Steven Atkinson

Education and Training:

B.S., Mechanical Engineering, University of Notre Dame, 2011
M.A., Mechanical Engineering, Princeton University, 2013
Ph.D., Mechanical Engineering, Princeton University, 2016

Employment History:

Undergraduate research assistant; University of Notre Dame; Notre Dame, IN; 2009-2011
Software developer; Gigamax Technologies; Eden Prairie, MN; Summer 2011
Graduate research assistant; Princeton University; Princeton, NJ; 2012-2016
Postdoctoral research associate; University of Notre Dame; Notre Dame, IN; 2016-2018
Research engineer; GE Research; Niskayuna, NY; 2018-2020
Lead engineer; GE Research; Niskayuna, NY; 2018-2020

Peer-reviewed Publications Related to the Proposed Project:

1. Sayan Ghosh, Piyush Pandita, Steven Atkinson, Waad Subber, Yiming Zhang, Natarajan Chennimalai Kumar, Suryarghya Chakrabarti, and Liping Wang. “Advances in Bayesian Probabilistic Modeling for Industrial Applications” ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems Part B: Mechanical Engineering 6, no. 3 (2020).
2. Steven Atkinson, Sayan Ghosh, Natarajan Chennimalai Kumar, Genghis Khan, Liping Wang. “Bayesian Task Embedding for Few-shot Bayesian Optimization”, in AIAA SciTech Forum 2020, Orlando, Florida.
3. Steven Atkinson, Waad Subber, Liping Wang, Genghis Khan, Philippe Hawi, and Roger G. Ghanem. “Data-driven discovery of free-form governing differential equations” in the Second Workshop on Machine Learning and the Physical Sciences (NeurIPS 2019), Vancouver, Canada.
4. Steven Atkinson and Nicholas Zabaras. "Structured Bayesian Gaussian process latent variable model: Applications to data-driven dimensionality reduction and high-dimensional inversion." Journal of Computational Physics 383 (2019): 166-195.

Peer-reviewed Publications Demonstrating Capabilities in the Broad Field

1. Steven Atkinson, Frank H. Stillinger, and Salvatore Torquato. "Static structural signatures of nearly jammed disordered and ordered hard-sphere packings: Direct correlation function." Physical Review E 94, no. 3 (2016): 032902.
2. Steven Atkinson, Ge Zhang, Adam B. Hopkins, and Salvatore Torquato. "Critical slowing down and hyperuniformity on approach to jamming." Physical Review E 94, no. 1 (2016): 012902.
3. Steven Atkinson, Frank H. Stillinger, and Salvatore Torquato. "Existence of isostatic, maximally random jammed monodisperse hard-disk packings." Proceedings of the National Academy of Sciences 111, no. 52 (2014): 18436-18441.
4. Steven Atkinson, Frank H. Stillinger, and Salvatore Torquato. "Detailed characterization of rattlers in exactly isostatic, strictly jammed sphere packings." Physical Review E 88, no. 6 (2013): 062208.
5. Andrew Gillman, Karel Matouš, and Steven Atkinson. "Microstructure-statistics-property relations of anisotropic polydisperse particulate composites using tomography." Physical Review E87, no. 2 (2013): 022208.
6. Steven Atkinson, Yang Jiao, and Salvatore Torquato. "Maximally dense packings of two-dimensional convex and concave noncircular particles." Physical Review E 86, no. 3 (2012): 031302.

Non-peer-reviewed Publications and Patents Demonstrating Capabilities in the Broad Field

1. Steven Atkinson. “Bayesian Hidden Physics Models: Uncertainty Quantification for Discovery of Nonlinear Partial Differential Operators from Data” arXiv preprint arXiv:2006.04228 (2020).
2. Steven Atkinson and Nicholas Zabaras. "Structured Bayesian Gaussian process latent variable model." arXiv preprint arXiv:1805.08665 (2018).