

Zhipeng Duan

Updated March 2, 2026

Email: zhipeng@nju.edu.cn

Website: <https://zhipeng1223.github.io>

Address: Wenyuan Road No.1,

Nanjing, JiangSu Province, China

Research interests Stable homotopy theory and combinatorial topology, with a focus on computational problems.

Education

University of Copenhagen Denmark
PhD in Mathematics 09 2017 – 12 2020
Advisor: Professor Jesper Møller.

University of Copenhagen Denmark
MA in Mathematics 09 2015 – 08 2017
Advisor: Professor Jesper Grodal.

Jilin University China
BA in Mathematics 08 2011 – 07 2015
Advisor: Professors Yunhe Sheng.

Publications

Vanishing lines in chromatic homotopy theory
Zhipeng Duan, Guchuan Li, Xiaolin Danny Shi.
Geometry & Topology 29 (2025), 903–930.
DOI: 10.2140/gt.2025.29.903

RO(G)-Graded Homotopy Fixed Point Spectral Sequence for Height 2 Morava E-Theory
Zhipeng Duan, Hana Jia Kong, Guchuan Li, Yunze Lu, Guozhen Wang.
Peking Math J, 2024
DOI: 10.1007/s42543-024-00087-7

Equivariant Euler Characteristics of Subgroups complexes of Symmetric Groups
Zhipeng Duan.
Annals of Combinatorics, 27, 67–85 (2023).
DOI: 10.1007/s00026-022-00630-2

Preprints

Periodicity and finite complexity in higher real K-theories
Zhipeng Duan, Mike Hill, Guchuan Li, Yutao Liu, XiaoLin Danny Shi, Guozhen Wang and Zhouli Xu.
arxiv.2512.01161

Moduli spaces of trees and complexes of not 2 connected graphs

Gregory Arone, Zhipeng Duan, Guchuan Li.

First draft available upon request.

Invited talks

On computations of Hill–Hopkins–Ravenel theories Nov. 2025

Topology Seminar, Tianjin University

Periodicities and vanishing lines in higher Jun. 2025

real K -theories

Topology Seminar, Zhejiang University

Picard groups of higher real K -theories Mar. 2025

Geometric topology and their related topics, TSIMF

Moduli spaces of trees and complexes of not Jun. 2024

2 connected graphs

Topology Seminar, Peking University

Periodicities and vanishing lines in higher Jun. 2024

real K -theories

Topology Seminar, AMSS

Moduli spaces of trees and complexes of not Dec. 2023

2 connected graphs

Topology Seminar, Southern University of Science and Technology

Vanishing lines in chromatic homotopy theory Aug. 2022

and its applications

8th Young Topology Scholars Forum, Tongliao

Vanishing lines in chromatic homotopy theory Mar. 2022

and its applications

Double Wednesday Seminar, Nanjing Normal University

Moduli spaces of trees and complexes of not Dec. 2020

2 connected graphs

East Lake International Forum for Outstanding Overseas

Young Scholars

Contributed talks

Introduction to equivariant stable homotopy theory Aug. 2023

Iwoat Summer School 2023, BIMSA

Introduction to equivariant algebraic topology Aug. 2023

Iwoat Summer School 2023, BIMSA

Morava K -theories and Morava E -theories Aug. 2022

Iwoat Summer School 2022, Online

Complex cobordism MU and $E_*(MU)$ Aug. 2022

Iwoat Summer School 2022, Online

Adams spectral sequences and the homotopy groups of MO Dec. 2018

Topics in Algebraic Topology, University of Copenhagen

Serre's calculations on homotopy groups of spheres Nov. 2018

Topics in Algebraic Topology, University of Copenhagen

Cobordisms and the Thom-Pontragin construction Dec. 2017

Topics in Algebraic Topology, University of Copenhagen

Teaching experience

Instructor

Nanjing Normal University

Probability and Statistics II	Spring 2026
Modern Algebra (joint with Prof. Haiyan Zhou)	Spring 2026
Linear Algebra	Fall 2025
Differential Geometry	Fall 2025
Advanced Mathematics II	Spring 2025
Advanced Mathematics I	Fall 2024
Advanced Mathematics II	Spring 2024
Advanced Mathematics I	Fall 2023
Advanced Mathematics II	Spring 2023
Advanced Mathematics I	Fall 2022
Advanced Mathematics II	Spring 2022

Teaching Assistant

Nanjing Normal University

Modern Algebra	Fall 2021
Advanced Algebra II	Spring 2021

University of Copenhagen

Advanced Linear Algebra	Fall 2019
Advanced Linear Algebra	Fall 2018

Service

Young Topologists Meeting 2018	July 2018
One of the organizers, responsible for the on-site arrangement and coordination of the conference.	