Dr Peyman Mostaghimi

Associate Professor in Minerals and Energy Resources
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Education and Professional Career

2002-2006	BSc Mechanical Engineering, Sharif University of Technology
2003-2006	BSc Petroleum Engineering, Sharif University of Technology
2006-2008	MSc Mechanical Engineering, Sharif University of Technology
2008-2011	PhD Earth Science and Engineering, Imperial College London
2011-2014	Post-doctoral Associate, Imperial College London
2014-2020	Lecturer and Senior Lecturer, The University of New South Wales
Since2020	Associate Professor, The University of New South Wales

Commitment, Appointments and Scientific Volunteer Jobs

2022	Steering committee, InterPore National Chapter, Perth
2018	Steering committee, InterPore National Chapter, Melbourne
2016	Chair and co-founder, InterPore National Chapter, Sydney
2016-2018	Deputy Head of School, UNSW
Since 2016	Chief Investigator for several Discovery Projects by Australian Research Council
Since 2017	Editorial Board for Journal of Petroleum Science and Engineering
Since 2021	Editorial Board for Journal of Energy Engineering
Since 2008	Reviewer for several journals and international funding agencies, memberships in InterPore, AGU, and SPE

Professional Awards, Offers and Recognitions

2022	Fulbright Senior Scholar
2021	Excellence Award in Research Supervision, UNSW Engineering
2016	Excellence Award in Teaching, UNSW Engineering
2016	Excellence Award in Research, UNSW Engineering

Most important Publications

1. **Mostaghimi**, P., Bijeljic, B. & Blunt, M. J.: Simulation of flow and dispersion on pore-space images, *SPE Journal*, 2012.

2. Blunt, M., Bijeljic, B., Dong, H., Gharbi, O., Iglauer, S., **Mostaghimi, P**., Paluszny, A., & Pentland, C.: Pore-scale imaging and modelling, *Advances in Water Resources*, 2013.

3. **Mostaghimi**, P., Percival, J. R., Tollit, B. S., Neethling, S. J., Gorman, G. J., Jackson, M. D., & Pain, C. C.: Anisotropic mesh adaptivity and control volume finite element methods for simulation of multiphase flow through porous media, *Mathematical Geosciences*, 2015.

4. **Mostaghimi**, P., Liu, M., & Arns, C.: Numerical simulation of reactive transport on micro-CT images, *Mathematical Geosciences*, 2016.

5. Jing, Y., Armstrong, R. T., & **Mostaghimi, P**: Rough-walled discrete fracture network modelling for coal characterisation, *Fuel*, 2017.

6. Singh, A., Rabbani, A., Armstrong, R., Regenauer-Lieb, & **Mostaghimi, P.:** Computer vision and unsupervised machine learning for pore-scale structural analysis of fractured porous media, *Advances in Water Resources*, 2020.

7. Singh, A., Regenauer-Lieb, K., Walsh, S. D. C., Armstrong, R. T., van Griethuysen, J. J. M., & **Mostaghimi, P**.: On Representative Elementary Volumes of Grayscale Micro-CT Images of Porous Media, *Geophysical Research Letters*, 2020.

8. Wang, Y., Shabaninejad, M., Armstrong, R., & **Mostaghimi, P.**: Deep neural networks for improving physical accuracy of 2D and 3D multi-mineral segmentation of rock micro-CT images, Applied Soft Computing, 2021.

9. Wang, Y., Blunt, M., Armstrong, R., & **Mostaghimi, P**.: Deep learning in pore scale imaging and modeling, *Earth-Science Reviews*, 2021.

10. Higgs, S., Wang, Y., Sun, C., Ennis-King, J., Jackson, S., Armstrong, R., & **Mostaghimi, P**.: In-situ hydrogen wettability characterisation for underground hydrogen storage. *International Journal of Hydrogen Energy*, 2022.