

# 简 历

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## 教育背景：

1996.09 – 2000.07, 南京师范大学, 信息与计算科学, 理学学士

2000.09 – 2003.07, 南京师范大学, 基础数学, 理学硕士

2003.09 – 2006.07, 中物院北京研究生部, 应用数学, 理学博士

## 研究方向：

分析：非线性泛函分析、调和分析

偏微分方程：非线性色散方程、非线性波动方程

## 科研经历：

2006.07–2008.09, 北京应用物理与计算数学研究所, 助理研究员

2007.09–2007.10, 香港中文大学, 访问学者

2013.08–2014.09, 美国芝加哥大学, 高级研究学者

2008.10–至今, 北京应用物理与计算数学研究所, 副研究员

2015 –至今, 北京应用物理与计算数学研究所, 硕士生导师

## 科研项目：

1. 国家自然科学基金面上项目, 11671046, 波动方程解的长时间动力学行为研究, 2017/01–2020/12, 负责人
2. 国家自然科学基金天元专项基金, 11726005, 调和分析中四大猜想及其应用, 2018/01–2018/12, 参加
3. 国家自然科学基金重点项目, 11231006, 多物理过程耦合的流体动力学方程, 2013/01–2017/12, 参加

4. 国家人力资源和社会保障部留学人员科技活动择优资助项目，人社厅函【2016】176号，波动方程行波解稳定性研究，2016/01-2016/12，负责人
5. 国家留学基金委2012年杰出青年高级研究学者赴国外研修数学物理项目<sup>1</sup>，留金发【2012】3022号，2013/08-2014/09，负责人
6. 国家自然科学基金面上项目，11171033，偏微分方程的调和和分析方法，2012/01-2015/12，参加
7. 国家科技部政府间科技合作项目，非线性发展方程的大范围依赖性（国科外字【2010】179），参加
8. 国家自然科学基金青年项目，10801015，Hartree方程的局部与整体分析，2009/01-2011/12，负责人
9. 国家自然科学基金天元项目，10726053，Hartree方程的局部及其整体分析，2008/01-2008/12，负责人
10. 国家自然科学基金面上项目，10571016，Littlewood-Paley及其在偏微分方程中的应用，2006/01-2008/12，参加

## 学术论文代表作：

### 已接收：

1. Stability of the sum of two solitary waves for (gDNLS) in the energy space, (with X. Tang), Accepted by J. Diff. Equat..

### 已发表：

2. Stability of the solitary wave for the derivative Schrodinger equation in the energy space. (With C. Miao and X. Tang), Calc. Var. PDEs, 56(2):(2017), Paper No. 45, 48pp.
3. Solitary waves for nonlinear Schrodinger equation with derivative. (With C. Miao and X. Tang), Comm. Contemp. Math., 1750049, 2017, 27pp.
4. Generic and non-generic behavior of solutions to defocusing energy critical wave equation with potential in the radial case. (With H. Jia, B. Liu and W. Schlag), IMRN, 2016, 1-59.
5. Long time dynamics of defocusing energy critical 3+1 dimensional wave equation with potential in the radial case. (With H. Jia and B. Liu), Comm. Math. Phys., 339(2015), 353-384.
6. The dynamics of the 3d radial NLS with the combined terms. (With C. Miao and L. Zhao), Comm. Math. Phys., 318:3(2013), 767-808.
7. Low regularity global solutions for the focusing, mass-critical NLS equation in  $\mathbb{R}$ . (With Y. Li and Y. Wu), SIAM J. Math. Anal., 43:1 (2011), 322-340.
8. Global well-posedness and scattering for the energy-critical, defocusing Hartree equation in  $\mathbb{R}^{1+n}$ . (With C. Miao and L. Zhao), Comm. PDEs, 36(2011), 1-48.

<sup>1</sup> 每年数学、物理两个学科获批“杰出青年高级研究学者赴国外研修数学物理项目”合计不超10项。

9. Global well-posedness and scattering for the mass-critical Hartree equation with radial data. (With C. Miao and L. Zhao), *J. Math. Pures Appl.*, 91(2009), 49-79.
10. Global well-posedness and uniform bound for the defocusing  $H^{1/2}$ -subcritical Hartree equation in  $\mathbb{R}^d$ . (With C. Miao and L. Zhao), *Ann. I. H. Poincaré*, AN., 26(2009), 1831 - 1852.
11. Global well-posedness and scattering for the energy-critical, defocusing Hartree equation for radial data. (With C. Miao and L. Zhao), *J. Funct. Anal.*, 253(2007), 605-627.
12. Dynamics for the focusing, energy-critical nonlinear Hartree equation, (With C. Miao and Y. Wu). *Forum Math.*, 27:1(2015), 373-447.
13. Global wellposedness and scattering for the defocusing energy-critical nonlinear Schrodinger equations of fourth order in dimensions  $d \geq 9$ . (With C. Miao and L. Zhao), *J. Diff. Equat.*, 251 (2011), 3381-3402.
14. Global well-posedness for Schrodinger equation with derivative in  $H^{1/2}(\mathbb{R})$ . (With C. Miao, and Y. Wu), *J. Diff. Equat.*, 251(2011), 2164-2195.
15. Global well-posedness for periodic mass-critical nonlinear Schrodinger equation. (With Y. Li, and Y. Wu), *J. Diff. Equat.*, 250:6, 15(2011), 2715-2736.
16. Global wellposedness and scattering for the focusing energy-critical nonlinear Schrodinger equations of fourth order in the radial case. (With C. Miao and L. Zhao), *J. Diff. Equat.*, 246(2009), 3715-3749.
17. Global solutions of the Klein-Gordon-Schrodinger system with rough data in  $\mathbb{R}^{2+1}$ . (With C. Miao), *J. Diff. Equat.*, 227(2006), 365-405.
18. On the dispersive estimate for the Dirichlet Schrodinger propagator and applications to energy critical NLS. (With D. Li and X. Zhang), *Canad. J. Math.*, 66(2014), 1110-1142.
19. The low regularity global solutions for the critical generalized KdV equation. (With C. Miao, S. Shao and Y. Wu), *Dynamics of PDE*, 7:3(2010), 265-288.
20. On the blow up phenomenon of the  $L^2$ -critical focusing Hartree equation in  $\mathbb{R}^4$ . (With C. Miao and L. Zhao), *Colloquium Mathematicum*. 119:1(2010), 23-50.
21. Global well-posedness, scattering and blow-up for the energy-critical, focusing Hartree equation in the radial case. (With C. Miao and L. Zhao), *Colloquium Mathematicum*, 114(2009), 213-236.
22. Long time dynamics of the 3D radial NLS with the combined terms. (With J. Yang), *Acta Mathematica Sinica*, 32:5(2016), 521-540.
23. The dynamics of the NLS with the combined terms in five and higher dimensions. (With C. Miao and L. Zhao), *Advanced Lectures in Mathematics*, Vol. 34, Higher Education Press, 2015.
24. Dynamics of some coupled nonlinear Schrodinger systems, *Math. Meth. Appl. Sci.*, 37:17 (2014), 2746-2771.
25. Interaction Morawetz estimate and a simplified proof on the energy scattering for Hartree equations. (With J. Yuan), *Acta Math. Scientia*, 31B:1(2011), 15-21.

26. The Cauchy problem for the Rosenau equation. (With S. Wang), *Nonlinear Analysis T. M. A.*, 71 (2009), 456-466.
27. The Cauchy problem of the Hartree equation. (With C. Miao and L. Zhao), *J. PDE*, 21:1 (2008), 22-44.
28. The Cauchy problem for generalized Benney-Luke equation. (With G. Chen and S. Wang), *J. Math. Phys.*, 48:7(2007), 073521.
29. The Cauchy problem of the focusing nonlinear Schrodinger equations in  $R^{1+1}$ . *Acta Math. Appl. Sinica, English Series*, 23:4(2007), 1-18.
30. Low regularity global well-posedness for the Klein-Gordon-Schrodinger system with the high order Yukawa coupling. (With C. Miao), *Diff. Inte. Equat.*, 20:6(2007), 643-656.
31. Existence results for some fourth-order nonlinear elliptic problems of local superlinearity and sublinearity. (with J. Zhang) *J. Math. Anal. Appl.*, 281:2(2003), 633-640.

## 获奖情况:

1. 2015, 非线性发展方程的现代调和分析方法, 中物院科技创新奖一等奖, 部级, 排名第三
2. 2011, 九所先进青年
3. 2007, 九所先进青年
4. 2007, 中物院优秀博士论文获得者
5. 2005, 中国工程物理研究院研究生部“三好研究生”
6. 2005, 南京市科协第十一届优秀学术论文奖
7. 2003, 南京师范大学“优秀毕业研究生”
8. 2003, 南京师范大学首届“苏威尔”杯科技论文竞赛一等奖
9. 2002, 南京师范大学“三好研究生”
10. 2000, 美国大学生数学建模竞赛<sup>2</sup>“Successful Participant”
11. 2000, 南京师范大学“优秀毕业生”
12. 1999, 南京师范大学“朱敬文奖学金”
13. 1999, 南京师范大学“校三好学生”
14. 1998, 南京师范大学“校三好学生”
15. 1998, 南京师范大学“大地奖教奖学金”
16. 1997, 南京师范大学“大地奖教奖学金”

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<sup>2</sup> 作为南京师范大学本科生代表, 第一届参加美国大学生数学建模竞赛。