

Prof Dr Vahid Niasar

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Education and Professional Career

- Aug.1996-Jun.2000: BSc of civil and hydraulics engineering, K.N.T University of Technology, Iran.
- Aug.2000-Jan.2003: MSc of civil and environmental engineering - Sharif University of Technology, Iran
- September 1998-November 2005, Environmental Engineer, SCE, Iran.
- January 2006- March 2010: PhD of multiphase flow and transport in porous media (Cum Laude) - Utrecht University, Netherlands
- February 2010- December 2011: Post-doctoral researcher, Utrecht University, Netherlands
- October 2011-July 2014, Research Reservoir Engineer, Shell Global Solutions, Rijswijk, Netherlands.
- August 2014-June 2018, Lecturer, Department of Chemical Engineering, University of Manchester, UK.
- July 2018- June 2020, Senior Lecturer, Department of Chemical Engineering, University of Manchester, UK.
- July 2020-July 2022, Reader, Department of Chemical Engineering, University of Manchester, UK.
- Since July 2022, Professor, Department of Chemical Engineering, University of Manchester, UK.

Commitment, Appointments and Scientific Volunteer Jobs

- Council Chair of International Society of Porous Media (InterPore) elected for two terms (2019-2021 and 2021-2023).
- Member of Scientific Advisory Committee for the Centre for Sustainable Subsurface Resources (CSSR), NORCE, Norway (since 2022)
- Governor of Ashdene Primary School, UK (since 2021)
- Chair of UK InterPore Chapter (since 2015)
- Fellow of the UK Higher Education Academy, since November 2017.
- Associate Editor of J. of Petroleum Science and Engineering since 2015.
- Member of IChemE, since 2014.
- Member of International Society of Porous Media (InterPore), since 2008.
- Member of American Geophysical Union (AGU), 2006-2012.
- Guest Editor of two special issues in Transport in Porous Media in 2012 and 2018, and Computational Geosciences in 2018.
- Co-organiser and convenor in 22 International conferences including InterPore, GRS, AGU.

Professional Awards, Offers and Recognitions

2022 Recipient of the InterPore Rosette

2012 Shell Recognition Award

2011 Young Researcher InterPore-Fraunhofer Award

2010 PhD Cum Laude graduation from Utrecht University

2022 Invited speaker in 2022 International Conference of Porous Media (InterPore) , Abu-Dhabi, UAE

2022 Invited speaker in SAC Career Development Event, InterPore 2022, Abu-Dhabi, UAE

2017 Keynote speaker in the third edition of the Wageningen Soil Conference, August 28th – September 2nd, 2017, Netherlands

2016 Invited speaker in the Flow and Transport in Permeable Media Gordon Research Conference, July 31-August 5, Girona, Spain

Most important Publications (maximum 10)

Summary: more than 80 peer-reviewed journal publications including notable ones in Science Advances, PNAS, J. Fluid Mechanics, ACS ES&T, and Water Resources Research. h-index=30, citations:3500 (Google scholar, visited 6/9/2022)

1. Chen Yongqiang, Steeb Holger, Erfani Hamidreza, Karadimitriou Nikolaos K., Walczak Monika S., Ruf Matthias, Lee Dongwon, An Senyou, Hasan Sharul, Connolley Thomas, Vo Nghia T., Niasar Vahid (2021) Nonuniqueness of hydrodynamic dispersion revealed using fast 4D synchrotron x-ray imaging, **Science Advances**, doi: 10.1126/sciadv.abj0960
2. Hasan, Sharul; Niasar, Vahid; Karadimitriou, Nikolaos K; Godinho, Jose RA; Vo, Nghia T; An, Senyou; Rabbani, Arash; Steeb, Holger (2020); Direct characterization of solute transport in unsaturated porous media using fast X-ray synchrotron microtomography **PNAS**, 117 38 23443-23449
3. An, Senyou; Erfani, Hamidreza; Godinez-Brizuela, Omar E; Niasar, Vahid (2020); Transition From Viscous Fingering to Capillary Fingering: Application of GPU-Based Fully Implicit Dynamic Pore Network Modeling **Water Resources Research** 56 12 e2020WR028149
4. Niblett, Daniel; Mularczyk, Adrian; Niasar, Vahid; Eller, Jens; Holmes, Stuart; Two-phase flow dynamics in a gas diffusion layer-gas channel-microporous layer system **Journal of Power Sources** 471 228427 2020
5. Aziz, R., Joekar-Niasar, V., Martinez-Ferrer, P., Godinez-Brizuela, O. (2019) Theodoropoulos, K., Mahani, H. (2019) Novel insights into pore-scale dynamics of wettability alteration during low salinity waterflooding, **Scientific Reports**, 9 (1), 9257.
6. Karadimitriou, N, Joekar-Niasar, V., Babaei, M, Shore, C., (2016), The critical role of immobile zone in non-Fickian two-phase transport: A new paradigm, **Environmental Science & Technology**, 50 (8), 4384-4392.
7. Joekar-Niasar, V., Doster, F., Armstrong, R.T., Wildenschild, D., Celia, M.A., (2013), Trapping and Hysteresis in Two-Phase Flow in Porous Media: A Pore-Network Study, **Water Resources Research**, 49 (7), 4244-4256.
8. Joekar-Niasar, V., Hassanizadeh, S.M., Leijnse A. (2008), Insights into the Relationships Among Capillary pressure, Saturation, Interfacial Area and Relative Permeability Using Pore-network Modeling, **Transport in Porous Media**, 74:201-219.
9. Joekar-Niasar, V., Hassanizadeh, S. M., Dahle, H. K. (2010), Non-equilibrium Effects in Capillarity and Interfacial Area in Two-Phase Flow: Dynamic Pore-Network Modelling, **Journal of Fluid Mechanics**, 655: 38-71.
10. Joekar-Niasar, V., Hassanizadeh, S. M. (2012), Analysis of Fundamentals of Two-Phase Flow in Porous Media using Dynamic Pore-Network Models; A Review, **Critical Reviews in Environmental Science and Technology**, 42 (18), 1895-1976.