

# FANCHEN HE

*Email:* wzfche@umich.edu

Department of Mathematics, University of Michigan  
530 Church Street, Ann Arbor, MI 48109 -1043

## EDUCATION

---

**University of Michigan**, Ann Arbor, MI, USA September 2015 - Present

Department of Mathematics

**Ph.D.** in Applied & Interdisciplinary Mathematics Expected: April 2020

- *Advisors:* Philip L. Roe (Aerospace Engineering), Smadar Karni (Mathematics)

**University of Michigan**, Ann Arbor, MI, USA September 2016 - April 2018

Department of Mechanical Engineering

**M.S.E.** in Mechanical Engineering

- *Dissertation Title:* Recovery-based discontinuous Galerkin method for the Cahn-Hilliard equation
- *Thesis Advisor:* Eric Johnsen

**Fudan University**, Shanghai, CHINA September 2011 - June 2015

School of Mathematical Sciences

**B.S.** in Mathematics

- *Dissertation Title:* Application of modified Cahn-Hilliard model for binary image inpainting in grayscale/color image inpainting
- *Thesis Advisor:* Wenbin Chen

## PUBLICATIONS

---

Preprints:

1. Fanchen He, Philip E. Johnson, Eric Johnsen. *A Recovery-based discontinuous Galerkin method for the Cahn-Hilliard equation.* (Submitted to *Journal of Computational Physics*, Feb 2019)  
[FULL-TEXT](#)

## PRESENTATIONS

---

Contributed Talks

1. *Recovery-based discontinuous Galerkin method for the Cahn-Hilliard equation.* 2018 SIAM Great Lakes Section Annual Meeting, Wayne State University, Detroit, MI (April 2018)
2. *Recovery-based discontinuous Galerkin method for the Cahn-Hilliard equation.* SIAM CSE19, Spokane, WA (Feb 2019)

Invited Talks

1. *Recovery-based discontinuous Galerkin method for the Cahn-Hilliard equation.* AMS Fall Central Sectional Meeting, University of Michigan, Ann Arbor, MI (Oct 2018)

## TEACHING EXPERIENCE

---

University of Michigan

- Math 105 (Pre-Calculus), *Instructor*, Fall 2015.
- Math 115 (Calculus I), *Instructor*, Winter 2016, Fall 2016.
- Math 116 (Calculus II), *Instructor*, Winter 2017, Fall 2017, Winter 2018

Fudan University

- Real-Variable Functions, *Teaching Assistant*, Spring 2015.

## SERVICE

---

- Reviewer of submissions for presentation at 2019 AIAA Aviation Forum.

## HONORS AND AWARDS

---

- Outstanding Bachelor's Thesis of School of Mathematical Sciences, Fudan University. (Top 2 out of around 200) (June 2015)
- Honors Student of School of Mathematical Sciences, Fudan University. (June 2015)
- The title Wang-dao Scholar for participation in Undergraduate Research Opportunities Program, Fudan University. (June 2015)
- **Silver medal of Applied and computational Mathematics** in *Shing- Tung Yau* College Student Mathematics Contests. (August 2014)
- First Prize of NOIP (National Olympiad in Informatics in Provinces), Zhejiang, China. (November 2009)