum, Expert Panel for Ecopetrol, Bogota, Columbia, October 28-30, 2015.
124. Johns, R.T., Seminar for UD Sturm Law School on The Myths of Fossil Fuels and the Environment, October 2015.
125. Johns, R.T., Presentation on research at CMG Foundation Summit, Calgary, CA, September 2015.
126. Johns, R.T. and Qiao, C., Simulation of Reactive Flow, CMG Foundation Summit, Calgary, CA, September 2015.
127. Johns, R.T, Miscible Gas Field Case Studies, Hess Energy, Houston, TX March 27, 2015.
128. Johns, R.T., Fluid Behavior and Rock Interactions, Foundation CMG Chair Poster with Reservoir Simulation Symposium SPE conference, Houston, TX, February, 2015.
129. Johns, R.T., Prediction of Microemulsion Phase Behavior under Reservoir Conditions, Stanford University, Energy Resources Engineering Department Seminar, January 12, 2015.
130. Johns, R.T. and Nojabaei, B., Enhanced Recovery and Reduced Flaring in Oil Shale Reservoirs by Recycling of Produced Gases, General Electric Poster Exhibition, Penn State University, State College, PA, January 8, 2014.
131. Johns, R.T., Fluid Behavior and Rock Interactions, Foundation CMG Chair Poster, Calgary, Canada, September, 2014.
132. Johns, R.T and Ghosh, S., A New HLD-NAC Approach to Predict Microemulsion Phase Behavior for Live Oil at Reservoir Pressure and Temperature, Chevron Research, Houston, TX, July 28, 2014.
133. Johns, R.T., EOR, Myths About Natural Gas, Enhanced Oil Recovery, and the Environment, University Women's Book Club, State College, PA, March 24, 2014.

134. Johns, R.T., A New HLD-NAC Approach to Predict Microemulsion Phase Behavior for Live Oil at Reservoir Pressure and Temperature, graduate seminar at Texas A&M, College Station, TX, March 18, 2014.
135. Nojabaei, B., and Johns, R.T.: Effect of capillary pressure on phase behavior in tight rocks and shales, 28th Annual Graduate Exhibition, The Pennsylvania State University, University Park, PA, March 24, 2013.
136. Venkatraman, A., Lake, L., and Johns, R.T.: Gibbs free energy minimization for reactive flow in porous media, SIAM conference on Mathematical and Computational Issues in the Geosciences, University of Padova, Italy, June 17-20, 2013.
137. Johns, R.T., Challenges for phase behavior modeling in compositional simulation, Invited speaker for Session I: CO₂ Enhanced Oil Recovery and CO₂ Sequestration, SPE Complex fluids workshop, November 5-7, 2012 Houston, TX.
138. Venkatraman, A., Hesse, M.A., Lake, L., and Johns, R.T.: Prediction of composition profiles for multicomponent Ion-exchange occurring during flow through porous media, Gordon conference on Flow & Transport in Permeable Media, June 23 – 24 2012, Les Diablerets, Switzerland.
139. Johns, R.T. and L. Ayala, Natural Gas Technology Workshop, Poster on Unconventional Gas Resources Consortium, State College, PA, June 29th, 2011.
140. Johns, R.T., Three-phase flash calculations in compositional simulation, Penn State department seminar, February 2010.
141. Johns, R.T., Occidental presentation on gas flooding, Houston, Tx, and world wide subsidiaries, May 2009.
142. Johns, R.T., Effect of dispersion on gas flooding oil recovery, Chevron seminar, Houston, TX, May 2008.
143. LaForce, T., Cinar, Y., Orr, FM., Jr., and Johns, R.T., Experimental confirmation of analytical composition routes in three-phase partially miscible flow, previously presented at *SPE/DOE Fifteenth Symposium on Improved Oil Recovery*, SPE No. 99505, April 22 - 26, Tulsa, OK, 2006, invited to also present at EAGE IOR conference in Cairo, Egypt, April 22 – 24, 2007.
144. Johns, R.T., Fast Flash Calculations, Enhanced Oil Recovery SPE Forum, Broomfield, CO, June 25 – 30, 2006.
145. Parakh, H., and Johns, R.T., Use of Stripping Ratios to Identify Dispersion Levels and Displacement Mechanisms in Miscible Gas Floods, Canadian International Petroleum Conference (CIPC), Calgary, Canada, June 7-10, 2004.
146. Egwuenu, A.M., Johns, R.T., and Yinghui, L., Experience with MMP calculations by PVTsim, PVTsim User Group Meeting, Houston, TX, September 30, 2004.
147. Yuan, H., and Johns, R.T., Recent advancements in the application of analytical theory to multicomponent gas drives, CSM Affiliates meeting, Austin, TX, October 23, 2002.
148. Johns, R.T., Application of vertical equilibrium models to solve environmental and petroleum coning problems, Stanford University, Palo Alto, CA, June 2002.
149. Mahadevan, J., Lake, L.W., and Johns, R.T., Estimation of echo dispersivity from single well tracer tests, Student paper, SPE Annual Tech. Conf. and Exhib., New Orleans, LA, September 30 - October 3, 2001.
150. Mahadevan, J., Lake, L.W., and Johns, R.T., Estimation of true dispersivity, poster presentation, Shell Oil Co., Houston, TX, November, 2000.
151. Long, M. and Johns, R.T., Interpretation of variable-skin well tests, ESP fall research review meeting, Austin, TX, November 4-5, 1999.
152. Long, M. and Johns, R.T., A new mathematical model for hydraulic testing and characterization of proposed nuclear waste disposal sites, ESP spring research review meeting, Austin, TX, April 15, 1999.
153. Long, M. and Johns, R.T., Hydraulic testing for characterization of proposed nuclear waste sites, ESP fall research review meeting, Austin, TX, November 5-6, 1998.
154. Long, M. and Johns, R.T., Effect of pre-test pressure on DST interpretation, ESP spring research review meeting, Austin, TX, April 23-24, 1998.
155. Delliste, A.M. and Johns, R.T., Analytical coning solutions to dual-phase pumping, ESP spring research review meeting, Austin, TX, April 23-24, 1998.
156. Johns, R.T., Lecture on "Analytical solutions for compositional modeling," Reservoir Engineering Research Institute (RERI), May, 1987.
157. Johns, R.T. and Long, M., Solution for sequential hydraulic tests in low-conductivity fractured formations,

ESP spring research review meeting, Austin, TX, April 10-11, 1997.

158. Johns, R.T., Vomvoris, S.G., and Löw, S., Review of hydraulic field tests in the Opalinus Clay of Northern Switzerland," Proceedings OECD, Nottingham, England, June 6 - 8, 1994.
159. Johns, R.T. and Jalali-Yazdi, Y., Comparison of pressure transient response in intensely and sparsely fractured reservoirs, 14th Workshop on Geothermal Reservoir Eng., Stanford, CA, January 24-26, 1989.
160. Johns, R.T., Sponge and rubber sleeve coring, Core Recovery Conference, Shell Research Center, 1985.
161. Johns, R.T., Estimate of residual oil saturation at White Castle field, Shell Oil Petrophysical and Geological Conference, Houston, TX, September 17, 1985.
162. Johns, R.T., Gulf coast experience with Welex's TMD and Schlumberger's TDT-K, Shell Oil Petrophysical and Geological Conference, Houston, TX, October 24-26, 1983.