Lin Li

Contact Information

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Employment

- Assistant professor, Department of Mathematics, University of South China, 2017−present;
- Visiting scholar, Department of Mathematics, National Central University, Taiwan, 2018. Visiting tutor: Prof. Suyu Yang;
- Visiting scholar, Department of Mathematics, Illinois Institute of Technology, 2019−2020. Visiting tutors: Prof. Jinqiao Duan and Prof. Xiaofan Li;
- Visiting scholar, Division of Mathematical Sciences, Nanyang Technological University, 2022.6-2022.8. Visiting tutors: Prof. Lilian Wang.

Education

- Ph.D. in Applied Mathematics, University of Science and Technology Beijing, June, 2017. Advisors: Prof. Ping Lin.
- M.S. in Computational Mathematics, University of Science and Technology Beijing, June 2013. Advisors: Prof. Ping Lin.
- B.S. in Applied Mathematics, Hengshui University, June 2011.

Research Interests

- Spectral method
- Computing multiple solutions
- Partial differential equations and numerical analysis
- Numerical optimization

Research Grants

- Natural Science Foundation of Hunan Province of China (2020JJ5464): A study of the stability of multiple solutions with spectral method, 2020-2022, (Single PI).

Publications

Journal papers

1. **Lin Li**, Yangyi Ye and Huiyuan Li. An Adaptive Orthogonal Basis Method for Computing Multiple Solutions of Differential Equations with Polynomial Nonlinearities [J]. Journal of Scientific Computing. 11(2024), pp.1-28.

2. **Lin Li**, Lilian Wang and Huiyuan Li, An efficient spectral trust-region deflation method for multiple solutions [J]. Journal of Scientific Computing. 32(2023), pp.1-23.

3. Yanxiao Sun, Ping Lin and **Lin Li**. Temporal stability analysis for multiple similarity solutions of viscous incompressible flows in porous channels with moving walls [J]. Applied Mathematical Modelling. 77(2020), pp.738-755.

4. Qizheng Huang, **Lin Li** and Zigen Ouyang. Asymptotic solutions on multiple solutions arising from laminar flow in a uniformly porous channel with expanding or contracting walls [J]. Boundary Value Problems. 3(2019), pp.1-15.

5. Hongxia Guo, Ping Lin and **Lin Li**. Asymptotic solutions for the asymmetric flow in a channel with porous retractable walls under a transverse magnetic field [J]. Applied Mathematics and Mechanics. 3(2019), pp.1-18.

6. Feng Wang, Ping Lin, **Lin Li** and Yongyue Jiang. A numerical study of multiple solutions for laminar flows in a porous and moving channel [J]. Numerical mathematics: Theory, Methods and Applications. 11(2018), pp.74-91.

7. **Lin Li**, Ping Lin, Xinhui Si and Liancun Zheng. A numerical study for multiple solutions of a singular boundary value problem arising from laminar flow in a porous pipe with moving wall [J], Journal of Computational and Applied Mathematics, 313(2017), pp.536-549.

8. **Lin Li**, Ping Lin, Hong Zhang, Liancun Zheng and Xinhui Si. Asymptotic solutions for laminar flow based on blood circulation through a uniformly porous channel with retractable walls and an applied transverse magnetic field [J], Powder Technology, 308(2017), pp.398-409.

9. **Lin Li** and Yongyue Jiang. Numerical simulation for different densities multi-phase fluids with an energy law preserving method [J], Journal of Physics, 916(2017), pp.1742-1753.

10. **Lin Li**, Yongyue Jiang and Aixin Chen. Numerical simulation of nanofluids based on power-law fluids with flow and heat transfer [J], IOP Earth and Environment Science, 61(2017), pp.25-34.

11. Xinhui Si, **Lin Li**, Liancun Zheng, Xinxin Zhang and Baiyu Liu. The exterior unsteady viscous flow and heat transfer due to a porous expanding stretching cylinder [J]. Computers and Fluids 105(2014), pp.280-284.