

JIANRU DUAN

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EDUCATION	Peking University <i>Ph.D. Mathematics</i> • Advisor: Prof. Yi Liu Peking University <i>B.S. Mathematics</i>	Beijing, China 2021 – 2026 (<i>expected</i>) Beijing, China 2017 – 2021
RESEARCH INTERESTS	Topology of 3-manifolds L^2 -theory and geometric group theory	
PREPRINTS AND PUBLICATIONS	<ol style="list-style-type: none">1. Universal L^2-torsion and taut sutured decompositions. Preprint available at https://duan-jianru.github.io/.2. Guts determine the leading coefficients of L^2-Alexander torsions. <i>Trans. Amer. Math. Soc.</i> 378 (2025), 3699–3720.3. On the positivity of twisted L^2-torsion for 3-manifolds. <i>Algebr. Geom. Topol.</i> 24 (2024), 2307–2329.	
AWARDS AND HONORS	<ul style="list-style-type: none">• BICMR Mathematical Award for Graduate Students• Peking University President’s Scholarship• National Scholarship for Graduate Student• Huaixin Bachelor (BICMR)• Peking University President’s Scholarship• Outstanding Student Award of Beijing• National Scholarship for Undergraduate Student	2025–2026 2023–2025 2023 2021 2021 2020 2018
INVITED TALKS	<ul style="list-style-type: none">• The 11th Sino-Russian Conference on Knot Theory and Related Topics at Xi’an Jiaotong-Liverpool University, Suzhou, July 2025.• Geometric Group Theory Seminar at Shanghai Center for Mathematical Sciences, Fudan University, May 2025.• Caltech Geometry & Topology Seminar, April 2025.• Rutgers Geometry & Topology Seminar, February 2025.• Topology Seminar at UC Berkeley, January 2025.• Gave a talk at South China University of Technology, Guangzhou, June 2024.• YMSC Topology Seminar at YMSC, Tsinghua University, April 2024.	

ACADEMIC
SERVICES

Teaching assistant of Homology Theory in 2021 Spring
Teaching assistant of Low Dimensional Topology 2022 Fall
Teaching assistant Homology Theory in 2024 Spring
Student editor of Front. Math., 2023–2024