

Fatemeh Khalkhal

EDUCATION

- Ecole Polytechnique de Montreal, QC, Canada, 2012, PhD, Chemical Engineering.
- Sharif University of Technology, Tehran, Iran, 2003, MSc, Chemical Engineering.
- Sharif University of Technology, Tehran, Iran, 1999, BSc, Chemical Engineering.

PROFESSIONAL POSITIONS AND RANKS HELD

- 2018- Assistant Professor of Mechanical Engineering, SFSU
- 2016-2018 Instructional Faculty, San Francisco State University
- 2014-2016 Postdoc Fellow, University of California, Berkeley
- 2012-2013 Postdoc Fellow, Yale University
- 2006-2011 Graduate Research Assistant, Ecole Polytechnique de Montreal

HONORS AND AWARDS:

- Postdoc Fellowship: Fonds de Recherche du Quebec Nature et Technologies (FQRNT), January 2014 to April 2016, (\$75,000).
- Best poster award: Development of structure-property relationships in carbon nanotube suspensions, Canadian Society of Rheology: Current Topics and Trends in Rheology, Montreal, QC, Canada, June 2011.

TEACHING ASSIGNMENTS

2016 – present

San Francisco State University

- ENGR 304 Mechanics of Fluids (lecture)
- ENGR 467 Heat Transfer (lecture)
- ENGR 364 Materials and Manufacturing Processes (lecture and lab)
- ENGR 610 Engineering Economic Analysis (lecture)
- ENGR 290 Introduction to SolidWorks (lab)

PEER-REVIEWED PUBLICATIONS

Publications with undergraduate students designate students with an asterisk (*).

Publications with graduate students designate students with two asterisks (**).

- **Khalkhal, Fatemeh**, Ajay Singh Negi, James Harrison, Casey D. Stokes, David L. Morgan and Chinedum Osuji (2017), Evaluating dispersant stabilization of colloidal suspensions from the scaling behavior of gel rheology and adsorption measurements, *Langmuir*, [IF: 3.833], 34 (3), 1092-1099.
- **Khalkhal, Fatemeh**, Kendrick Chaney* and Susan Muller (2016), Optimization and application of dry film photoresist for rapid fabrication of high-aspect-ratio microfluidic devices, *Microfluidics and Nanofluidics*, [IF: 2.344] 20 (11), 153.
- Ren, Fang**, Stacy A. Kanaan**, **Fatemeh Khalkhal**, Codruta Zoican Loebick**, Gary L. Haller and Lisa D. Pfefferle (2013), Controlled cutting of single-walled carbon nanotubes and low temperature annealing, *Carbon*, [IF: 6.337], (63), pages 61-70.
- **Khalkhal, Fatemeh** and Pierre J. Carreau (2012) Critical shear rates and structure build-up at rest in MWCNT suspensions, *J. Non-Newtonian Fluid Mechanics*, [IF: 2.536], 171-172, pages 56-66.

- **Khalkhal, Fatemeh** and Pierre J. Carreau (2011) Scaling behavior of the elastic properties of non-dilute MWCNT-epoxy suspensions, *Rheologica Acta*, [IF: 1.767], 50(9), 717-728.
- **Khalkhal, Fatemeh**, Pierre J. Carreau and Gilles Ausias (2011) Effect of flow history on linear viscoelastic properties and the evolution of the structure of MWCNT suspensions in an epoxy, *J. Rheology*, [IF: 3.136], 55(1), 153-175.

THESES

- **Khalkhal, Fatemeh**, Characterization of flow-induced structures in carbon nanotube suspensions, *Ph.D. thesis*, Ecole Polytechnique de Montreal, Montreal, 2011.
- **Khalkhal, Fatemeh**, Modeling and fluid flow analysis in fractured reservoirs, *Master of Applied Science thesis*, Sharif University of Technology, Tehran, 2003.

PEER-REVIEWED CONFERENCES

- Hidema, Ruri, **Fatemeh Khalkhal** and Susan Muller, Optimizing a microfluidic device to produce double emulsions, International Congress on Rheology, Kyoto, Japan, August 2016 (oral presentation).
- **Khalkhal, Fatemeh** and Susan Muller, Dynamics of Double Emulsion Droplets in a Wall-Bounded Shear Flow, American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, November 2015 (oral presentation).
- **Khalkhal, Fatemeh** and Susan Muller, Microfluidic Studies of Emulsions and Suspensions in Wall-Bounded Shear Flow, American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, November 2015 (poster presentation).
- **Khalkhal, Fatemeh** and Chinedum Osuji, Scaling behavior of colloidal gel elasticity in the context of dispersant surface activity, Society of Engineering Science (SES) 50th Annual Technical Meeting, Brown University, Providence, RI, July 2013 (oral presentation).
- **Khalkhal, Fatemeh** and Pierre J. Carreau, Analyzing the kinetics of structure build-up in carbon nanotube suspensions, Proceedings of 18th International Conference on Composite Materials (ICCM18), 21-26 August 2011, Jeju Island, Korea (oral presentation).
- **Khalkhal, Fatemeh** and Pierre J. Carreau, Development of structure-property relationships in carbon nanotube suspensions, Canadian Society of Rheology: Current Topics and Trends in Rheology, Montreal, QC, Canada, June 2011 (poster presentation).
- **Khalkhal, Fatemeh** and Pierre J. Carreau, Flow-induced evolution of the microstructure of MWCNT suspensions at small deformations, 82nd Annual meeting of the Society of Rheology, Santa Fe, NM, October 2010 (oral presentation).
- **Khalkhal, Fatemeh** and Pierre J. Carreau, Transient behavior of carbon nanotube suspensions in an epoxy, 81st Annual Meeting of The Society of Rheology, Madison, WI, October 2009 (oral presentation).
- **Khalkhal, Fatemeh** and Pierre J. Carreau, Effect of flow history on rheology of MWNT-epoxy suspensions, VIII World Congress of Chemical Engineering, Montreal, QC, August 2009 (oral presentation).

INVITED TALKS

- **Khalkhal, Fatemeh**, A new insight into characterization of microstructure of colloidal suspensions, Massachusetts Institute of Technology, Cambridge, MA, November 2013.
- **Khalkhal, Fatemeh**, Application of rheology in efficiency evaluation of engine oil, California Polytechnique State University, Pomona, CA, April 2016.

CONTRIBUTIONS TO CAMPUS AND COMMUNITY

- 2018- Faculty advisor, Society of Women Engineers, SFSU chapter