

ARASH DAHI TALEGHANI

CONTACT INFORMATION

Department of Energy and Mineral Engineering
Pennsylvania State University
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EDUCATION

- Ph.D. in Engineering, *The University of Texas at Austin, Austin, TX, USA, 2009*
- M.S. in Structural Mechanics and Material, *Sharif University of Technology, Tehran, Iran, 2003*
- B.S. in Civil Engineering, *Sharif University of Technology, Tehran, Iran, 2001*

LICENSE AND CERTIFICATE

- Registered Professional Engineer in the state of Texas (PE) since 2013.
- Certified GARP Energy Risk Professional (ERP) since 2016.

PROFESSIONAL EXPERIENCE

- Professor, Department of Energy and Mineral Engineering, *Pennsylvania State University, 2022– Present*
- Associate Professor, Department of Energy and Mineral Engineering, *Pennsylvania State University, 2017–2022*
- Associate Professor, Department of Petroleum Engineering, *Louisiana State University, 2015–2017*
- Assistant Professor, Department of Petroleum Engineering, *Louisiana State University, 2009–2015*
- Summer Intern, *Schlumberger Data and Consulting Services, 2007*
- Summer Intern, *Schlumberger Data and Consulting Services, 2006*
- Research/Teaching Assistant, Petroleum Engineering, *The University of Texas at Austin, 2004-2009*
- Research/Teaching Assistant, Dept. of Civil Engineering, *Sharif University of Technology, 2003-2004*
- Engineer, *Ghana-Beton Construction Company 2001-2003*

AWARDS, HONORS, AND APPOINTMENTS

- Committee Member of SPE R&D Technical Section, 2022-2024.
- SPE Distinguished Lecturer on topic of repurposing oil and gas wells into geothermal wells, 2022-23.
- Chair of SPE Education and Accreditation Committee, 2022-2023.
- Member of SPE Education and Accreditation Committee, 2021-2022.
- Dr. Charles H. Bowman and Lynn A. Holleran Early Career Professorship, 2019.
- Member of Completions Technical Committee for SPE ATCE 2020-2022.
- Editorial Board Member of the Journal of Multiscale Science and Engineering published by Springer.
- SPE Eastern North America Regional Completion Optimization and Technology Award, 2017.
- NCEES PE Exam Committee member 2016-2018..
- Recognized as a "Future Leader" by American Rock Mechanics Association.
- Wellbore Stimulation and Production Enhancement Committee SPE ATCE 2017-2019.
- Co-director of Unconventional Oil and Gas Summer School, Dubrovnik, Summer 2016.
- SPE Scholarship and Fellowship Committee (2015-2016).
- LSU Foundation Tigers Undergraduate Teaching Award, 2015.
- Co-director of Petroleum Engineering Summer School, Dubrovnik, Summer 2015.
- SPE Distinguished Achievement Award for Petroleum Engineering Faculty, 2014.
- Associate Editor for ASME Journal of Energy Resources and Technology, since 2013.
- Associate Editor for Journal of Frontiers in Mechanical Engineering, since 2020.
- SPE Petroleum Engineering Junior Faculty Research Initiation Award, 2012.

PATENTS

- Fabrication of Elastomer-based nanocomposites, International Publication No. WO 2023/081045.
- Coal-Based Surface Modified Additives For High Thermal Conductivity Grout, US104283.0009PRO
- Geothermal Cementing System with Aluminum Fibers and Carbon Fillers US104283.0011PRO
- Geothermal Cementing System with High Thermal Conductivity, United States Appl. No. 63/323,682
- Shape memory polymer proppants, methods of making shape memory polymer proppants for application in hydraulic fracturing treatments, US Patent US10538694B2
- Methods of treating oil and gas well fractures, US Patent US20180037803A1.
- Methods for temporary fracture isolation, US Patent US20190024490A1.
- Cement materials including shape memory polymer and methods of making cement materials, WO2017184813A1, US10876030B2

- Using graphite nano-platelets to improve the integrity of oil and gas wells, US Patent US20200308469A1
- Proppant Function Enhancement - US Provisional Pat. App. No. 63/141,196
- Shape memory polymer proppants and methods of making shape memory polymer proppants for application in hydraulic fracturing treatments, CA2911139A1.

TEACHING

- Undergraduate level: Production Engineering, Numerical Methods; Well Logging, Mechanical Earth Modelling, Unconventional Reservoirs.
- Graduate level: Advanced Wellbore Stimulation; Petroleum Rock Mechanics; Advanced Production and Completion Systems.
- Industry Short Courses: Overview of the Hydraulic Fracturing Design, Rock Mechanics for Drillers, Sand production; Prediction and Mitigation.

PUBLICATIONS

Books

1. Dahi-Taleghani, A., L. Santos, 2022, Wellbore Integrity From Theory to Practice, ISBN 3031190238, Springer.

Peer-Reviewed Papers

2. Al Balushi, F., Q. Zhang, A. Dahi Taleghani, 2023, Autonomous Fracture Conductivity using Expandable Proppants in Enhanced Geothermal Systems, Accepted for publication in SPE Journal.
3. Santos, L., A. Dahi Taleghani, 2023, Impact of Microannulus on the Efficiency of Heat Transfer in the Bottomhole, *Front. Energy Res., Sec. Advanced Clean Fuel Technologies*, Volume 11.
4. Tabatabaei, M., A. Dahi Taleghani, 2023, Surface-Modified Graphite Nanoplatelets to Limit Deteriorative Impacts of Oil-Based Mud Residuals on Cement Bonding. Accepted for publication in SPE Drilling & Completions
5. Liu, S., A. Dahi Taleghani, 2023, Factors affecting the efficiency of closed-loop geothermal wells, *Applied Thermal Engineering*, 222, p.119947.
6. Zhang Q., W. Liu, J. Wei, A. Dahi Taleghani, H. Sun, D. Wang, 2022, Numerical Simulation Study on Temporary Well Shut-in Method in Development of Shale Oil Reservoir, *Energies*, 15(23), p.9161.
7. Cai Y., A. Dahi Taleghani, 2022, Using Pressure Changes in Offset Wells for Interpreting Fracture Driven Interactions (FDI), *Journal of Petroleum Science and Engineering*, 219, p.111111.
8. Al Balushi, F., A. Dahi Taleghani, 2022, Digital Rock Analysis to Estimate Stress-Sensitive Rock Permeabilities, *Computers and Geotechnics*, 151, p.104960.
9. Yu, H., A. Dahi Taleghani, F. Al Balushi, H. Wang, 2022, Machine Learning for Rock Mechanics Problems; An Insight, *Frontiers in Mechanical Engineering*, DOI: 10.3389/fmech.2022.1003170.
10. Wang, D., Dahi Taleghani, A., Yu, B., Wang, M.; He, C., 2022, Numerical Simulation of Fracture Propagation during Refracturing. *Sustainability* 14, 9422. <https://doi.org/10.3390/su14159422>.

11. Wang, D., Dahi Taleghani, A., Yu, B., 2022, Height Effect on Interactions between the Hydraulic Fracture and Natural Fractures, *Geofluids*, vol. 2022, Article ID 4642326, <https://doi.org/10.1155/2022/4642326>
12. Zhang, Q., A. Dahi Taleghani, 2022, On the Role of Proppants and Geomechanics on Flowback Behavior in Complex Fracture Networks, *Journal of Petroleum Science and Engineering*, 216, p.110835.
13. Santos, L., A. Dahi Taleghani, D. Elsworth, 2022, Repurposing Abandoned Wells for Geothermal Energy: Current Status and Future Prospects Renewable Energy, *Renewable Energy*, Volume 194, July 2022, Pages 1288-1302.
14. Kleit, A., A. Dahi Taleghani, 2022, COVID Shut-In Choices Across Unconventional Reservoirs: Evidence From the Bakken and the Marcellus. *Journal of Energy Resources Technology*, 144(7), p. 073009.
15. Li, L., A. Dahi Taleghani, 2022, Modelling of Cohesive Expandable LCMs for Fractures with Large Apertures, *Geothermics*, Volume 104, September 2022, p. 102466.
16. Wang X, Wang R, Guo R, Dahi Taleghani A, Su S, Ding W, Gong Y, Lai F, Wu Z, Su Y and Cao Z, 2022, Fracture Characterization of Lower Cambrian Niutitang Shale in Cen'gong Block, Southern China. *Front. Earth Sci.* 10:880366. doi: 10.3389/feart.2022.880366
17. Cai Y., A. Dahi Taleghani, 2022, Incorporating injection stage into DFIT analysis for permeability estimation, and its significance, *Journal of Petroleum Science and Engineering*, Volume 215, Part A, August 2022, p 110519.
18. Lin, C. A. Dahi Taleghani, Y. Kang; C. Xu, 2022, A coupled CFD-DEM numerical simulation of fracture sealing by lost circulation materials: Effect of lost circulation material, drilling fluid and fracture, *Fuel*, Volume 322, 15 August 2022, 124212.
19. Yu, H, A. Dahi Taleghani, Z. Lian, T. Lin, 2022, Severe Casing Failure In Multistage Hydraulic Fracturing Using Dual-scale Modelling Approach, *SPE Drilling & Completion*, 37(03), pp.252-266.
20. Tabatabaei, M., A. Dahi Taleghani, G. Li, 2021, Combination of Shape-Memory Capability and Self-assembly to Plug Wide Remote Fractures, *MRS Communications*, volume 11, pages 770-776.
21. Liu, W., Duan, Y., Zhang, Q., Chen, Z., Yan, X., Sun, H. and Taleghani, D., 2022. Analytical study on a one-dimensional model coupling both darcy flow and low-velocity non-darcy flow with threshold pressure gradient in heterogeneous composite reservoirs. *Journal of Porous Media*, 25(7).
22. Lin, C. A. Dahi Taleghani, 2021, A Coupled CFD-DEM Numerical Simulation of Formation and Evolution of Sealing Zones, *Journal of Petroleum Science and Engineering*, Volume 208, Part D, Pp. 109765.
23. Li, L., A. Dahi Taleghani, 2021, Assessment of LCM Particle Size Distribution on Fracture Sealing; A Numerical Study, *SPE Drilling & Completions*, SPE-209201-PA, <https://doi.org/10.2118/209201-PA>.
24. Zhang, Q., W. Liu, A. Dahi Taleghani, 2021, Numerical Study on Non-Newtonian Bingham Fluid Flow in Development of Heavy Oil Reservoirs Using Radiofrequency Heating Method, *Energy*, Volume 239, Part E, 15 January 2022, 122385.
25. Cai, Y., A. Dahi Taleghani, 2021, Axial Fracture Initiation During Diagnostic Fracture Injection Tests and Its Impact on Interpretations, *Rock Mechanics and Rock Engineering*, 54 (11), Pp. 5845-5865.
26. Magzoub, M., Anyaezu, T., Salehi, S., Li, G., Fan, J., Teodoriu, C., Saleh, F.K. and Dahi Taleghani, A., 2021, Evaluating sealability of blended smart polymer and fiber additive for geothermal drilling with the effect of fracture opening size, *Journal of Petroleum Science and Engineering*, Volume 206, November 2021, 108998.
27. Tabatabaei, M., A. Dahi Taleghani, 2021, Shape Memory Polymers as Lost Circulation Materials for Sealing Wide-Opened Natural Fractures, *SPE Drilling & Completions*, Vol. 36 (04): 931-942.
28. Santos, L., A. Dahi Taleghani, 2021, On Quantitative Assessment of Effective Cement Bonding to Guarantee Wellbore Integrity, *ASME Journal of Energy Resources and Technology*, 144(1), p.013001.

29. Yu, H, A. Dahi Taleghani, Z. Lian, T. Lin, 2021, A New Look at Rock Mechanical Behavior from the Granular-Scale, *Journal of Petroleum Science and Engineering*, 200, p.108373.
30. Tabatabaei, M., A. Dahi Taleghani, J. Hooker, 2021, Debonding of Cemented Natural Fractures during Core Recovery To be published in: *Journal of Structural Geology*, *Journal of Structural Geology*, Volume 144, March 2021, 104272.
31. Song, Y., A. Dahi Taleghani, 2021, Numerical Simulation of Proppant Displacement in Scaled Fracture Networks, *ASME Journal of Energy Resources and Technology*, 143(4): 043004.
32. Tabatabaei, M., A. Dahi Taleghani, 2020, Nanoengineered Solution for Repairing Cement Leakage in Deep Wells, *International Journal of Greenhouse Gas Control*, Volume 103, 103187
33. Lee, L., A. Dahi Taleghani, 2020, Simulating Fracture Sealing by Granular LCM Particles in Geothermal Drilling, *Energies*, Vol. 13, p. 4878; doi:10.3390/en13184878
34. Koc, S., A. Dahi Taleghani, 2020, A Fast Method to Determine the Critical Depth of Cut for Various Rock Types, *Energies*, 13, p.4496; doi:10.3390/en13174496.
35. Tabatabaei, M., A. Dahi Taleghani, Y. Cai, L. Santos, N. Alem, 2020, Surface Modification of Proppant using Hydrophobic Coating to Enhance Long-Term Production, *SPE Production & Operations*, pp. 1-12, SPE-196067-PA.
36. Santos, L., A. Dahi Taleghani, G. Li, 2020, Nanosilica-Treated Shape Memory Polymer Fibers to Strengthen Wellbore cement, *Journal of Petroleum Science and Engineering*, 196, p.107646.
37. Tabatabaei, M., A. Dahi Taleghani, N. Alem, 2020, Nanoengineering of Cement Using Graphite Platelets to Refine Inherent Microstructural Defects, *Composites Part B*, 202, p.108277.
38. Fan, J., L.Y. Santos, A.D. Taleghani, and G. Li., 2020, Stimuli-responsive petroleum cement composite with giant expansion and enhanced mechanical properties, *Construction and Building Materials*, Vol. 259, p.119783.
39. Dahi Taleghani, A., Y. Cai, A. Pouya, 2020, Fracture Closure Modes during Flowback from Hydraulic Fractures, *International Journal for Numerical and Analytical Methods in Geomechanics*, 44(12), pp.1695-1704.
40. Santos, L., A. Dahi Taleghani, G. Li, 2020, Smart Expandable Fiber Additive to Prevent Formation of Microannuli, *SPE Drilling & Completions*, 35 (03): pp. 490–502
41. Dahi Taleghani, A., M. Ahmadi, Thermoporoelastic Analysis of Artificially Fractured Geothermal Reservoirs; a Multiphysics Problem, *ASME Journal of Energy Resources and Technology*, 142 (8) p.081302..
42. Yu, H, A. Dahi Taleghani, Z. Lian, 2019, On How Asymmetric Stimulated Rock Volume in Shales May Impact Casing Integrity, *Energy Science & Engineering* 8 (5), 1524-1540
43. Tabatabaei, M., A. Dahi Taleghani, N. Alem, 2020, Measurement of Mixed Mode Interfacial Strengths with Cementitious Materials, *Engineering Fracture Mechanics*, Volume 223, 106739, ISSN 0013-7944.
44. Cai Y., A. Dahi Taleghani, 2019, Semi–Analytical Model for Two–Phase Flowback in Complex Fracture Networks in Shale Oil Reservoirs, *Energies*, 12, 4746; doi:10.3390/en12244746
45. Tabatabaei, M., A. Dahi Taleghani, N. Alem, 2019 Surface Modified Graphite Nanoplatelets to Enhance Cement Sheath Durability, *SPE-199897-PA*, *SPE Drilling & Completions*, 35 (03) pp. 452–464.
46. Lui, K., D. Gao, A. Dahi Taleghani, Semi-Analytical Model for Fault Slippage Due to Partial Pressurization, *SPE Journal*, 25 (03) pp. 1489–1502..
47. Xiao, Z., Ding, W., Dahi Taleghani, A., Wang, X. , Gu, Y., 2019, Quantitative analysis of tight sandstone reservoir heterogeneity based on rescaled range analysis and empirical mode decomposition: A case study, *Journal of Petroleum Science and Engineering*, Volume 182, 106326.
48. Yu, H, A. Dahi Taleghani, Z. Lian, 2019, On How Pumping Hesitations May Improve Complexity of Hydraulic Fractures, A Simulation Study, *Fuel*, Volume 249, Pages 294-308.

49. Lui, K., A. Dahi Taleghani, D. Gao, 2019, Calculation of Hydraulic Fracture Induced Stress and Corresponding Fault Slippage in Shale Formation, *Fuel*, Volume 254, Article 11525.
50. Asala, H.I., J. Chebeir, M. Vidhyadhar, I. Gupta, A. Dahi-Taleghani, J. Romagnoli, 2019, An Integrated Machine Learning Approach to Shale Gas Supply Chain Optimization and Re-frac Well Candidate Identification, *SPE Reservoir Evaluation and Engineering Journal*, Volume 22, Issue 04, pp. 1201-1224.
51. Tabatabaei, M., A. Dahi Taleghani, and N. Alem, Additives to Enhance Cement Sheath Durability, *Proceedings of the ASME 2019 38th International Conference on Ocean, Offshore and Arctic Engineering. Volume 8: Polar and Arctic Sciences and Technology; Petroleum Technology*. Glasgow, Scotland, UK. June 9–14, 2019. V008T11A002. ASME.
52. Yu, H, A. Dahi Taleghani, Z. Lian, 2018, Impact of the Dogleg Geometry on Displacement Efficiency during Cementing; An Integrated Modeling Approach, *Journal of Petroleum Science and Engineering*, Volume 173, pp. 588-600.
53. Puyang, P., A. Dahi Taleghani, B. Sarker, 2018, Optimal natural fracture realizations by minimizing least squared errors of distances from microseismic events, *Journal of Applied Geophysics*, Vol. 159, pp. 294-303.
54. Lui, K., D. Gao, A. Dahi Taleghani, 2018, Analysis on Integrity of Cement Sheath in the Vertical Section of Wells during Hydraulic Fracturing, *Journal of Petroleum Science and Engineering*, Volume 168, pp. 370-379.
55. Lui, K., D. Gao, A. Dahi Taleghani, 2018, Impact of Casing Eccentricity on Cement Sheath, *Energies*, 11 (10), Page 2557.
56. Yu, H, A. Dahi Taleghani, Z. Lian, 2018, Modelling Casing Wear at Doglegs by Incorporating Alternate Accumulative Wear, *Journal of Petroleum Science and Engineering*, Volume 168, Pages 273-282.
57. Santos, L., A. Dahi Taleghani, G. Li, 2018, Expandable Proppants to Moderate Production Drop in Hydraulically Fractured Wells, *Journal of Natural Gas Science and Engineering*, Volume 55, Pages 182-190.
58. Klimenko, D., A. Dahi Taleghani, 2018, A modified extended finite element method for fluid-driven fractures; Incorporating variable primary energy loss mechanism, *International Journal of Rock Mechanics and Mining Sciences*, Volume 106, June 2018, Pages 329-341.
59. Mansour, A., A. Dahi Taleghani, S. Salehi, 2018, Smart Lost Circulation Materials for Productive Zones, *Journal of Petroleum Exploration and Production Technology*, Pages 1-16 <https://doi.org/10.1007/s13202-018-0458-z>.
60. Dahi Taleghani, A., M. Gonzalez, H. Yu, H. Asala, 2018, Numerical Simulation of Hydraulic Fracture Propagation in Naturally Fractured Formations Using The Cohesive Zone Model, *Journal of Petroleum Science and Engineering* 165, 42-57.
61. Jiang, Y., A. Dahi Taleghani, 2018, Modified Extended Finite Element Methods for Gas Flow in Fractured Reservoirs; a Pseudo-Pressure Approach, *ASME Journal of Energy Resources Technology*, 140(7), p.073101.
62. Bautista, J.F., A. Dahi Taleghani, 2017, Prediction of Damage at Water Injectors Wells in Unconsolidated Formations, *Journal of Petroleum Science and Engineering*, 164, pp.1-10.
63. Ahmadi, M., Dahi-Taleghani, A., 2017, Thermoporoelastic Analysis of a Single-well Closed-Loop Geothermal System, *American Society of Civil Engineering, Poromechanics VI*, pp. 602-609.
64. Sheikhezadei, K., Dahi-Taleghani, A., 2017, Comparative Experimental Study of Rock Cutting Under High Confining Pressure and Atmospheric Conditions Using PDC Cutter, *American Society of Civil Engineering, Poromechanics VI*, pp 1900-1908.
65. Moayedi, M., A. Dahi Taleghani, G. Li, 2017, Smart Expandable Cement Additive to Achieve Better Wellbore Integrity, *ASME. J. Energy Resour. Technol.* 2017;139(6):062903-062903-8. doi:10.1115/1.4036963.

66. Wang W., A. Dahi Taleghani, 2017, Impact of Hydraulic Fracturing on Cement Sheath Integrity; A Modelling Approach, *Journal of Natural Gas Science and Engineering* 44, 265-277.
67. Bautista, J.F., A. Dahi Taleghani, 2017, Dynamic Modeling of Injectivity Evolution in Unconsolidated Sands, *Journal of Petroleum Science and Engineering* 149, 256-269
68. Wang, W., Dahi-Taleghani, A., 2017, Emergence of Delamination Fractures around the Casing and Its Stability, *Journal of Energy Resources Technology*, Volume 39, Issue 1, Pages 012904-11. doi:10.1115/1.4033718.
69. Tabatabaei, M., Dahi-Taleghani, A., 2017, Randomly distributed interfacial arc cracks within the inclusion-inhomogeneity-matrix system, *Meccanica* 52(4), 1123-1142, DOI 10.1007/s11012-016-0442-y
70. Bautista, J.F., A. Dahi Taleghani, 2016, The state of the art and challenges in geomechanical modeling of injector wells; a review paper, *Journal of Energy Resources Technology*, 139(1) p.012910.
71. Ahmadi, M., Dahi-Taleghani, A., 2016, Impact of Thermally Reactivated Micro-Natural Fractures on Well Productivity in Shale Reservoirs, a Numerical Study , *Journal of Natural Gas Science and Engineering*, Volume 35, Part A, September 2016, Pages 583-592.
72. Puyang, P., A. Dahi Taleghani, B. Sarker, 2016, An Integrated Modeling Approach for Natural Fractures and Post Treatment Fracturing Analysis: A Case Study, *Journal of Interpretation* November-January, Vol. 4, No. 4: pp. T493-T504.
73. Ahmadi, M., Dahi-Taleghani, A., and C. Sayers, 2016, The effect of fracture roughness on fracture compliance, *Geophysical Journal International*, Volume 205, Issue 1, Pp. 454-463.
74. Bedayat, H., Dahi Taleghani, A., Anisotropic Inhomogeneous Poroelastic Inclusions; with Application to Underground Energy related Problems, *Journal of Energy Resources Technology*, Volume 138, Issue 3, 032905.
75. Dahi Taleghani, A., A. Shojaei, M. Gonzalez, 2016, Overview of Numerical Models for Interactions between Hydraulic Fractures and Natural Fractures: Challenges and Limitations, *Computers and Geotechnics*, Volume 71, January 2016, Pages 361-368.
76. Dahi Taleghani, A., D. Klimenko, 2015, An Analytical Solution for Microannulus Cracks Developed Around the Wellbore, *Journal of Energy Resources and Technology*, 137(6):062901-062901-8.
77. Bedayat, H., Dahi Taleghani, A., 2015, Pressurized Poroelastic Inclusions: Short-term and Long-term Asymptotic Solutions, *Journal of Rock Mechanics and Rock Engineering*, pp. 1-9, 10.1007/s00603-014-0705-7.
78. Bedayat, H., Dahi Taleghani, A., 2015, Eshelby Solution for Double Ellipsoidal Inhomogeneities: Applications in Geoscience, *Computers & Geosciences*, Volume 76, March 2015, Pages 72-79, ISSN 0098-3004, <http://dx.doi.org/10.1016/j.cageo.2014.12.003>.
79. Ameen, S., A. Dahi Taleghani, 2015, Dynamic Modeling of Channel Formation during Fluid Injection into Unconsolidated Formations, *SPE Journal*, 20(4) 689 - 700.
80. Gonzalez, M., A. Dahi-Taleghani, P. Puyang, J. Lorenzo and J. Le Calvez, 2014, Post-Treatment Assessment of Induced Fracture Networks, *Hydraulic Fracturing Journal*, Vol. 1, No 3, pp. 24-33.
81. Wang W., A. Dahi Taleghani, 2014, Three-Dimensional Analysis of Cement Sheath Integrity around Wellbores, *Journal of Petroleum Science and Engineering* vol. 121 p. 38-51.
82. Wang W., A. Dahi Taleghani, 2014, Simulating Multi-Zone Fracturing in Vertical Wells, *Journal of Energy Resources and Technology*, 136(4), 042902. DOI: 10.1115/1.4027691.
83. Shojaei, A., Dahi Taleghani, A., Li, G., 2014, A Continuum Damage Failure Model for Hydraulic Fracturing of Porous Rocks, *International Journal of Plasticity*, 59, 199-212. doi: <http://dx.doi.org/10.1016/j.ijplas.2014.03.003>
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85. Ahmadi, M., Dahi-Taleghani, A., and C. Sayers, 2014, Direction Dependence of Fracture Compliance ratio induced by Slickensides, *Geophysics*, 79(4), C91-C96. doi: 10.1190/geo2013-0227.1
86. Dahi Taleghani, A., M. Ahmadi, J. Olson, W. Wang, 2014, Thermal Reactivation of Microfractures and its potential impact on Hydraulic Fractures Efficiency, *SPE Journal* 19 (05) pp. 761-770. doi: 10.2118/163872-PA
87. Dahi Taleghani, A., and J. Olson, 2013, How Natural Fractures Could Affect Hydraulic Fracture Geometry, *SPE Journal* Vol. 19, Issue 1, doi: 10.2118/167608-PA.
88. Dahi Taleghani, A., 2013, An Improved Closed-Loop Heat Extraction Method From Geothermal Resources. *J. Energy Resources and Technology*, 2013;135(4):042904-042904-7. doi:10.1115/1.4023175.
89. Dahi Taleghani, A. and J. Olson, 2011, Analysis of multi-stranded hydraulic fracture Propagation: an improved model for the interaction between induced and natural fractures, SPE 124884, *SPE Journal*, Volume 16, Number 3, September 2011.
90. Sayers, C., Dahi Taleghani, A., and J. Adachi, The Effect of Mineralization on the Ratio of Normal to Tangential Compliance of Fractures, *Journal of Geophysical Prospecting*, *Geophysical Prospecting* 57:3 (2009): 439-446.
91. Rafii-Tabar H., H.M. Shodja, M. Darabi and A. Dahi, 2006, Molecular Dynamics Simulation of Crack Propagation in Materials Containing Clusters of Impurities, *Journal of Mechanics of Materials*, Volume 38, Issue 3, March 2006, Pages 243-252.

Conference Proceedings

92. Singh, H., P. Cheng, Y. Pan, C. Li, Y. Liu, X. Wu, M. Van Domelen, S. Rogers, A. Dahi Taleghani, M Cao, 2023, A Comprehensive Review of Fracture-Driven Interaction in Unconventional Oil and Gas Plays: Characterization, Real-Time Diagnosis, and Impact on Production, Presented in URTEC Conference in Denver, CO.
93. Zhang, Q., A. Dahi Taleghani, 2023, On Tunable Fracture Conductivity to Enhance Heat Extraction from Fractured Geothermal Systems, presented at 48th Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California, February 6-8, 2023.
94. Liu, S., A. Dahi Taleghani, 2023, Conductive Proppants to Improve Heat Extraction, , presented at 48th Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California, February 6-8, 2023.
95. Tabatabaei M., L Santos, AA Al Hassan, A Dahi Taleghani, 2022, Limiting Deteriorative Impacts of Oil-Based Mud Residuals on Cement Bonding presented in SPE Annual Technical Conference & Exhibition in Houston, TX.
96. Wang, R., A. Dahi Taleghani, 2022, Selection of the Flowback Rate for DFIT-Flowback Test presented in SPE Annual Technical Conference & Exhibition in Houston, TX.
97. Santos, L., A. Dahi Taleghani, 2022, Impact of Microannulus on the Heat Exchange at the Bottomhole presented in SPE Annual Technical Conference & Exhibition in Houston, TX.
98. Zhang, Q., A. Dahi Taleghani, 2022, Variable Fracture Conductivity to Enhance Heat Extraction in EGS, presented in 2022 Geothermal Rising Conference (GRC) in Reno, Nevada, August 28-31.
99. Santos, L., A. Dahi Taleghani, 2022, Impact of Microannulus on the Performance of Closed-Loop Geothermal Systems, presented in 2022 Geothermal Rising Conference (GRC) in Reno, Nevada, August 28-31.
100. Liu, S., A. Dahi Taleghani, 2022, Numerical Study on Critical Factors Affecting Efficiency of Closed-Loop Geothermal Wells, presented in 2022 Geothermal Rising Conference (GRC) in Reno, Nevada, August 28-31.

101. Tabatabaei, M., A. Dahi Taleghani, 2022, Using Shape Memory Effects to Develop New Lost Circulation Materials to Seal Wide Fractures, presented in 2022 Geothermal Rising Conference (GRC) in Reno, Nevada, August 28-31.
102. Santos, L., A. Dahi Taleghani, 2021, Machine learning framework to generate synthetic cement evaluation logs for wellbore integrity analysis, presented in 55th US Rock Mechanics/Geomechanics Symposium held in Houston, Texas, USA, 20-23 June 2021.
103. Lee, L., A. Dahi Taleghani, 2021, Impact of Particle Size Distribution on Fracture Sealing Capability; a Simulation for Better Geothermal Drilling, presented at 46th Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California, February 15-17, 2021.
104. Tabatabaei, M., A. Dahi Taleghani, 2021, Smart Lost Circulation Materials for Sealing Large Width Natural Fractures, presented in 55th US Rock Mechanics/Geomechanics Symposium held in Houston, Texas, USA, 20-23 June 2021.
105. Yu, H, A. Dahi Taleghani, Z. Lian, 2021, On Causes of Partial Cement Deficiency at Doglegs and its Impact on Casing Failure; An Integrated Modeling Approach, SPEAAPGSEG Asia Pacific Unconventional Resources Technology Conference, Brisbane, Australia.
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