

*Visiting Assistant Professor,  
Department of Mathematics*

## Education

### University of Kansas

*Ph.D. Mathematics*

*Advisor: Prof. Atanas Stefanov,*

Lawrence, Kansas

*2014–2019*

### University of Kansas

*M. A. in Analysis*

*Advisor: Prof. Atanas Stefanov,*

Lawrence, Kansas

*2013–2014*

### Tarbiat Modares University

*M. Sc. in Applied Mathematics*

*Advisor: Prof. Mohammad Hosseini.*

Tehran, Iran

*2011*

## Research Interests

- Regularity and Time Decay Rate of Wave equations, the Navier-Stokes Systems and related PDEs,
  - *Regularity and Decay Rate of the Boussinesq System, Magnetohydrodynamic System, Active Scalar Equation, Quasi-Geostrophic Equation, Planar waves, Burger equations, etc.*
- Harmonic Analysis,
  - *Littlewood-Paley Theory,*

## Publications

- F. Hadadifard, A. Stefanov, *Sharp relaxation rates for plane wave of general reaction-diffusion models.* (Preprint)
- F. Hadadifard, A. Stefanov, *On the sharp time decay rates for the 2D generalized Quasi-Geostrophic equation and the Boussinesq system.* Journal of Nonlinear Science, **332**, (2019), p. 1-66.
- F. Hadadifard and A. Stefanov, *On the global regularity of the 2D critical Boussinesq system with  $\alpha > 2/3$ ,* Comm. Math. Sci., **15** (2017), p. 1325–1351.
- F. Hadadifard, H.Mofidi, *Weight guaranteeing polefree barycentric rational interpolation,* Indian Journal of Science and Technology, 6(11), p. 5450- 5458.

## Awards

- Received Paul Conard Graduate Scholarship , University of Kansas, 2018.
- Received Rashleigh Family Graduate Summer Scholarship , University of Kansas, 2018.

- Awarded Summer Research Fellowship for Excellent Academic Records, University of Kansas, Summer 2017.
- Granted U. G. MITCHELL Graduate Scholarship, University of Kansas, Summer 2016.
- Received Research Summer Assistantship, University of Kansas, 2015.
- Received Research Summer Assistantship, University of Kansas, 2014.
- Ranked 14, out of 3000 participants (top 1%), in Iran's National Graduate Entrance Examination For PhD degree (Konkour), 2012.
- Ranked 73, out of 10763 participants (top 1%), in Iran's National Graduate Entrance Examination For Master degree (Konkour), 2008.

### **Talks and Poster Presentations**

- Talk: Texas Analysis and Mathematical Physics Symposium, Baylor University, Waco, TX, Oct. 2018.
- Talk: Analysis Seminar, University of Oklahoma, Norman, OK, Oct. 2018.
- Talk: Analysis Seminar, Oklahoma State University, Stillwater, OK, Oct. 2018.
- Talk: Differential Equations Seminar, University of Missouri, Columbia, MO, Sep. 2018.
- Talk: Graduate Student Seminar, University of Kansas, Lawrence, KS, Sep. 2018.
- Talk: Graduate Student Seminar, University of Kansas, Lawrence, KS, June 2018.
  - On the sharp time decay rate of the 2D generalized Quasi-Geostrophic equation.
- Poster: KUMUNU PDE Conference on Dynamical Systems and Applications Conference, University of Kansas, Lawrence, KS, April 2018.
  - Optimal time decay rates for the generalized surface Quasi-Geostrophic equation.
- Talk: Special Session on Analysis on the Navier-Stokes Equations and Related PDEs, Washington State University, Pullman, WA, April 2017.
  - On the global regularity of the 2D critical Boussinesq system
- Talk: The 17th Ohio River Analysis Meeting, University of Cincinnati, Cincinnati, Ohio, March 2017.
  - On the global regularity of the 2D critical Boussinesq system
- Talk: 6th Seminar on Linear Algebra and Its Applications, Arak University, Arak, Iran, 2011.
- Talk: 44th Annual Iranian Mathematics Conference, Urmia University, Urmia, Iran, 2010.

### **Conferences/Workshops Attended**

- Workshop on Nonlinear Differential Equations, Dynamical Systems and Applications, University of Kansas, Oct. 2018.

- First Drexel Waves Workshop, Drexel University, Philadelphia, Pennsylvania (Spring 2018).
- KUMU PDE Conference, University of Kansas, April 2018.
- The 21th Internet Seminar on Evolution Equations, Wuppertal, Germany, (2017–2018).
  - Functional Calculus.
- The 20th Internet Seminar on Evolution Equations, University of Salerno, Baronissi, Italy, (2016–2017).
  - Linear Parabolic equations.
- Prairie Analysis Seminar on Harmonic Analysis and PDEs, University of Kansas, Sep 2016.
- KUMU PDE Conference, University of Missouri, April 2016.
- Second Chicago Summer School in Analysis, University of Chicago, Summer 2015.
- KUMU PDE Conference, University of Kansas, April 2015.
- NSF-CBMS Workshop on PDEs, Oklahoma State University, Summer 2014.
- 17th International Seminar on Evolution Equations, Heinrich-Fabri Institute, Blaubeuren, Germany, 2013–2014.
  - Title: Positive Operator Semi- groups and Applications.
- Southeastern Atlantic Regional Conference on Differential Equations (SEARCDE), University of Tennessee, September 2013.
- 16th International Seminar on Evolution Equations, Karlsruhe Institute of Technology, Karlsruhe, Germany, 2012–2013.
  - *Title: Operator Semigroups and Dispersive Equations.*
- 43th Annual Iranian Mathematics Conference, Sharif University, Tehran, Iran, 2009.

## Teaching Experience

- Prepare lectures slides, wrote weekly quizzes and group works,
- Prepare solutions manual of the exams and homework assignments
- Provide tutoring to students in help room
- **Courses Taught**

<b>Course Number</b>	<b>Course Description</b>	<b>Year</b>
Math 127	Engineering Calculus I	Spring 2018
Math 125	Engineering Calculus I	Fall 2018
Math 127	Engineering Calculus III	Spring 2018
Math 126	Engineering Calculus II	Fall 2017
Math 126	Engineering Calculus II	Spring 2017
Math 126	Engineering Calculus II	Fall 2016
Math 125	Engineering Calculus I	Spring 2016
Math 115	Business Calculus I	Fall 2015
Math 002	College Algebra (KAP)	Spring 2015
Math 104	PreCalculus I	Fall 2014
Math 104	PreCalculus I	Fall 2014
Math 115	Business Calculus-I	Spring 2014
Math 115	Business Calculus-I	Fall 2013

- University of Kansas AMS Chapter membership, Fall 2013-present
- International Math competition Math Kangaroo assistant, 2014-2017

*I have also taught some advanced courses at the undergraduate level, including Numerical Analysis, Ordinary Differential Equations, Probability and Statistics.*