

# Miru Lee

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## Education

Feb 2019 -	<b>Doctoral studies</b> , University of Göttingen, Göttingen, Germany
Oct 2016 - Oct 2018	<b>M.Sc. in Physics</b> , University of Stuttgart, Stuttgart, Germany Master's Thesis: "Computer Simulation of Bacterial Dynamics in Porous Media Flow"
Mar 2013 - Dec 2016	<b>B.Sc. in Physics</b> (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 Experience

Feb 2019 -	<b>Doctoral candidate</b> , Institute for Theoretical Physics, University of Göttingen Stochastic field theory of viscoelastic solids: a quantitative study of phononic friction
Oct 2017 - Oct 2018	<b>Research student</b> , Institute for Computational Physics, University of Stuttgart Dynamics of microswimmers in porous media: effects of the run and tumble motion
Mar 2014 - Jun 2014	<b>Research student</b> , 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. <i>In preparation</i> , 2022
May 2022	Miru Lee, Niklas Weber, Cynthia A. Volkert, and Matthias Krüger. Friction on layered media: How deep do phonons reach? <i>arxiv:2205.01151</i> , 2022
Nov 2021	Miru Lee, Richard L. C. Vink, Cynthia A. Volkert, and Matthias Krüger. Noncontact friction: Role of phonon damping and its nonuniversality. <i>Physical Review B</i> , 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. <i>Soft Matter</i> , 17(4):893–902, 2021

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