Miru Lee

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Education

Feb 2019 - July 2022	**Doctoral studies**, University of Göttingen, Göttingen, Germany
Oct 2016 - Oct 2018	**M.Sc. in Physics**, University of Stuttgart, Stuttgart, Germany Master's Thesis: "Computer Simulation of Bacterial Dynamics in Porous Media Flow"
Mar 2013 - Dec 2016	**B.Sc. in Physics** (cont.), Inha University, Incheon, South Korea Bachelor's Thesis: "Design of Two-Channel Perfect Coherent Absorption"
Mar 2009 - Dec 2009	Inha University, Incheon, South Korea (break due to conscription)

Research Experiene

Feb 2019 - July 2022	**Doctoral candidate**, Institute for Theoretical Physics, University of Göttingen Stochastic field theory of viscoelastic solids: a quantitative study of phononic friction
Oct 2017 - Oct 2018	**Research student**, Institute for Computational Physics, University of Stuttgart Dynamics of microswimmers in porous media: effects of the run and tumble motion
Mar 2014 - Jun 2014	**Research student**, Thin Film Optics Lab., Inha University Governing equations of two-channel perfect coherent absorption for thin films

Publications

2022	Niklas Weber, Miru Lee, Richard L. C. Vink, Vasily Moshnyaga, Matthias Krüger, and Cynthia A. Volkert. *In preparation*, 2022
May 2022	Miru Lee, Niklas Weber, Cynthia A. Volkert, and Matthias Krüger. Friction on layered media: How deep do phonons reach? *arxiv:2205.01151*, 2022
Nov 2021	Miru Lee, Richard L. C. Vink, Cynthia A. Volkert, and Matthias Krüger. Noncontact friction: Role of phonon damping and its nonuniversality. *Physical Review B*, 104(17):174309, 2021
Nov 2020	Miru Lee, Christoph Lohrmann, Kai Szuttor, Harold Auradou, and Christian Holm. The influence of motility on bacterial accumulation in a microporous channel. *Soft Matter*, 17(4):893–902, 2021

Jun 2020	Miru Lee, Richard L. C. Vink, and Matthias Krüger. Spatially resolved atomic-scale friction: Theory and simulation. *Physical Review B*, 101(23):235426, 2020
May 2019	Miru Lee, Kai Szuttor, and Christian Holm. A computational model for bacterial run-and-tumble motion. *The Journal of Chemical Physics*, 150(17):174111, 2019

Scholarships

Oct 2016 - Mar 2018	IMPRS Fellowship Scholarship, International Max Planck Research School for Condensed Matter Science
Mar 2014 - Dec 2015	Honor Student Scholarship, Inha University

Teaching experience

Oct 2021 - Mar 2022	Supervision of a bachelor student University of Göttingen, Göttingen, Germany
Apr 2021 - Sep 2021	Supervision of a bachelor student University of Göttingen, Göttingen, Germany
Apr 2020 - Sep 2020	Teaching assistant on "Renormalization group and application" University of Göttingen, Göttingen, Germany
Oct 2019 - Mar 2020	Teaching assistant on "Advanced statistical physics" University of Göttingen, Göttingen, Germany
Aug 2015 - Dec 2015	Teaching assistant on "Electrodynamics" Inha University, Incheon, South Korea
Mar 2015 - Jun 2015	Teaching assistant on "General Physics" Inha University, Incheon, South Korea

Skills

Python, LAMMPS, Mathematica, LaTeX, git, PyTorch

Languages

Korean (native), English (professional)

Side projects

Discounted free cash flow calculator
Evaluate a company's intrinsic value. Written in Python.

Social service

Sep 2010 - Sep 2012	Social Service Military Manpower Administration, South Korea.