

Miru Lee

mirulee@mail.com | [My Webpage](#) | [LinkedIn](#) | [GitHub](#) | [Google Scholar](#)

Education

- Feb 2019 - Jul 2022 **Ph.D. in Physics**, University of Göttingen, Göttingen, Germany
Doctoral Thesis (defended on 23.06.2022): “Stochastic field theory of viscoelastic solids: a quantitative study on phononic friction”
- 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**, Inha University, Incheon, South Korea
Bachelor’s Thesis: “Design of Two-Channel Perfect Coherent Absorption”

Research Experience

- Feb 2019 - Jul 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, PyTorch, git, LAMMPS, Mathematica, \LaTeX

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.