

# Zhilong Xue

## Curriculum Vitae

(Oct. 2025)

### Personal Details

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Name: Zhilong Xue  
Date of Birth: September, 1998  
Nationality: Chinese  
Website: <https://www.zhilongxue.cn>  
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Address: Academy of Mathematics and Systems Science, Chinese Academy of Science, 100190, Beijing, China

### Research Interests

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Analysis and partial differential equations

### Employment

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Jul. 2025 — present    **Post-doc Researcher**, Chinese Academy of Science  
Mentor: Quoc-Hung Nguyen

### Education

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Sep. 2020—Jun. 2025    **Beijing Normal University**, PhD in mathematics    **Supervisor:** Liutang Xue  
Sep. 2016—Jun. 2020    **Chang'an University**, BS in mathematics

### Research Stays

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Oct. 2023 — Oct. 2024    **Visiting PhD student**, University of Seville, Spain  
Supervisor: Francisco Gancedo  
Funded by China Scholarship Council (No. 202306040124)  
Sep. 2024 — Oct. 2024    **Visiting PhD student**, University of Granada, Spain  
Host: Claudia García

### Publications and Preprints

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- Changhui Tan, Liutang Xue, and Zhilong Xue. *A revisit of patch solutions for the 2D Loglog-Euler type equation*. arXiv:2510.18759.
- Taoufik Hmidi, Liutang Xue, and Zhilong Xue. *Doubly connected V-states in geophysical models: a general framework*. arXiv:2504.08143.
- Qianyun Miao, Changhui Tan, Liutang Xue, and Zhilong Xue. *Local regularity and finite-time singularity for a class of generalized SQG patches on the half-plane*. arXiv:2410.19273.
- Taoufik Hmidi, Liutang Xue, and Zhilong Xue. *Unified theory on V-states structures for active scalar equations*. arXiv:2312.02874.
- Taoufik Hmidi, Liutang Xue, and Zhilong Xue. *Emergence of time periodic solutions for the generalized surface quasi-geostrophic equation in the disc*. *Journal of Functional Analysis* **285** (2023), no. 10, Paper No. 110142.

### Invited Talks

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16/10/2024    PhD seminar, IMUS, University of Seville, Spain  
21/03/2024    Ecuaciones Diferenciales seminar, IMAG, University of Granada, Granada, Spain  
13/11/2023    Fluid Conversations seminar, IMUS, University of Seville, Spain

## Conferences

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- Jul. 2025 *Mathematical theory on Navier-Stokes equation*, Peking University, China
- Jun. 2025 *Advances in Mathematical Fluid Dynamics*, Peking University, China
- Nov. 2024 *Mixing, enhanced dissipation and stability effects in fluid dynamics*, Kunming, China
- Jul. 2024 *Alhambra PDE days*, IMAG, University of Granada, Spain
- Jul. 2024 *9th European Congress of Mathematics*, University of Seville, Spain

## Awards

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- Dec. 2023 First-class Scholarship, Beijing Normal University, China
- Jul. 2023 Scholarship for study abroad, China Scholarship Council, China
- Dec. 2022 First-class Scholarship, Beijing Normal University, China
- Dec. 2021 First-class Scholarship, Beijing Normal University, China
- Dec. 2019 National Scholarship for undergraduate students, Ministry of Education of China, China