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王佳兵，男，中共党员，1989年6月生，湖北巴东人。2018年6月博士毕业于兰州大学（与加拿大纽芬兰纪念大学联合培养）。现任中国地质大学（武汉）数学与物理学院副教授、博士生导师，先后入选地大学者岗位青年优秀人才（2018）与青年拔尖人才（2022）。主要研究领域为微分方程与动力系统，尤其关注扩散系统的传播理论及应用。已在 JNS、JDE、JDDE、DCDS、Proc. Roy. Soc. Edinburgh Sec. A、Proc. Amer. Math. Soc.、Stud. Appl. Math.、Sci. China Math.等期刊发表系列学术论文，其中 ESI 高被引论文 3 篇、热点论文 1 篇。主持完成国家自然科学基金青年项目 1 项，正在主持国家自然科学基金面上项目、湖北省自然科学基金面上项目、广东省自然科学基金面上项目各 1 项。

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研究兴趣 Research Interests

（非局部）反应扩散方程

(Nonlocal) Reaction-Diffusion Equations

应用动力系统

Applied Dynamical Systems

数学生物学

Mathematical Biology

教育背景 Education

- | | |
|-----------------|--|
| 2016.09-2018.03 | 加拿大 Memorial University of Newfoundland 数学系-联合培养博士（国家留学基金委资助），导师：Prof. Xiao-Qiang Zhao |
| 2014.09-2018.06 | 兰州大学-应用数学博士，获理学博士学位，导师：李万同教授 |
| 2011.09-2014.06 | 兰州大学-应用数学硕士（推荐免试），导师：李万同教授 |
| 2007.09-2011.06 | 西北民族大学，数学与应用数学专业本科，获理学学士学位 |

工作经历 Academic Experience

- 2018.07- 中国地质大学(武汉)数学与物理学院,
特任副教授、副教授 (2021.07-)、硕导、博导 (2023.06-)
- 2021.01- 中国地质大学(武汉)数学科学中心, 副教授
- 2023.06 访问香港理工大学应用数学系 (合作导师: 王治安教授)

主要学术任职 Academic Service

- ① 武汉工业与应用数学学会理事
- ② 美国《数学评论》(Mathematical Reviews) 评论员
- ③ 德国《数学文摘》(zbMATH) 评论员
- ④ 教育部学位与研究生教育发展中心学位论文评审专家
- ⑤ 湖北省、江西省、黑龙江省科技项目评审专家

指导学生 Students

【1】博士生:

- 赵娟: 2024年09月-
- 卢雷: 2023年09月-

【2】硕士生:

- 谭倩倩: 2024年09月-
- 韩宜伦: 2023年09月-
- 吕娣慷: 2022年09月-
- 覃淑玲: 2022年09月-
- 李骏锋: 2021年09月-2024年06月 (任职于湖北师范大学文理学院), 2024年度校级优秀硕士学位论文获得者
- 卢雷: 2020年09月-2023年06月 (继续攻博), 获2023年度湖北省工业与应用数学学会优秀研究生论文二等奖, 入选数理学院第四届“数理先锋”年度人物
- 朱静蕾: 2020年09月-2023年06月 (任职于南昌市外国语学校), 获2022年度湖北省工业与应用数学学会优秀研究生论文三等奖, 入选数理学院第三届“数理先锋”年度人物

【3】本科生毕业设计

- 2024年: 谭倩倩、弓佩玉、胡依婷
- 2023年: 宋博睿、孔繁宁
- 2022年: 梁庭辉、杨鸿宇、罗兰情

- 2021 年：牛宇童、周良
- 2020 年：赵锦涛、龙腾

科研课题 Funded Research Projects

1. 2023/01-2026/12, 主持国家自然科学基金面上项目 (National Natural Science Foundation of China), 12271494, 非局部扩散方程在非均匀介质中的传播现象及应用研究 (Propagation phenomena and applications of nonlocal dispersal equations in heterogeneous media) ;
2. 2024/03-2026/03, 主持湖北省自然科学基金面上项目 (Natural Science Foundation of Hubei), 2024AFB547, 移动介质中格微分方程的传播动力学 (Propagation dynamics of lattice differential equations in shifting environments) ;
3. 2023/01-2025/12, 主持广东省基础与应用基础研究基金自然科学基金面上项目 (Guangdong Basic and Applied Basic Research Foundation), 带自由边界的非局部扩散模型在移动介质中的传播动力学 (Propagation dynamics of nonlocal diffusion models with free boundaries in shifting environments) ;
4. 2020/01-2022/12, 主持国家自然科学基金青年项目 (National Natural Science Foundation of China), 11901543, 移动环境下非局部扩散模型的时空传播 (Spatiotemporal propagation of nonlocal dispersal models in shifting environments) ;
5. 2021/01-2022/12, 主持中国地质大学 (武汉) 数学特区优秀青年人才计划培育项目;
6. 2020/06-2023/05, 参加 ESI 数学学科团队建设项目 (非线性动力系统稳定性理论研究), CUGSX01;
7. 2016/01-2017/06, 主持兰州大学中央高校基金优秀研究生创新项目 (the Fundamental Research Funds for the Central Universities, Lanzhou University), lzujbky-2016-226、周期媒介中退化非局部扩散系统的时空动力学 (Spatiotemporal dynamics of degenerate nonlocal diffusion systems in periodic media) 。

学术论文 Academic Papers (*: Corresponding author 通讯作者)

1. Jun-Feng Li(研究生), **Jia-Bing Wang***, Spatial propagation of a lattice predation–competition system with one predator and two preys in shifting habitats, *Stud. Appl. Math.* 152 (2024), no. 1, 307-341.
2. Zhan-Ping Ma, **Jia-Bing Wang***, Existence and Bifurcation of positive solutions to a class of predator-prey models with mutual interference among the predators, *Proc. Amer. Math. Soc.* 152 (2024), no. 3, 1253-1263.
3. **Jia-Bing Wang***, Jing-Lei Zhu(研究生), Propagation Phenomena for a Discrete Diffusive Predator-Prey Model in a Shifting Habitat. *J. Dynam. Differential Equations* 36 (2024), no. 3, 2739-2771.
4. Fang-Di Dong, Wan-Tong Li*, **Jia-Bing Wang**, Propagation phenomena for a nonlocal dispersal Lotka- Volterra competition model in shifting habitats. *J. Dynam. Differential Equations* 36 (2024), no. 1, 63-91.
5. Shao-Xia Qiao, Wan-Tong Li*, **Jia-Bing Wang**, Propagation dynamics of nonlocal dispersal competition systems in time-periodic shifting habitats. *J. Differential Equations* 378 (2024), 399-459.

6. Jing Wang, Wan-Tong Li*, **Jia-Bing Wang**, Fei-Ying Yang, Spreading properties for a predation-competition system with nonlocal dispersal in shifting habitats. *Discrete Contin. Dyn. Syst.* 44 (2024), no. 6, 1712-1746.

7. Teng-Long Cui, Wan-Tong Li*, **Jia-Bing Wang**, Spatial propagation of a nonlocal dispersal cooperation model under a shifting habitat: acceleration or not?. *Appl. Math. Lett.* 151 (2024), Paper No. 108976, 6 pp.

8. Yu-Xia Hao, Wan-Tong Li*, **Jia-Bing Wang**, Wen-Bing Xu, Entire solutions of Lotka-Volterra competition systems with nonlocal dispersal, *Acta Mathematica Scientia*, 2023, 43B(6): 2347-2376.

9. Lei Lu(研究生), **Jia-Bing Wang***, Traveling waves of the SIR epidemic model with discrete diffusion and treatment. *Appl. Math. Lett.* 138 (2023), Paper No. 108515, 8 pp.

10. Lei Lu(研究生), Meihong Qiao, **Jia-Bing Wang***, Epidemic waves in a discrete diffusive endemic model with treatment and external supplies. *Commun. Nonlinear Sci. Numer. Simul.* 120 (2023), Paper No. 107163, 30 pp.

11. Yu-Xia Hao, Wan-Tong Li*, **Jia-Bing Wang**, Propagation dynamics of nonlocal dispersal equations with bistable nonlinearity in spatially periodic media. *Discrete Contin. Dyn. Syst. Ser. B* 28 (2023), no. 7, 4040-4067.

12. Jing-Lei Zhu(研究生), **Jia-Bing Wang***, Fang-Di Dong, Spatial propagation for the lattice competition system in moving habitats. *Z. Angew. Math. Phys.* 73 (2022), no. 3, Paper No. 92.

13. **Jia-Bing Wang**, Shao-Xia Qiao, Chufen Wu*, Wave phenomena in a compartmental epidemic model with nonlocal dispersal and relapse. *Discrete Contin. Dyn. Syst. Ser. B* 27 (2022), no. 5, 2635-2660.

14. **Jia-Bing Wang**, Wan-Tong Li*, Fang-Di Dong, Shao-Xia Qiao, Recent developments on spatial propagation for diffusion equations in shifting environments. *Discrete Contin. Dyn. Syst. Ser. B* 27 (2022), no. 9, 5101-5127.

15. Shao-Xia Qiao, Wan-Tong Li, **Jia-Bing Wang***, Multi-type forced waves in nonlocal dispersal KPP equations with shifting habitats. *J. Math. Anal. Appl.* 505 (2022), no. 2, Paper No. 125504.

16. Shao-Xia Qiao, Wan-Tong Li*, **Jia-Bing Wang**, Asymptotic propagations of a nonlocal dispersal population model with shifting habitats. *European J. Appl. Math.* 33 (2022), no. 4, 701-728.

17. Yu-Xia Hao, Wan-Tong Li*, **Jia-Bing Wang**, Propagation dynamics of Lotka-Volterra competition systems with asymmetric dispersal in periodic habitats. *J. Differential Equations* 300 (2021), 185-225.

18. Guofeng He(研究生), **Jia-Bing Wang**, Gang Huang*, Wave propagation of a diffusive epidemic model with latency and vaccination. *Appl. Anal.* 100 (2021), no. 9, 1972-1995.

19. Guofeng He(研究生), **Jia-Bing Wang**, Gang Huang*, Threshold Dynamics of an Epidemic Model with Latency and Vaccination in a Heterogeneous Habitat. *Journal of Nonlinear Modeling and Analysis* (2020), Volume 2, Number 3, 393-410.

20. Shao-Xia Qiao, Jing-Lei Zhu(研究生), **Jia-Bing Wang***, Asymptotic behaviors of forced waves for the lattice Lotka-Volterra competition system with shifting habitats. *Appl. Math. Lett.* 118 (2021), 107168.
21. **Jia-Bing Wang**, Jie Wang*, Jia-Feng Cao, Blowup and global existence of a free boundary problem with weak spatial source. *Appl. Anal.* 100 (2021), no. 5, 964-974.
22. **Jia-Bing Wang ***, Chufen Wu, Forced waves and gap formations for a Lotka-Volterra competition model with nonlocal dispersal and shifting habitats. *Nonlinear Anal. Real World Appl.* 58 (2021), 103208, 19 pp. (ESI 高被引论文、热点论文)
23. **Jia-Bing Wang**, Wan-Tong Li*, Wave propagation for a cooperative model with nonlocal dispersal under worsening habitats. *Z. Angew. Math. Phys.* 71 (2020), no. 5, Paper No. 147, 19 pp.
24. Fei-Ying Yang, Wan-Tong Li*, **Jia-Bing Wang**, Wave propagation for a class of non-local dispersal non-cooperative systems. *Proc. Roy. Soc. Edinburgh Sect. A* 150 (2020), no. 4, 1965-1997.
25. Wan-Tong Li, **Jia-Bing Wang***, Xiao-Qiang Zhao, Propagation dynamics in a time periodic nonlocal dispersal model with stage structure. *J. Dynam. Differential Equations* 32 (2020), no. 2, 1027-1064.
26. **Jia-Bing Wang** , Wan-Tong Li*, Pulsating waves and entire solutions for a spatially periodic nonlocal dispersal system with a quiescent stage. *Sci. China Math.* 62 (2019), no. 12, 2505-2526.
27. **Jia-Bing Wang**, Xiao-Qiang Zhao*, Uniqueness and global stability of forced waves in a shifting environment. *Proc. Amer. Math. Soc.* 147 (2019), no. 4, 1467–1481. (ESI 高被引论文)
28. Fang-Di Dong, Wan-Tong Li*, **Jia-Bing Wang**, Propagation dynamics in a three-species competition model with nonlocal anisotropic dispersal. *Nonlinear Anal. Real World Appl.* 48 (2019), 232-266.
29. Li-Jun Du, Wan-Tong Li*, **Jia-Bing Wang**, Asymptotic behavior of traveling fronts and entire solutions for a periodic bistable competition-diffusion system. *J. Differential Equations* 265 (2018), no. 12, 6210-6250.
30. **Jia-Bing Wang**, Wan-Tong Li*, Jian-Wen Sun, Global dynamics and spreading speeds for a partially degenerate system with non-local dispersal in periodic habitats. *Proc. Roy. Soc. Edinburgh Sect. A* 148 (2018), no. 4, 849-880.
31. Wan-Tong Li, **Jia-Bing Wang***, Xiao-Qiang Zhao, Spatial dynamics of a nonlocal dispersal population model in a shifting environment. *J. Nonlinear Sci.* 28 (2018), no. 4, 1189–1219. (ESI 高被引论文)
32. Fang-Di Dong, Wan-Tong Li*, **Jia-Bing Wang**, Asymptotic behavior of traveling waves for a three-component system with nonlocal dispersal and its application. *Discrete Contin. Dyn. Syst.* 37 (2017), no. 12, 6291-6318.
33. Li-Jun Du, Wan-Tong Li*, **Jia-Bing Wang**, Invasion entire solutions in a time periodic Lotka-Volterra competition system with diffusion. *Math. Biosci. Eng.* 14 (2017), no. 5-6, 1187-1213.

34. Wan-Tong Li*, **Jia-Bing Wang**, Li Zhang, Entire solutions of nonlocal dispersal equations with monostable nonlinearity in space periodic habitats. *J. Differential Equations* 261 (2016), no. 4, 2472-2501.
35. Wei-Jie Sheng*, **Jia-Bing Wang**, Entire solutions of time periodic bistable reaction-advection-diffusion equations in infinite cylinders. *J. Math. Phys.* 56 (2015), no. 8, 081501.
36. **Jia-Bing Wang**, Wan-Tong Li*, Guo-Bao Zhang, Spatial dynamics of a nonlocal dispersal vector disease model with spatio-temporal delay. *Electron. J. Differential Equations* 2015, No. 122, 28 pp.
37. **Jia-Bing Wang**, Wan-Tong Li*, Fei-Ying Yang, Traveling waves in a nonlocal dispersal SIR model with nonlocal delayed transmission. *Commun. Nonlinear Sci. Numer. Simul.* 27 (2015), no. 1-3, 136-152.

教育教学 Teaching

[1] 主讲过的本科生课程(Undergraduate courses):

- 《数学物理方程(Mathematical Physical Equations)》、
《复变函数与积分变换(Complex Function and Integral Transformation)》、
《高等数学(Advanced Mathematics)》、
《线性代数(Linear Algebra)》、
《概率论与数理统计(Probability and Mathematical Statistics)》

[2] 主讲过的研究生课程(Graduate courses):

- 《数学物理方程(Mathematical Physical Equations)》
《偏微分方程基本理论(Basic theory of partial differential equations)》

[3] 教学研究项目与教改论文

- ◆ 主持校级教改项目：“以学为中心”课堂教学模式的研究与实践 ---以《数学物理方程》教学改革为例；
- ◆ 教改论文：数学物理方程教学改革策略探究，教育科学，2023年第12期 0182-0185。

[4] 参与建设的《数学物理方程》获批湖北省线下一流本科课程（2022年）