Sunny S Lou, MD PhD

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EDUCATION

2020- 2022	Barnes Jewish Hospital / Washington University **Fellowship, Adult Cardiothoracic Anesthesiology**	St Louis, MO
2017- 2020	Barnes Jewish Hospital / Washington University **Residency, Anesthesiology** **Internship, Anesthesiology**	St Louis, MO
2009- 2017	Stanford University School of Medicine **M.D., Ph.D.**	Stanford, CA
2005- 2009	Massachusetts Institute of Technology **S.B., Biology**	Cambridge, MA

LICENSES AND CERTIFICATION

2017- present	Missouri State Medical License
2017- present	BLS/ACLS
2017- present	ATLS
2018- present	PALS

HONORS AND AWARDS

2020	**Awardee**, Washington University Big Ideas Healthcare Innovation competition
2019	**Top 10%**, American Board of Anesthesiology BASIC Exam
2009	**Phi Beta Kappa**
2008	**Barry M. Goldwater Scholarship**

RESEARCH

2020- present	**Postdoctoral Research,** Washington University Dept of Anesthesiology Mentor: Thomas Kannampallil, PhD Principle investigator for a longitudinal observational study to measure burnout among resident physicians over time, with the goal to develop a machine learning model to predict burnout from electronic health record usage patterns.
Jan-Mar 2017	**Research Fellow**, Google Health Mentor: Ming Jack Po, MD PhD Exploratory product design for the application of artificial intelligence to medicine. Cleanup and harmonization of electronic health record data.
2010-2017	**Doctoral Research**, Stanford University Dept of Biochemistry Mentor: Julie Theriot, PhD Identified novel biochemical and biophysical mechanisms for large-scale coordination of single-cell migration.

PUBLICATIONS

S.S. Lou, C.W. Goss, B.A. Evanoff, J.G. Duncan, T. Kannampallil (2021) Risk factors associated with physician trainee concern over missed educational opportunities during the COVID-19 pandemic, *submitted*

T. Kannampallil, J. Abraham, **S.S. Lou**, P.R.O. Payne (2020) Conceptual considerations for using EHR-based activity logs to measure clinician burnout and its effects. *Journal of the American Medical Informatics Association*, Dec 22. doi: 10.1093/jamia/ocaa305

M.J. Arcario, **S.S. Lou**, P.N. Taylor, S.H. Gregory (2020) Sinus of Valsalva Aneurysms: A Review with Perioperative Considerations. *Journal of Cardiothoracic and Vascular Anesthesia*, Dec 14. doi: 10.1053/j.jvca.2020.12.016

S.S. Lou, A. Diz-Munoz, O.D. Weiner, D.A. Fletcher, J.A. Theriot (2015) Myosin light chain kinase regulates cell polarization independently of membrane tension or Rho kinase. *Journal of Cell Biology*, Apr 27;209(2):275-88. doi: 10.1083/jcb.201409001.

E.L. Barnhart, J. Allard, **S.S. Lou**, A. Mogilner, J.A. Theriot (2017) Adhesion dependent wave generation in crawling cells. *Current Biology,* Jan 9; (27)1:27-38. doi: 10.1016/j.cub.2016.11.011

T.Y. Tsai, S.R. Collins, C.K. Chan, A. Hadjitheodorou, P.Y. Lam, **S.S. Lou**, H.W. Yang, J. Jorgensen, F. Ellett, D. Irimia, M.W. Davidson, R.S. Fischer, A. Huttenlocher, T. Meyer, J.E. Ferrell Jr, J.A. Theriot (2019) Efficient Front-Rear Coupling in Neutrophil Chemotaxis by Dynamic Myosin II Localization. Developmental Cell, Apr 22;49(2):189-205.e6. doi: 10.1016/j.devcel.2019.03.025.

S.S. Lou, E.F. Koslover, A.S. Kennard, E. Gutierrez, A. Groisman, J.A. Theriot. Elastic wrinkling of keratocyte lamellipodia driven by myosin-induced contractile stress, *manuscript under revision*

E.L. Barnhart, H. Boehm, **S.S. Lou**, Y. Schoen, J.P. Spatz, J.A. Theriot. FAK signaling and myosin contraction are required for persistent movement of highly adherent fish keratocytes, *manuscript under revision*

INVITED TALKS

S.S.Lou, J.A. Theriot (2014) Myosin light chain kinase activity regulates the number of leading edges in zebrafish embryonic keratocytes. *Biophysical Society Abstracts*, 106, 2:1, 1236-Plat; doi: 10.1016/j.bpj.2013.11.1429. (Invited oral presentation)

TEACHING EXPERIENCE

2014	**Teaching Assistant** for MCP 222, a graduate course in light microscopy, Stanford University.
2010-2012	**Teaching Assistant** for INDE 216, a first year medical school course in cell biology and histology, Stanford University.
2008	**Instructor**, MIT Educational Studies Program, developed and taught a short course on cancer biology for high school students.
2007	**Teaching Assistant** for 5.07 Biochemistry, Massachussetts Institute of Technology.