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目前职位

哈佛大学数学系
本杰明 · 皮尔斯研究员
（博士后）

教育经历

剑桥大学 纯数学与数理统计系，纯数学专业，博士
2019 年 10 月-2022 年 7 月，英国剑桥，导师：Jacob Rasmussen

北京大学 数学科学学院，数学与应用数学专业，学士
2015 年 9 月-2019 年 7 月，中国北京，导师：刘毅

工作经历

哈佛大学 数学系，本杰明 · 皮尔斯研究员（博士后）
2022 年 7 月-至今，美国剑桥，导师：Peter Kronheimer

研究方向

低维拓扑，特别是纽结理论、规范场论与 Floer 同调

已发表文章及预印本

[1] 2-torsion in instanton Floer homology Joint with Zhenkun Li, accepted by Adv. Math., arXiv:2405.16252.
[2] Knot surgery formulae for instanton Floer homology II: applications
Joint with Zhenkun Li, Math. Ann., published online. DOI: 10.1007/s00208-024-03074-6.
[3] Guts of nearly fibered knots Joint with Zhenkun Li, accepted by Algebr. Geom. Topol., arXiv:2208.05382.
[4] Knot surgery formulae for instanton Floer homology I: the main theorem
Joint with Zhenkun Li, accepted by Geom. Topol., arXiv:2206.10077.
[5] Small Dehn surgery and SU(2) Joint with John A. Baldwin, Zhenkun Li, and Steven Sivek,
Geom. Topol. 28(4): 1891–1922 (2024). DOI:10.2140/gt.2024.28.1891, arXiv:2110.02874.
[6] SU(2) representations and a large surgery formula
Joint with Zhenkun Li, submitted, arXiv:2107.11005.
[7] An enhanced Euler characteristic of sutured instanton homology
Joint with Zhenkun Li, IMRN 2024(4): 2873-2936 (2023). DOI:10.1093/imrn/rnad066, arXiv:2107.10490.
[8] Instanton Floer homology, sutures, and Euler characteristics
Joint with Zhenkun Li, Quantum Topol. 14 (2): 201–284 (2023). DOI:10.4171/QT/182, arXiv:2101.05169.
[9] Sutured instanton homology and Heegaard diagrams
Joint with John A. Baldwin and Zhenkun Li
Compos. Math. 159(9), 1898-1915 (2023). DOI:10.1112/S0010437X23007303, arXiv:2011.09424.
[10] Instanton Floer homology, sutures, and Heegaard diagrams
Joint with Zhenkun Li, J. Topol. 15(1): 39-107 (2022). DOI:10.1112/topo.12218, arXiv:2010.07836.
[11] Constrained knots in lens spaces
Algebr. Geom. Topol. 23(3): 1097–1166 (2023). DOI:10.2140/agt.2023.23.1097, arXiv:2007.04237.
[12] Ph.D. Thesis, New techniques in calculation of sutured instanton Floer homology: by Heegaard diagrams, Euler characteristics, and Dehn surgery formulae DOI:10.17863/CAM.85094.