

Karsten E. Thompson

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Education and Professional Career

1985-1989 B.S. Chemical Engineering, University of Colorado, Boulder
1989-1991 M.S.E. Chemical Engineering, University of Michigan, Ann Arbor
1991-1996 Ph.D. Chemical Engineering, University of Michigan, Ann Arbor
1996-2011 Assistant/Associate/Full Professor of Chemical Engineering, LSU, Baton Rouge
2011- Professor and Department Chair, Petroleum Engineering, LSU, Baton Rouge
(dept chair term to end summer 2022)

Commitment, Appointments and Scientific Volunteer Jobs

2000-2008 Group 1D planning committee (Transport Processes) for AIChE; Organizer for Sessions on Flow and Reaction in Heterogeneous and Porous Media
2006-2013 Founder and PI of PoreSim Research Consortium
2009-2016 LSU Lead for participation in Advanced Energy Consortium
2010 Organizing Committee: GeoX 2010: 3rd International Workshop on X-Ray CT for Geomaterials, New Orleans, March 1-3.
2015-2017 Academic Advisory Committee, Society of Petroleum Engineers.
2018 Chair of Local Organizing Committee: InterPore 10th Annual Conference and Jubilee, New Orleans, May 14-17.
2019- Co-chair InterPore Industry Committee
2020-2025 LSU Lead for GoMed Consortium under US-Israel Energy Center

Professional Awards, Offers and Recognitions

1998 LSU Engineering Council Professor of the Year Award
2001, 2011 Dow Outstanding Faculty Award
2005 Tiger Athletic Foundation Teaching Award
2007- Malcolm C Jr and Gene Perdue Lowe Distinguished Professor
2011- Longwell-Leonard Family Distinguished Professor
2016 ASME Lewis F Moody Award for most outstanding paper dealing with the practice of fluids engineering
2016 Clayton Award for outstanding mentoring of graduate students

Most important Publications (maximum 10)

- [1] Thompson, K.E., and H.S. Fogler, "Modeling Flow in Disordered Packed Beds from Pore-Scale Fluid Mechanics," *AIChE J.*, **43**(6), 1377 (1997).
- [2] Thompson, K.E., "Pore-Scale Modeling of Fluid Transport in Disordered Fibrous Materials," *AIChE J.* **48**(7), 1369-1389 (2002).
- [3] Al-Raoush, R., K.E. Thompson, and C.S. Willson, "Comparison of network generation techniques for unconsolidated porous media," *Soil Sci. Soc. Am. J.* **67**, 1687-1700 (2003).
- [4] Balhoff, M., and K.E. Thompson, "A macroscopic model for shear-thinning flow in packed beds based on network modeling," *Chem. Eng. Sci.*, **61**, 698-719 (2006).

- [5] Zhang, W., K.E. Thompson, A.H. Reed, and L. Beenken, "Relationship between packing structure and porosity in fixed beds of equilateral cylindrical particles," *Chem. Eng. Sci.* **61**, 8060-8074 (2006).
- [6] Balhoff, M.T., K.E. Thompson, and M.A. Hjortsø, "Coupling pore-scale networks to continuum-scale models of porous media," *Computers and Geosciences*, **33**, 393-410 (2007).
- [7] Thompson, K.E., Willson, C.S., White, C.D., Nyman, S., Bhattacharya, J.P., and A.H. Reed, "Application of a new grain-based reconstruction algorithm to microtomography images for quantitative characterization and flow modeling," *SPE Journal*, **13**(2) 164-176 (2008).
- [8] Bhattad, P., C.S. Willson, and K.E. Thompson, "Effect of network structure on characterization and flow modeling using X-ray micro-tomography images of granular and fibrous porous materials," *Transport in Porous Media*, **90**, 363-391 (2011).
- [9] Sheng, Q. and K.E. Thompson, "A unified pore-network algorithm for dynamic two-phase flow," *Advances in Water Resources*, **95**, 92-108 (2016).
- [10] Anbar, S., K.E. Thompson, and M Tyagi, "The impact of compaction and sand migration on permeability and non-Darcy coefficient from pore-scale simulations," *Transport in Porous Media*, **127**(2) 247-267 (2019).