Jingyuan Zhu

233 Rue Pierre de Coubertin ⋄ Bures sur Yvette, 91440

+33 7 44 88 65 54 ⋄ jingyuan.zhu@universite-paris-saclay.fr ⋄ zhujy19@gmail.com

Personal webpage (under construction): https://jingyuan-zhu.com/

EDUCATION

Master of Science   August 2023 - present
Faculté des Sciences, Orsay, France
Université Paris-Saclay

Bachelor of Science   August 2019 - June 2023
Department of Mathematical Sciences, Beijing, China
Tsinghua University, CGPA: 3.76/4.00

HSC   September 2016 - June 2019
Yueqing Zhilin High School, Wenzhou, China

SSC   September 2013 - June 2016
Yuecheng Public Boarding School, Wenzhou, China

RESEARCH INTERESTS

Algberaic Topology, Homotopical Algebra, Stable Homotopy Theory, Higher Categories and Operad Theory.

INTERNSHIP/TRAININGS

C_2-∞-categorical generalisation of THR and topological derivation   March 2024 - present
Master thesis
· This thesis generates THR to the case of $\mathbb{E}_\sigma$ algebra in C_2-∞-category, using equivariant factorisation homology, and seeks to give the equivariant version of topological derivation and its relationship with THR.

Nielsen Realisation Problem   October 2022 - June 2023
Undergraduate Thesis Project
· Undergraduate Dissertation
· Investigated Teichmüller theory and Teichmüller geometry, mapping class group, and MMM classes; derived several representational results regarding Nielsen realisation problem

Morse Theory and its Applications   April 2022 - January 2023
Major Project as a part of a curriculum named Research Training Program
· A Project of researching nature in collaboration with Zhongxian Cao
· Explored the major content of Morse theory, deriving a proof of Bott periodicity theorem for U and O

A Report on Removable Singularities in Yang–Mills Fields   December 2022 - January 2023
Minor Project as a part of curriculum
· A Report of an article by Karen K. Uhlenbeck

A Report on the Existence of Harmonic Diffeomorphism from $\mathbb{C}$ to $\mathbb{D}$ November 2021 - December 2021
Minor Project as a part of curriculum
· A Report of an article by P. Collin and H. Rosenberg, in collaboration with Jianqiao Shang et al.
· Disproved Schoen's conjecture that there does not exist a harmonic diffeomorphism from $\mathbb{C}$ to $\mathbb{D}$

HONORS/AWARDS

Sophie Germain Scholarship	*2023–2024*
Tsinghua XueTang Mathematics Program Scholarship	*2021–2023*
S.-T. Yau College Student Mathematics Contest 2022, Geometry and Topology, reward of excellence	*2022*
S.-T. Yau College Student Mathematics Contest 2022, Algebra and Number Theory, reward of excellence	*2022*
S.-T. Yau College Student Mathematics Contest 2021, Algebra and Number Theory, reward of excellence	*2021*

LANGUAGES

Chinese (mother tongue), English (C1), French (A2), Japanese (N4)

DECLARATION

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.