

CONTACT INFORMATION	726 Broadway, Office 935 New York, NY 10003	Email: <a href="mailto:nanoom.lee@nyu.edu">nanoom.lee@nyu.edu</a> Webpage: <a href="https://github.com/nanoomlee">nanoomlee.github.io</a>
RESEARCH INTERESTS	<i>Topics</i> : Data-driven Cosmology, CMB, Recombination, SZ effect, Large-scale Structure, Redshift-space distortion, Dark Matter, Dark Matter-Baryon Scattering, 21cm <i>Methodologies</i> : Theoretical/mathematical modeling, Statistical analysis, Computations	
EDUCATION	<b>New York University</b> , New York, NY Ph.D. in Physics (Focused on Cosmology/Astrophysics) Jan 2025 (expected) • Ph.D advisor: Prof. Yacine Ali-Haïmoud & Prof. Roman Scoccimarro <b>State University of New York, Stony Brook</b> , Stony Brook, NY M.A. in Physics May 2018 <b>Korea University</b> , Seoul, South Korea B.S. in Physics and Mathematics (Double Major) Feb 2016 • First rank in class	
HONORS AND AWARDS	Roman Galaxy Redshift Survey Postdoc (Caltech/PI:Dr.Yun Wang/Declined) 2024 Beus Prize Postdoctoral Fellowship (Arizona State University/finalist/2nd place) 2024 James Arthur Graduate Associate Fellowship 2020 - 2021, 2022 - 2023 Balzan Cosmological Studies Program Award (by Oxford/JHU) 2022 Outstanding Graduate Student Instructor Award 2019 - 2020 <b>Korean Government Scholarship for Overseas Study</b> 2016 - 2018 • \$80k First Rank Graduation Award Spring 2016 Boheon Scholarship Spring 2012 - Spring 2013, Fall 2015 • One student nominated from each college in Korea University, Full tuition National Scholarship Spring 2012 - Fall 2012	
TECHINICAL SKILLS	<i>Programming</i> : Python, C, Mathematica, HPC <i>Research tools</i> : CLASS, MontePython, Multinest, emcee <i>In progress</i> : Machine Learning (Linear regression & Neural Network), Stochastic Calculus	
PUBLICATIONS	<a href="#">Google Scholar</a> - 6 first-authored publications, h-index 5, $\sim 120$ citations. - 1 first-authored and 1 second-authored papers in preparation <ol style="list-style-type: none"> <li>1. <b>N. Lee</b> and Y. Ali-Haïmoud “Magnetic field from primordial perturbations” <i>Phys.Rev.D</i> 109, 103536 (2024)</li> <li>2. <b>N. Lee</b> and S. C. Hotinli “Probing light relics through cosmic dawn” <i>Phys.Rev.D</i> 109, 043502 (2024)</li> <li>3. <b>N. Lee</b>, Y. Ali-Haïmoud, N. Schöneberg, V. Poulin “What it takes to solve the Hubble tension through modifications of cosmological recombination” <i>Phys.Rev.Lett.</i> 130,161003 (2023)</li> <li>4. <b>N. Lee</b>, S. C. Hotinli, M. Kamionkowski “Probing cosmic birefringence with Polarized Sunyaev Zel’dovich Tomography” <i>Phys.Rev.D</i> 106, 083518 (2022)</li> </ol>	

5. **N. Lee** and Y. Ali-Haïmoud “Probing small-scale baryon and dark matter isocurvature perturbations with cosmic microwave background anisotropies” *Phys.Rev.D* 104, 103509 (2021)
6. **N. Lee** and Y. Ali-Haïmoud “HYREC-2: a highly accurate sub-millisecond recombination code” *Phys.Rev.D* 102, 083517 (2020)
7. B. Min, S. H. Gwak, **N. Lee**, K. I. Goh “Layer-switching cost and optimality in information spreading on multiplex networks” *Scientific Report* 6, 21392 (2016)

In preparation

1. A. Eggemeier, **N. Lee**, R. Scoccimarro, et al. “Improving galaxy clustering predictions with non-perturbative pairwise velocity statistics”
2. **N. Lee**, Y. Ali-Haïmoud, and M. Braglia “Can inflation solve the Hubble tension?”

PUBLIC CODE	HYREC-2: a highly accurate sub-millisecond recombination code - available at <a href="https://github.com/nanoomlee/HYREC-2">github.com/nanoomlee/HYREC-2</a>		
SERVICE	Referee, Journal of Cosmology and Astroparticle Physics (JCAP) Referee, Astronomy & Astrophysics (A&A)		
TEACHING ASSISTANT	General Physics I Lab (undergrad) Electricity & Magnetism I (undergrad) Mathematical Physics (undergrad)	Spring 2024 Fall 2019, Fall 2021 Spring 2019, Spring 2020	
TALKS	Perimeter Institute, Waterloo PONT conference, Avignon LUPM, Montpellier AAS 241st Meeting (iPoster), Seattle Cosmology from Home (remote) Particle Astro/Cosmo Meeting Around NYC (PACMAN) at CCA Brown Bag, New York University NYU-CCA X Data Science meeting	Jan 2024 April 2023 April 2023 Jan 2023 July 2022 May 2022 April 2022 May 2021	
REFERENCES	<p><b>Yacine Ali-Haïmoud</b> Associate Professor Department of Physics New York University Phone: (212) 992-8781 E-mail: <a href="mailto:yah2@nyu.edu">yah2@nyu.edu</a> <a href="https://cosmo.nyu.edu/yacine/">https://cosmo.nyu.edu/yacine/</a></p> <p><b>Roman Scoccimarro</b> Professor Department of Physics New York University Phone: (212) 992-8786 E-mail: <a href="mailto:rs123@nyu.edu">rs123@nyu.edu</a> <a href="https://cosmo.nyu.edu/roman/">https://cosmo.nyu.edu/roman/</a></p> <p><b>Marc Kamionkowski</b> William R. Kenan Jr. Professor Department of Physics and Astronomy Johns Hopkins University Phone: (410) 516-0373 E-mail: <a href="mailto:kamion@jhu.edu">kamion@jhu.edu</a> <a href="http://kamion.pha.jhu.edu/Home.html">http://kamion.pha.jhu.edu/Home.html</a></p>		