

Your title and name

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Education and Professional Career

2000-2006 Physics, Dipl., University of Heidelberg, Germany
2007-2011 Physics, Dr rer nat, University of Stuttgart, Germany
2011–2013 Postdoctoral Research Fellow, Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ, USA jointly with Department of Mathematics, University of Bergen, Norway
2014 –2017: Assistant Professor, School of Energy Geoscience Infrastructure and Society, Heriot Watt University, Edinburgh, UK
2017-2020: Associate Professor, School of Energy Geoscience Infrastructure and Society, Heriot Watt University, Edinburgh, UK
Since 2020: Professor, School of Energy Geoscience Infrastructure and Society, Heriot Watt University, Edinburgh, UK

Commitment, Appointments and Scientific Volunteer Jobs

2019-2023 Program director MSc Subsurface Energy Systems,
2023-2025 Director of Postgraduate Research,
2023-2026 Geoenergy theme-lead at the Global Research Institute for Achieving Net-zero and Beyond (iNetZ+))
Since 2025 Co-founding member of Centre for Subsurface Energy Transition and Innovation Centre (SET-IT)
Since 2001 member of German Physical Society
Since 2008 InterPore member
Since 2025 EAGE member
Since 2023 member of Editorial Board, Interpore Journal
Since 2015 Member of steering committee UK Interpore Chapter
2023 Co-chair Interpore Annual conference Edinburgh
2015, 2026 Co-chair Interpore UK Chapter meeting
2010-2013 member of the interpore publicity committee (2010-2013),
2016-2019 Chair Interpore P&G Student Poster Award
Since 2015 Member of Scottish Carbon Capture and Storage Directorate
Since 2024 Scientific Advisor to the programs “Tiefengeothermie” and “Digitale Geosysteme”, Bundesministerium für Bildung und Forschung

Professional Awards, Offers and Recognitions

2011 Dissertation with distinction
2016 Interpore Rosette
2022 EAGE Best Instructor Award

Most important Publications (maximum 10)

(Peer reviewed journal articles / books / patents)

- [1] RAMACHANDRAN, H., DE JONGE-ANDERSON, I., HAFIZI MUSA, I., NICHOLSON, U., TAN, C. P., GEIGER, S. & DOSTER, F. 2026. Rapid Fault Leakage Modelling for CO₂ Storage in Saline Aquifers. *Water Resources Research*, 62, e2025WR041074.
- [2] HOSSEINI, S. A., CHEN, J., CAVANAGH, A., CHEN, B., DARRAJ, N., DOSTER, F., ENNIS-KING, J., FLEMISCH, B., GUNNING, J., MOODIE, N., MOHAMMADI, B. T. & TENTHOREY, E. 2026. A decade of progress in the modeling and simulation of geologic carbon storage. *International Journal of Greenhouse Gas Control*, 155.
- [3] PEREZ, S., DOSTER, F., MAES, J., MENKE, H., ELSHEIKH, A. & BUSCH, A. 2025. When Cubic Law and Darcy Fail: Bayesian Correction of Model Misspecification in Fracture Conductivities. *Geophysical Research Letters*, 52, e2025GL117776.
- [4] JONGE-ANDERSON, I. D., RAMACHANDRAN, H., NICHOLSON, U., GEIGER, S., WIDYANITA, A. & DOSTER, F. 2024. Determining CO₂ storage efficiency within a saline aquifer using reduced complexity models. *Advances in Geo-Energy Research*, 13, 22–31.
- [5] FLEMISCH, B., NORDBOTTEN, J. M., FERNØ, M., JUANES, R., BOTH, J. W., CLASS, H., DELSHAD, M., DOSTER, F., ENNIS-KING, J., FRANC, J., GEIGER, S., GLÄSER, D., GREEN, C., GUNNING, J., HAJIBEYGI, H., JACKSON, S. J., JAMMOUL, M., KARRA, S., LI, J., MATTHÄI, S. K., MILLER, T., SHAO, Q., SPURIN, C., STAUFFER, P., TCHELEPI, H., TIAN, X., VISWANATHAN, H., VOSKOV, D., WANG, Y., WAPPEROM, M., WHEELER, M. F., WILKINS, A., YOUSSEF, A. A. & ZHANG, Z. 2023. The FluidFlower Validation Benchmark Study for the Storage of CO₂. *Transport in Porous Media*.
- [6] SNIPPE, J., KAMPMAN, N., BISDOM, K., TAMBACH, T., MARCH, R., MAIER, C., PHILLIPS, T., INSKIP, N. F., DOSTER, F. & BUSCH, A. 2022. Modelling of long-term along-fault flow of CO₂ from a natural reservoir. *International Journal of Greenhouse Gas Control*, 118.
- [7] BERRE, I., DOSTER, F. & KEILEGAVLEN, E. 2018. Flow in Fractured Porous Media: A Review of Conceptual Models and Discretization Approaches. *Transport in Porous Media*, 130, 215–236.
- [8] MARCH, R., DOSTER, F. & GEIGER, S. 2018. Assessment of CO₂ Storage Potential in Naturally Fractured Reservoirs With Dual-Porosity Models. *Water Resources Research*, 54, 1650–1668.
- [9] PAVULURI, S., MAES, J. & DOSTER, F. 2018. Spontaneous imbibition in a microchannel: analytical solution and assessment of volume of fluid formulations. *Microfluidics and Nanofluidics*, 22.
- [10] DOSTER, F., NORDBOTTEN, J. M. & CELIA, M. A. 2013. Impact of capillary hysteresis and trapping on vertically integrated models for CO₂ storage. *Advances in Water Resources*, 62, 465–474.