

Rice University
 Department of Mathematics
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Academic Positions

2019- *Assistant Teaching Professor*
Rice University, Houston, Texas USA

2014-2019 *Instructor*
Rice University, Houston, Texas USA

Summer '16,'17,'18,'19 *Instructor of Mathematics*
Rice Emerging Scholars Program

Summer '16,'17 *Instructor of Mathematics*
Rice Excellence in Math Instruction

Summer '15 *Visiting Instructor of Mathematics*
Middle East Technical University, Ankara, TR

2011-2014 *G.C. Evans Instructor*
Rice University, Houston, Texas USA

2011 (Spring) *Postdoctoral Fellow*
MSRI, Berkeley, California USA
 Free Boundary Problems, Theory and Applications

2008 (Fall) *Assistant Instructor*
University of Texas at Austin, Austin, Texas USA

Education

December 2010 *Ph.D. Mathematics*
University of Texas at Austin,
 Advisor: Prof. Luis Caffarelli

May 2005 *M.S., Mathematics*
Bogazici (Bosphorus) University
 Advisor: Prof. Alp O. Eden

May 2003 *B.S., Mathematics*
Bogazici (Bosphorus) University

Grants

2019 *Co-PI of James S. McDonnell Fdn grant "Teachers as Learners" (Under Review)*

2019 *Co-PI of NSF grant "Impact of Noyce on Teacher Retention" (Under Review)*

2012-2014 *AMS-Simons Travel Grant*

Awards

Fall 2009	<i>Professional Development Award, UT-Austin</i>
2006	<i>David Bruton jr. Fellowship, UT-Austin</i>
2005	<i>Deans Excellence Fellowship, UT-Austin</i>

Research Interests Nonlinear Partial Differential Equations, Free Boundary Problems and Applications, Homogenization Problems in Periodic and Stationary Ergodic Cases, Geometric Variational Problems in Random Media, Fluid Dynamics.

- Publications**
1. B. Orcan-Ekmekci, On the Largest Subsolution for a Free Boundary Problem in \mathbf{R}^2 : Elliptic Case, *Calculus of Variations and Partial Differential Equations*, March 2014, Volume 49, Issue 3 – 4, pp 937 – 962.
 2. V. Hoang, B. Orcan-Ekmekci, M. Radosz, and H. Yang, Blowup with vorticity control for a 2D model of the Boussinesq equation, *Journal of Differential Equations*, June 2018, Volume 264, Issue 12, pp 7328 – 7356.
 3. B. Orcan-Ekmekci, Homogenization results for a Free Boundary problem with Stationary Ergodic Free Boundary in \mathbf{R}^2 : In the Form of Layers, *Submitted*
 4. B. Orcan-Ekmekci, Homogenization results for a Free Boundary problem with Stationary Ergodic Free Boundary in \mathbf{R}^2 : Elliptic Case, *Preprint*
 5. R. Hardt, and B. Orcan-Ekmekci, On the highly oscillatory Plateau problem, *Preprint*
 6. B. Orcan-Ekmekci, Optimal Regularity Results for Parabolic Integro-Differential Equation with Obstacle, *Preprint*

Conference Talks

Sep 2019	<i>AMS Fall Central Sectional Meeting, Madison, WI</i>
May 2019	<i>Topics in Geometric Analysis, 2019 IAS-WAM, Princeton, NJ</i>
Apr 2019	<i>AWM Research Symposium 2019, Houston, TX</i>
Oct 2, 2015	<i>IOU AIDA Joint Workshop at Schlumberger, Houston, TX</i>
June 17, 2015	<i>Webinar talk for Schlumberger Mathematics Community, Houston, TX</i>
May 28-31, 2015	<i>Special Workshop for Women in Analysis and PDE, IMA, Twin Cities, MN</i>
December 7, 2013	<i>2013 SIAM PDE, Lake Buena Vista, FL</i>
January 12, 2013	<i>2013 AMS and MAA Joint Mathematics Meetings, San Diego, CA</i>
May 11, 2012	<i>Young Women in PDE, Bonn, Germany</i>
April 30, 2011	<i>AMS Spring Western Section Meeting, Las Vegas, NV</i>
April 10, 2010	<i>33rd Annual Texas PDE Conference, Austin, TX</i>
January 15, 2010	<i>2010 AMS and MAA Joint Mathematics Meetings, San Francisco, CA</i>
April 29, 2008	<i>Symposia on Analysis of Geometric Evolution, Austin, TX</i>

Seminar Talks

Fall 2012	<i>Geometry-Analysis Seminar- Rice University</i>
Sp 2012	<i>Analysis Seminar-UT-Austin</i>
Fall 2011	<i>PDE Seminar- University of Houston</i>
Fall 2011	<i>Geometry-Analysis Seminar- Rice University</i>
Sp 2011	<i>PDE Seminar- University of California-Berkeley</i>
Fall 2007	<i>Continuum Mechanics Seminar Austin, TX</i>

Service	2018-	<i>Faculty Associate of Duncan College</i>
	Fall '19-	<i>Differential Equations and Linear Algebra (Math 211) course coordinator</i>
	Fall '19-	<i>Undergraduate Committee member</i>
	Summer '19-	<i>Teaching Mentor for Instructors and graduate students at Mathematics Dept</i>
	F11, Sp12, '19	<i>Co-organizer of Graduate Teaching Seminar at Rice University</i>
	Fall '18-	<i>Diversity Committee member</i>
	Apr 2019	<i>Organizer of a session at AWM Research Symposium 2019 at Rice University</i>
	2018-	<i>Co-organizer of Mathematical Perspectives for Prospectives at Rice University</i>
	Sep 2018	<i>Presenter at Katy Math Circle at Texas</i>
	Aug 2018	<i>Reviewer at CONACYT Collaborative Research Grants at UT System</i>
	Oct 2015	<i>Panelist at Academic Fellows and Mentors Meeting at Rice University</i>
	Dec 2013	<i>Co-organizer of a mini-lecture series at SIAM PDE 2013, FL</i>
	Nov 2012	<i>Panelist in careers in the Mathematical Sciences at Rice AWM event</i>
	Fall'12	<i>Co-organizer of Minimal Surfaces Seminar at Rice University</i>
	Fall'12	<i>Co-organizer of Current Mathematics Seminar at Rice University</i>
Sp'12	<i>Co-organizer of Stochastic Differential Equations Seminar at Rice University</i>	
Fall'11	<i>Co-organizer of Multi-valued Functions Seminar at Rice University</i>	

Synergistic Activities	Fall 2019	<i>Participant of Center for Teaching in Excellence Reading Group</i>
	May 2019	<i>Selected participant of "Topics in Geometric Analysis," IAS-WAM, Princeton, NJ</i>
	May 2019	<i>Selected participant of "Active Learning for Busy Skeptics" Workshop, UT-Austin</i>
	'17,'18,'19	<i>Invited faculty sponsor for "Pancakes for Parkinson"</i>
	Mar 2019	<i>Participant of CTE workshop: Inclusive Teaching Practices</i>
	Sp 2019	<i>Participant of Center for Teaching in Excellence Reading Group</i>
	Jan 2019	<i>Participant of 6th Annual Symposium on Teaching & Learning</i>
	Feb 2018	<i>Panelist at 'Why Does My Teacher Suck?' at Rice University</i>
	Jan 2018	<i>Participant of 5th Annual Symposium on Teaching & Learning</i>
	Sp 2018	<i>Selected participant of CTE Teaching & Innovation Colloquy</i>

Teaching Experience

Rice University

Graduate Level Courses:

Math 517- Complex Analysis

Math 515- Integration Theory

Math 423- Partial Differential Equations

Undergraduate Research:

Spring 2020 - Supervised-Reading Course on PDEs

Summer 2019 - 8 week program on PDEs and geometric properties of fluid dynamics

Spring 2019 - Supervised-Reading Course on Convex Analysis

Undergraduate Courses:

Math 382 - Complex Analysis

Math 212-Multi Variable Calculus

Math 211-Ordinary Differential equations

Math 111- Fundamental Theorem of Calculus

Math 102 - Single Variable Calculus II

Math 101 - Single Variable Calculus I

UT-Austin-Assistant Instructor

Math 305- Elementary Functions and Coordinate Geometry-2 sections

UT-Austin-Teaching Assistant

Graduate Level Courses:

Methods of Applied Mathematics

Stochastic Processes and Applications

Real Analysis(2 semesters)

Undergraduate Courses:

Applied Linear Algebra

Scientific Computation in Numerical Analysis

Advanced Calculus for Applications Methods of Applied Mathematics

Bogazici University-Teaching Assistant

2003-2005 Ordinary Differential Equations, Real Analysis I, and Real Analysis II