

Gheehyun Nahm

Education	Princeton University Ph.D. candidate in Mathematics	2023 – present
	University of Cambridge (Trinity College) 2019 – 2021: leave for mandatory national service BA+MMath; Part II (2022): Class I, rank: 1 st /243; Part III (2023): Distinction, rank: 1 st /282	2017 – 2023
	Seoul National University Left after one semester; Major in Mathematics	2017
Research	An irreducible real projective plane in the 4-sphere (with Mark Hughes, Seungwon Kim, and Maggie Miller). arXiv:2605.12921	
	Basepoints in Khovanov homology and nonorientable surfaces. arXiv:2605.08457	
	Knotting and linking in 4 and 5 dimensions from barbell diffeomorphisms (with Seungwon Kim and Alison Tatsuoka). arXiv:2603.20130	
	Brunnian links of 3-balls in the 4-sphere (with Seungwon Kim and Alison Tatsuoka). arXiv:2603.06554	
	The Rasmussen s -invariant and exotic 4-manifolds. arXiv:2602.20138	
	Rational surgery exact triangles in Heegaard Floer homology. arXiv:2601.06654	
	Khovanov homology can distinguish exotic Mazur manifolds. arXiv:2510.10809	
	Spectral sequences in unoriented link Floer homology. arXiv:2505.01914	
	An unoriented skein exact triangle in unoriented link Floer homology. arXiv:2501.01047	
Invited Talks	PCMI Research Program: Knotted Surfaces in Four-Manifolds	July 2026
	University of Oxford, Junior Topology and Group Theory Seminar	May 2026
	AMS Special Session on Topology, Gauge Theory, and Special Geometric Structures	Mar 2026
	AMS Special Session on Sheaf-Theoretic and Floer-Theoretic Approaches to Contact and Symplectic Topology	Mar 2026
	UC Berkeley, Topology Seminar	Feb 2026
	Joint IAS/Princeton University Symplectic Geometry Seminar	Nov 2025
	London Low Dimensional Topology Seminar (online)	Nov 2025
	Stanford University, Topology Seminar	Oct 2025
	California Institute of Technology, Geometry & Topology Seminar	Oct 2025
	ICTP Conference on Modern Developments in Low-Dimensional Topology	June 2025
	Duke University, Geometry/Topology Seminar	May 2025
	University of Oregon, Topology/Geometry Seminar	Feb 2025

Selected Honors	Centennial Fellowship, Princeton University	2023 – 2027
	ILJU Fellowship, ILJU Academy and Culture Foundation	2023 – 2028
	Pure Mathematics Prize, University of Cambridge	2023
	Leslie Walshaw Award, Trinity College	2023
	Ver Heyden de Lancey Prize, Trinity College	2022
	Presidential Science Scholarship, Republic of Korea <i>2019 – 2021: leave for mandatory national service</i>	2017 – 2023
Service	Princeton University Student Topology Seminar Organizer (Spring 2024, Fall 2024, Spring 2025); Co-organizer (Fall 2025, Spring 2026)	Spring 2024 – present
	Princeton University Topology Reading Seminar Co-organizer (Spring 2024 Khovanov homology and related topics); Organizer (Fall 2024 Topics in Heegaard Floer homology, Fall 2025 New constructions of closed 4-manifolds)	Spring 2024, Fall 2024, Fall 2025
	International Mathematical Olympiad (IMO) 2019: Language Consultant; 2022, 2024, 2025: Coordinator	2019, 2022, 2024, 2025
	KAIST Advanced Mathematics Camp Teaching assistant; Probability and measure theory	2016
Languages	Korean (native), English, Mandarin Chinese, Japanese (漢検 準2級)	