

Jincheng Yang

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RESEARCH INTERESTS	Analysis, dynamical systems, partial differential equations, and their application in fluid dynamics, plasma physics, optimal mass transportation.	
EDUCATION	The University of Texas at Austin , Austin, Texas USA Ph.D. Candidate in Mathematics (Pure) Aug. 2017 – Present Advisor: Luis A. Caffarelli and Alexis F. Vasseur Xi'an Jiaotong University (XJTU) , Xi'an, Shaanxi China B.Sc. in Mathematics and Applied Mathematics (Elite Class) Aug. 2013 – July 2017 Thesis: <i>Linear Inviscid Damping of a Shear Flow in a Half-Space and a Finite Channel</i> Advisor: Dongsheng Li and Zhiwu Lin	
HONORS AND AWARDS	University Graduate Continuing Fellowship , UT Austin Mar 2021 Frank Gerth III Teaching Excellence Award , UT Austin June 2020 Senate of College Council's TA of the Year , UT Austin Apr 2019 Frank Gerth III Graduate Excellence Award , UT Austin June 2018 Outstanding Student (The highest honor on campus, $10/30000$), XJTU Oct 2016 National Scholarship , Ministry of Education, China Sept 2016	
PUBLICATIONS	Journal Articles <ul style="list-style-type: none">■ Alexis Vasseur, Jincheng Yang. <i>Second Derivatives Estimate of Suitable Solutions to the 3D Navier-Stokes Equations</i>, Arch. Ration. Mech. Anal., 241: 683–727 (2021)■ Zhiwu Lin, Jincheng Yang, Hao Zhu. <i>Barotropic Instability of Shear Flows</i>, Stud. Appl. Math., 144: 289–326 (2020)■ Jincheng Yang, Zhiwu Lin. <i>Linear Inviscid Damping for Couette Flow in Stratified Fluid</i>, J. Math. Fluid Mech., 20: 445–472 (2018) Preprints <ul style="list-style-type: none">■ Jincheng Yang. <i>Construction of Maximal Functions associated with Skewed Cylinders Generated by Incompressible Flows and Applications</i>, to appear in Ann. Inst. H. Poincaré Anal. Non Linéaire, arXiv:2008.05588 (2021)■ Rui Gao, Jincheng Yang, Luhao Zhang. <i>Robust Policy Optimization for Feature-Based Newsven-</i> dor, submitted (2021)	
ACADEMIC EXPERIENCE	Visiting <ul style="list-style-type: none">■ <i>Georgia Institute of Technology</i>, Atlanta, GA 2016 – 2017■ <i>Columbia University in the City of New York</i>, New York City, NY 2015 Conferences and Workshops <ul style="list-style-type: none">■ <i>Banff International Research Station</i>, New Mechanisms for Regularity, Singularity, and Long Time Dynamics in Fluid Equations July 2021	

- *Mathematical Sciences Research Institute*, Virtual Summer Graduate School: Introduction to Water Waves July 2020
- *Northwestern University*, Summer School in Semiclassical Analysis July 2019
- *Instituto de Ciencias Matemáticas*, Summer School on Fluid Mechanics at the ICMAT June 2019
- *Columbia University*, Workshop on Free Boundary Problems May 2019
- *The University of Texas at Austin*, On Nonlinear PDEs and their Applications Mar 2019

Invited Talks

- American Mathematical Society, *Spring Western Sectional Meeting*
 - Special Session on Nonlinear PDEs and Fluid Dynamics May 2021
- American Mathematical Society, *Spring Eastern Sectional Meeting*
 - Contributed Paper Session Mar 2021

Seminar Talks

- Junior Analysis Seminar, *Shapley Extension and Application* Apr 2021
- Junior Analysis Seminar, *Distributionally Robust Optimization* Oct 2020
- Junior Analysis Seminar, *Oscillatory Integrals and Decay of Dispersive Equation* Apr 2020
- ★ Ph.D. Candidacy Talk, *A New Covering Lemma and its Application in 3D Incompressible Navier–Stokes Equations* Mar 2020
- Harmonic Analysis Reading Seminar, *Introduction to Hardy Space* Nov 2019
- Junior Analysis Seminar, *A Covering Lemma for Fluid Equations and its Application to Navier–Stokes Equation* Nov 2019
- Stochastic Calculus in Manifold Reading Seminar, *Manifold-valued Semimartingales and their Quadratic Variation* Oct 2019
- Junior Analysis Seminar, *Regularity for a Local-Nonlocal Transmission Problem* Apr 2019
- Sophex Seminar, *An Introduction to Stochastic Integrals* Apr 2018
- Sophex Seminar, *Stability and Instability of Shear Flow in a Rotating System* Sept 2017
- Fluid Mechanics Seminar, *Inviscid Damping of Couette Flow in a Stratified Fluid* Apr 2017

Journal Refereeing

- SIAM Journal on Mathematical Analysis

TEACHING

Teaching Assistant

- M383D — *Methods of Applied Mathematics II* Spring 2021
- M427J — *Differential Equations with Linear Algebra* Spring 2019 – Fall 2020
- M427L — *Advanced Calculus for Applications II* Fall 2018
- M408D — *Sequences, Series, and Multivariable Calculus* Spring 2018
- M408K — *Differential Calculus* Fall 2017

OUTREACH

Mentoring of Undergraduate Students

- Yongqi Pang, *on the topic of Statistics and Data Analysis* Spring 2020
- Trey Minor, *on the topic of Differential Equations and Dynamical Systems* Spring 2019
- Yan Cheng, *on the topic of Probability and Martingales* Spring 2018