



MIN ZHAO

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RESEARCH INTERESTS

- Partial differential equations and dynamic systems
Reaction-diffusion equations, Nonlocal problems, Traveling waves, Spreading speed
- Biomathematics
Prey-predator system, Nonlinear differential equation, Epidemic model
- Stochastic theory and process
Brownian motion, Ergodic, Lévy process

SCIENTIFIC EDUCATION

09/2024–present	Postdoctoral researcher, Institut de Mathématiques de Toulouse Université de Toulouse, France <i>Supervisors:</i> Dr. Grégory Faye and Prof. Jean-Michel Roquejoffre
09/2019–06/2023	Ph.D., Fundamental mathematics of Beijing Normal University, China <i>Title:</i> Propagation dynamics of nonlocal versus local diffusion equations <i>Supervisor:</i> Prof. Rong Yuan <i>Defended on</i> 03 June 2023
09/2021–09/2022	Joint training doctoral student, Applied mathematics (China Scholarship Council, No. 202006040239) <i>Supervisors:</i> Prof. Pierre Magal, University of Bordeaux, France
09/2016–06/2019	Master degree, Mathematics of Taiyuan University of Technology, China <i>Supervisor:</i> Prof. Xiaoyun Wang
09/2011–06/2015	Bachelor degree, Mathematics and Applied Mathematics Shanxi Datong University, China

RESEARCH PUBLICATIONS

• Publications

1. H. Li, **M. Zhao**, R. Yuan, Traveling wave in a ratio-dependent Holling–Tanner system with nonlocal diffusion and strong Allee effect, *Nonlinear Analysis: Real World Applications*, 84 (2025), 104327. [\(PDF\)](#)
2. Q. Griette, P. Magal, **M. Zhao**, Traveling waves with continuous profile for hyperbolic Keller–Segel equation, *European Journal of Applied Mathematics*, (2024), 1–29. [\(PDF\)](#)
3. **M. Zhao**, R. Yuan, The persistence of solutions in a nonlocal predator–prey system with a shifting habitat, *Acta Mathematica Scientia*, 44 (2024), 1096–1114. [\(PDF\)](#)
4. H. Li, **M. Zhao**, R. Yuan, Traveling waves of modified Leslie–Gower predator–prey systems, *International Journal of Biomathematics*, (2024), 2350107. [PDF](#)
5. **M. Zhao**, R. Yuan, Z. Ma, X. Zhao, Spreading speeds for the predator–prey system with nonlocal dispersal, *Journal of Differential Equations*, 316 (2022), 552–598. [\(PDF\)](#)
6. **M. Zhao**, Z. Ma, R. Yuan, The spreading speed and the existence of planar waves for a class of predator–prey system with nonlocal diffusion, *Taiwanese Journal of Mathematics*, 26(2) (2022), 381–410. [\(PDF\)](#)

7. Y. Cheng, F. Zhang, **M. Zhao**, A stochastic model of HIV infection incorporating combined therapy of HAART driven by Lévy jumps, *Advances in Difference Equations*, 321 (2019), 1–17. ([PDF](#))
8. X. Wang, **M. Zhao**, X. Wang, S. Li, N. Cao, H. Liu, The Application of Dynamic Models to the Exploration of β_1 -AR Overactivation as a Cause of Heart Failure, *Computational and Mathematical Methods in Medicine*, 2018 (2018) 1613290. ([PDF](#))

• Preprints

1. G. Faye and M. Zhao, The threshold phenomena for propagation in fractional Laplacian diffusion equations, submitted, [hal-04644409v1](#), (2024), 1–20.
2. H. Li, **M. Zhao**, R. Yuan, A sufficient condition on successful invasion by the predator, submitted, [arXiv:2306.00713](#), (2023), 1–9.
3. **M. Zhao**, R. Yuan, Existence and Stability of Random Transition Waves for Nonautonomous Fisher-KPP Equations with Nonlocal Diffusion, submitted, [arXiv:2305.19762](#), (2023), 1–27.

RESEARCH PROJECTS

10/2023–09/2025 (hosted)	Natural Science Foundation of Tianjin Propagation dynamics of fractional Laplacian diffusion equations (No.23JCQNJC01010)
01/2022–12/2025 (participated)	The National Natural Science Foundation of China Some problems in the differential equation of almost periodic and time-delay (No. 12171039)
01/2019–12/2021 (participated)	The National Natural Science Foundation of China Game-based modeling of brucellosis transmission dynamics and Applications (No. 11801398)

TALKS AND POSTERS

06/2025	Talk at the Minisymphonia “Réaction-diffusion et Dynamique des populations, Session 1” at the SMAI conference, Carcans-Maubuisson
05/2025	Talk at the seminar at Shanxi University (Zoom)
09/2024	Talk at MAC Seminar at University of Toulouse
11/2024	Poster at Rencontres Normandes sur les aspects théoriques et numériques des EDP, Rouen

CONFERENCES AND COURSE

10/2022	International Conference on Nonlinear Partial Differential Equations 2022 and in honor of Prof. Hiroshi Matano’s 70th Birthday
10/2022	Monotone Semiflows and Propagation Dynamiac Prof. Xiaoqiang Zhao, Memorial University of Newfoundland, Canada
9–10/2022	Introduction to the Theory of Traveling Waves Prof. Henri Berestycki, EHESS, Paris
07/2020	Online Summer School on Nonlinear Differential Equations and Applications Prof. François Hamel, Aix-Marseille University
10/2019	Symposium on Differential Equations and Dynamic Systems and commemorated the 90th anniversary of the birth of Mr. Tongren Ding
07/2016	Biomathematics Summer School Peking University

AWARDS AND HONOR

2022	Graduate Academic Innovation Award Special Prize Beijing Normal University
2020	Second Class Academic Scholarship Beijing Normal University
2019–2020	Outstanding undergraduate teaching assistant Beijing Normal University
2018–2019	Second class academic scholarship Taiyuan University of Technology
2013–2014	National Inspirational Scholarship Shanxi Datong University

WORK EXPERIENCE

08/2023–08/2024	Lecturer of Mathematics at the School of Science Tianjin Chengjian University, China
09/2020–01/2021	Advanced Algebra Exercises Beijing Normal University
08/2015–08/2016	Junior high school mathematics tutoring institution in Datong of Shanxi Province, China

SKILLS

Language	Chinese (Native), English
Professional Knowledge	Office, LaTeX, Matlab, OriginPro

INTERESTS AND ACTIVITIES

- Reading (Detective and reasoning books are my favorite)
- Travelling