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Education

- 2002–2006 B.S. in Mathematics and Applied Mathematics, Zhengzhou University, Henan Province, P. R. China
- 2006–2009 M.S. in Applied Mathematics, Graduate School of China Academy of Engineering Physics, Beijing, P. R. China (Advisor: Prof. Changxing Miao)
- 2009–2012 Ph.D. in Applied Mathematics, Graduate School of China Academy of Engineering Physics, Beijing, P. R. China (Advisor: Prof. Changxing Miao)

Academic Positions

- 2012.9–2013.9 Post-doctor, Laboratoire LAMA, Université Paris-Est, Paris, France (Advisor: Prof. Régis Monneau and Prof. Marco Cannone)
- 2013.9–2016.9 Assistant Professor, Beijing Normal University, Beijing, P. R. China.
- 2016.9–present Associate Professor, Beijing Normal University, Beijing, P. R. China.

Research Interests

Nonlinear PDEs, Mathematical Fluid Mechanics.

Research Grants

National Natural Science Foundation of China, grant No. 11401027, 2015.1–2017.12. (Amount: 220,000 RMB)

National Natural Science Foundation of China, grant No. 11771043, 2018.1–2021.12. (Amount: 480,000 RMB)

Publications and Preprints

1. Qianyun Miao, Liutang Xue, Regularity and singularity results for the dissipative Whitham equation and related surface wave equations. To appear in *Commun. Math. Soc.*, (2019).
2. Changxing Miao, Liutang Xue, On the regularity issues of a class of drift-diffusion equations with nonlocal diffusion. *SIAM J. Math. Anal.*, **51** (2019), no. 4, 2927–2970.
3. Omar Lazar, Liutang Xue, Regularity results for a class of generalized surface quasi-geostrophic equations. To appear in *Journal de Mathématiques Pures et Appliquées*, 2019.

4. Piotr Mucha, Liutang Xue, Xiaoxin Zheng, Between homogeneous and inhomogeneous Navier-Stokes systems: the issue of stability. *J. Differential Equations*, **267** (2019), Issue 1, 307–363.
5. Qianyun Miao, Liutang Xue, On the Hölder regularity of the weak solution to a drift-diffusion equation with pressure. *Calc. Var. Partial Differential Equations*, **57** (2018), no. 6, Art. 153, 33 pp.
6. Liutang Xue, Zhuan Ye, On the differentiability issue of the drift-diffusion equation with nonlocal Lévy-type diffusion. *Pacific J. Mathematics*, **293** (2018), no. 2, 471–510.
7. Jiahong Wu, Xiaojing Xu, Liutang Xue, Zhuan Ye, Regularity results for the 2D Boussinesq equations with critical or supercritical dissipation, *Commun. Math. Sci.*, **7** (2016), 1963–1997.
8. Liutang Xue, On the locally self-similar solution of the surface quasi-geostrophic equation with decaying or non-decaying profiles. *J. Differential Equations*, **261** (2016), no. 10, 5590–5608.
9. Liutang Xue, On the locally self-similar singular solutions for the incompressible Euler equations. *Dyn. Partial Differ. Equ.*, **12** (2015), no. 4, 321–342.
10. Liutang Xue, On the discretely self-similar solutions for the 3D Navier-Stokes equations. *Nonlinearity*, **28** (2015), no. 10, 3695–3708.
11. Marco Cannone, Liutang Xue, Remarks on self-similar solutions for the surface quasi-geostrophic equation and its generalization, *Proc. Amer. Math. Soc.*, **143** (2015), no. 6, 2613–2622.
12. Dong Li, Changxing Miao, Liutang Xue, On the well-posedness of a 2D nonlinear and nonlocal system arising from the dislocation dynamics, *Commun. Contemp. Math.*, **16** (2014), no. 2, 1350021, 36 pp.
13. Xiaojing Xu, Liutang Xue, Yudovich type solution for the 2D inviscid Boussinesq system with critical and supercritical dissipation, *J. Differential Equations*, **256** (2014), no. 9, 3179–3207.
14. Marco Cannone, Changxing Miao, Liutang Xue, Global regularity for the supercritical dissipative quasi-geostrophic equation with large dispersive forcing, *Proc. Lond. Math. Soc.*, **106** (2013), no. 3, 650–674.
15. Liutang Xue, Xiaoxin Zheng, Note on the well-posedness of a slightly supercritical surface quasi-geostrophic equation, *J. Differential Equations*, **253** (2012), 795–813.
16. Gang Wu, Liutang Xue, Global well-posedness for the 2D inviscid Bénard system with fractional diffusivity and Yudovich’s type data, *J. Differential Equations*, **253** (2012), 100–125.
17. Changxing Miao, Liutang Xue, Global well-posedness for a modified critical dissipative quasi-geostrophic equation, *J. Differential Equations*, **252** (2012), 792–818.
18. Changxing Miao, Liutang Xue, On the regularity of a class of generalized quasi-geostrophic equations, *J. Differential Equations*, **251** (2011), 2789–2821.
19. Changxing Miao, Liutang Xue, On the global well-posedness of a class of Boussinesq-Navier-Stokes systems, *Nonlinear Differential Equations and Applications*, **18** (2011), 707–735.
20. Liutang Xue, Wellposedness and zero microrotation viscosity limit of the 2D micropolar fluid equations, *Mathematical Methods in the Applied Sciences*, **34** (2011), 1760–1777.
21. Liutang Xue, On the well-posedness of incompressible flow in porous media with supercritical diffusion, *Applicable Analysis* **88** (2009), no. 4, 547–561.

Invited Talks

Beijing conference on harmonic analysis and partial difference equations. IAPCM, Beijing, 17 May–23 May 2010.

Dynamics of nonlinear dispersive and fluid mechanics equations, BICMR, Beijing, 25 June–13 July 2012.

PDE Seminar, Rennes 1 University, France, 10 January 2013.

The Fifth BNU-PDE Workshop, BNU, 24 January–25 January 2015.

PDE Seminar, Chung-Ang University, Korea, 10 May 2016.

PDE Seminar, University of California ÍC Irvine, 11 April 2017.

Workshop Mathflows 2018, Porquerolles, France, 3 September 2018.

Workshop on Mathematical Theory of Fluid Mechanics, Beijing Normal University, Beijing, 6 July 2019.