Prof. Hossein Hejazi, PhD, P.Eng.

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Education and Professional Career

1997-2001	BSc studies in Mechanical Engineering, Power and Water University of Technology, Tehran, Iran
2001-2004	MSc studies in Mechanical Engineering, University of Tehran, Tehran, Iran
2004-2006	Mechanical Engineer, DaryaPala Energy Corp. & Combined Heat and Power Research Center, Tehran, Iran
2006-2011	PhD studies in Chemical and Petroleum Engineering, University of Calgary, Calgary, Canada
2011-2013	Reservoir Engineer, Laricina Energy Ltd., Calgary, Canada
2013-2017	Assistant Professor and PI of the Interfacial Flows and Porous Media Laboratory, Chemical and Petroleum Engineering, University of Calgary, Calgary, Canada
2017-2022	Associate Professor and PI of the Interfacial Flows and Porous Media Laboratory, Chemical and Petroleum Engineering, University of Calgary, Calgary, Canada
Since 2022	Professor and PI of the Interfacial Flows and Porous Media Laboratory, Chemical and Petroleum Engineering, University of Calgary, Calgary, Canada

Commitment, Appointments and Scientific Volunteer Jobs

Since 2016	Member, International Society for Porous Media (InterPore); facilitated the institutional membership of the University of Calgary
2016	Member, InterPore election committee; member, InterPore website evaluation task force
2017-2023	Technical Director, Collaborative Knowledge Network on Mature and Unconventional Oil Fields (~$12M), CONACYT-Secretariat of Energy Hydrocarbon Sector Fund, Mexico
2018-2026	Organizer and co-chair of sessions at the InterPore Annual Conferences (2018, 2020, 2021, 2022, 2023, 2026)
Since 2022	Graduate Program Director, Master of Engineering Program, Chemical and Petroleum Engineering, University of Calgary
Since 2023	Editorial Board Member, InterPore Journal
2023-2024	Vice President, Energy Division, Chemical Institute of Canada
Since 2024	Technical Lead, Hydrogen Storage Theme, Hydrogen Centre of Excellence, University of Calgary
Since 2025	Associate Department Head, Energy Engineering Program, University of Calgary
Since 2025	Section Editor and Founding Member, Energy Science
Various	Session chair/co-chair at American Physical Society-Division of Fluid Dynamics and American Geophysical Union annual conferences
Societies	InterPore, American Physical Society (APS), Society of Petroleum Engineers (SPE), Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Professional Awards, Offers and Recognitions

2025	SPE Regional Distinguished Achievement Award for Petroleum Engineering Faculty, Canada region
2024	Schulich School of Engineering Award for Undergraduate Teaching Excellence
2023	Schulich School of Engineering Award for Research Excellence
2022	Schulich School of Engineering Award for Teaching Excellence
2021	Schulich School of Engineering Award for Blended and Online Learning
2011	Society of Petroleum Engineers Scholarship, Calgary Section

2010	First place, poster competition, Canadian Applied and Industrial Mathematics Society Annual Meeting; University of Calgary Ruby Doctoral Scholarship
2008-2010	Alberta Ingenuity Fund PhD Scholarship; Len Bolger Memorial Scholarship for Energy Research Excellence
2001	Recognized as the Top B.Sc. Student at Power & Water University of Technology

Most important Publications (maximum 10)
(Peer reviewed journal articles / books / patents)

[1] Q. Li, Q., I.D. Gates, S.H. Hejazi. Comparative gas-brine relative permeability of H_2, N_2, and CO_2 under subsurface storage conditions, *Geophysical Research Letters*: 53, e2026GL122008, 2026.
[2] P. Bazazi, H. A. Stone and S. H. Hejazi. The dynamics of droplet pinch-off at emulsified oil-water interfaces: interplay between interfacial viscoelasticity and capillary forces. *Physical Review Letters*, 130(3), 034001, 2023.
[3] P. Bazazi, H. A. Stone and S. H. Hejazi. Spongy all-in-liquid materials by in-situ formation of emulsions at oil-water interfaces. *Nature Communications*, 13, 4162, 2022.
[4] H. Khorshidian H., S. Afshari, H. Bagherzadeh, S.H. Hejazi. The effect of flow-swing on waterflood under oil-wet conditions: a pore-level study: *Transport Porous Media*, 137, 109-130, 2021.
[5] S. Afshari, S. , S.H. Hejazi, A. Kantzas. Role of medium heterogeneity and viscosity contrast in miscible flow regimes and mixing zone growth: A computational pore-scale approach: *Physical Review Fluids*. 3 (5), 054501, 2018.
[6] Y. Zhang, A. Sanati-Nezhad and S. H. Hejazi. Surface modification of microchips with geo-materials by layer-by-layer assembly: towards subsurface energy and environmental applications. *Lab on a Chip*, 18(2), 285-295, 2018.
[7] M. F. Ikram, R. Askari, S. H. Hejazi and M. Sahimi. Effect of elastic deformation and rough grain surface on heat conduction in partially-saturated granular porous media. *Water Resources Research*, 54(11), 2018.
[8] R. Askari, S. H. Hejazi and M. Sahimi. Effect of deformation on the thermal conductivity of granular porous media with rough grain surface. *Geophysical Research Letters*, 44(16), 8285-8293, 2017.
[9] S. H. Hejazi, P. M. J. Trevelyan, J. Azaiez and A. De Wit. Viscous fingering of a miscible reactive A + B → C interface: a linear stability analysis. *Journal of Fluid Mechanics*, 652, 501-528, 2010.
[10] Materials for hydrogen storage. International Publication Number: US Patent: WO 2026/090730 A1, 2026.