

Xuecheng Wang

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DATE OF BIRTH	1991/04/24 (Official, in lunar calendar) 1991/06/06 (in Gregorian (solar) calendar)	
RESEARCH INTERESTS	Nonlinear dispersive PDEs , nonlinear wave equations, harmonic analysis, fluid dynamics (water waves system in various settings), kinetic theory.	
EMPLOYMENT	<i>Associate Professor</i> (with tenure) (July, 2023–) YMSC, Tsinghua University, Beijing, China <i>Assistant Professor</i> (Sep, 2017–July, 2023) YMSC, Tsinghua University, Beijing, China <i>Postdoc</i> ICERM, Brown University, Providence, USA (Spring semester, 2017) Math Dept, Princeton University, Princeton, USA (Fall semester, 2016)	
EDUCATION	Princeton University (Sept 2011–June 2016) Ph.D. in Mathematics (Oct 2016) • Ph.D. Advisor: Prof. Alexandru Ionescu M.A. in Mathematics, Oct 2012 Central University of Finance and Economics (Sept 2007–June 2011) B.A. in Economics, June 2011	
PREPRINTS & PUBLICATIONS	Selected works are marked with stars. 20 (With A. Ionescu, B. Pausader, K. Widmayer) On the stability of homogeneous equilibria in the Vlasov-Poisson system on \mathbb{R}^3 , <i>preprint</i> (2023), <i>submitted</i> . ★ 19 Global solution of 3D anisotropic wave equations with same speed in one direction, arXiv:2303.03973, <i>preprint</i> (2023), <i>submitted</i> . ★ 18 Global stability of the Minkowski spacetime for the Einstein-Vlasov system, 98 pages, arXiv:2210.00512, <i>preprint</i> (2022), <i>submitted</i> . ★ 17 (With A. Ionescu, B. Pausader, K. Widmayer) Nonlinear Landau damping for the Vlasov-Poisson system in \mathbb{R}^3 : the Poisson equilibrium, arXiv:2205.04540, <i>preprint</i> (2022), <i>submitted</i> . ★ 16. Global solution of the 3D relativistic Vlasov-Maxwell system for large data with cylindrical symmetry, 113 pages, arXiv:2203.01199, <i>preprint</i> (2022), <i>submitted</i> . 15. Global solution of the 3D relativistic Vlasov-Poisson system for a class of large data, arXiv:2003.14191v3, <i>preprint</i> (2022), <i>submitted</i> .	

14. Remarks on the large data global solutions of 3D RVP system and 3D RVM system, arXiv:2203.01202, *preprint* (2022), **Discrete and Continuous Dynamical Systems - Series A**, *to appear*.
13. Decay estimates for the 3D relativistic and non-relativistic Vlasov-Poisson systems, **Kinetic and Related Models**, 16(2023), no 1, 1-19.
12. (With A. Ionescu, B. Pausader, K. Widmayer) On the asymptotic behavior of solutions to the Vlasov-Poisson system, **International Mathematics Research Notices**, Vol. 2022, no. 12, 8865–8889.
- ★ 11. Propagation of regularity and long time behavior of 3D massive relativistic transport equation II: Vlasov-Maxwell system, **Communications in Mathematical Physics**, Vol 389 (2022), no.2, pp 715–812.
10. Propagation of regularity and long time behavior of 3D massive relativistic transport equation I: Vlasov-Nordström system, **Communications in Mathematical Physics**, Vol. 382 (2021), pp 1843–1934.
- ★ 9. Global regularity for the 3D finite depth capillary water waves, **Annales scientifiques de l'École normale supérieure**, Vol 53 (2020), pp 847–943
- ★ 8. Global solution for the 3D gravity water waves system above a flat bottom, **Advances in Mathematics**, Vol. 346(2019), 805-886.
- ★ 7. Global infinite energy solutions for the 2D gravity water waves system, **Communications on Pure and Applied Mathematics**, 71 (2018), no. 1, 90–162.
6. On the 3-dimensional water waves system above a flat bottom, **Analysis & PDE**, Vol. 10 (2017), no. 4, pp 893–928.
5. Global solution for the 3D quadratic Schrödinger equation of $Q(u, \bar{u})$ type, **Discrete and Continuous Dynamical Systems - Series A**, Vol 37 (2017), no. 9, pp 5037–5048.
4. Global existence for the 2D incompressible isotropic elastodynamics for small initial data, **Annales Henri Poincaré**, 18 (2017), no.4, pp 1213–1267.
3. On global existence of 3D charge critical Dirac-Klein-Gordon system, **International Mathematics Research Notices**, 2015(2015), no. 21, pp 10801–10846.
2. (With B. Pausader and N. Tzvetkov) Global regularity for the energy-critical NLS on \mathbb{S}^3 . **Ann. Inst. H. Poincaré Anal. NonLinéaire**, 31 (2014), no 2, pp 315–338.
1. A Beurling-Hörmander theorem associated with the Riemann-Liouville operator, **Pacific Journal of Mathematics**, 251 (2011), pp 239–255.

GRANT

PI: NSFC-11801299 (2018–2021)

Not PI: MOST-2020YFA0713003(2020–2025), NSFC-12141102 (2022–2026).

PROFESSIONAL
SERVICES

Referee for the following journals: • Annals of PDE • Advances in Mathematics • American Journal of Mathematics • Annale Henri Poincaré • Communications in Mathematical Physics • International Mathematical Research Notice • Inventiones Mathematicae • Journal de Mathématiques Pures et Appliquées • Mathematische Annalen • Transaction of AMS, etc.