

## Jincheng Yang

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### CONTACT INFORMATION

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### RESEARCH INTERESTS

Analysis, dynamical systems, partial differential equations, and their application in fluid mechanics

### EDUCATION

**The University of Texas at Austin**, Austin, Texas USA

Ph.D. Candidate in Mathematics (Pure)

Aug. 2017 - Present

**Xi'an Jiaotong University (XJTU)**, Xi'an, Shaanxi China

B.Sc. in Mathematics and Applied Mathematics (Elite Class)

Aug. 2013 - July 2017

Thesis: *Linear Inviscid Damping of a Shear Flow in a Half Space and in a Finite Channel*

Advisor: Dongsheng Li and Zhiwu Lin

### HONORS AND AWARDS

**First Everest Research Scholarship**, XJTU

**2014**

**National Scholarship**, Ministry of Education, China

**2016**

**Pacemaker to Outstanding Student**, XJTU

**2016**

**Frank Gerth III Graduate Excellence Award**, UT Austin

**2018**

**Senate of College Council's TA of the Year**, UT Austin

**2019**

**Frank Gerth III Teaching Excellence Award**, UT Austin

**2020**

### ACADEMIC EXPERIENCE

**Georgia Institute of Technology**, Atlanta, Georgia USA

*Visiting Research Student*

**Feb. 2017 - May 2017**

Research includes the effect of density variation of fluids on the inviscid damping of stratified Couette flow, and the barotropic instability of shear flows for incompressible fluids with Coriolis effects.

**The University of Texas at Austin**, Austin, Texas USA

*Teaching Assistant*

**Sept. 2017 - Present**

Teaching assistant for differential/integral/vector calculus, differential equations and linear algebra.

### PUBLICATIONS

3. Lin, Z., Yang, J. & Zhu, H. (2020) *Barotropic Instability of Shear Flows*, Studies in Applied Mathematics, **144**: 289-326. <https://doi.org/10.1111/sapm.12297>
2. Yang, J. & Lin, Z. (2018) *Linear Inviscid Damping for Couette Flow in Stratified Fluid*, Journal of Mathematical Fluid Mechanics, **20**: 445-472. <https://doi.org/10.1007/s00021-017-0328-3>
1. Xie, T., Cheng, X. & Yang, J. (2014) RAPTOR Program Designing Tutorial. Beijing: Tsinghua University Press.

### PREPRINT

2. Vasseur, A. & Yang, J. (2020) *Second Derivatives Estimate of Suitable Solutions to the 3D Navier-Stokes Equations*, submitted, arXiv:2009.14291
1. Yang, J. (2020) *Construction of Maximal Functions associated with Skewed Cylinders Generated by Incompressible Flows and Applications*, submitted, arXiv:2008.05588