

CURRICULUM VITAE

Contact Information

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Research Interests

- Partial differential equations with applications to geometry
- Analysis on non-compact manifolds and manifolds with singularities
- Geometric evolution equations
- The Yamabe flow on singular manifolds
- Regularity of elliptic and parabolic equations and systems
- Degenerate and singular parabolic equations
- Free boundary problems
- The Stefan problem

Education

- August 2010-Present
Ph.D. Candidate in Mathematics (expected April 2015), Department of Mathematics, Vanderbilt University, USA
Ph.D. advisor: Gieri Simonett
- September 2008-January 2010
Master of Science in Mathematics, Courant Institute of Mathematical Sciences, New York University, USA
- September 2003-July 2007
Bachelor of Science in Applied Mathematics, Department of Mathematics, Fudan University, Shanghai, China

Employment

- Teaching Assistant, Vanderbilt University, Fall 2010-Present.

Publications

1. *Real analytic solutions to the Willmore flow*. Ninth MSU-UAB Conference on Differential Equations and Computational Simulations; Electron. J. Diff. Eqns., Conf. **20**, pp. 151-164 (2013).
2. *Continuous maximal regularity on uniformly regular Riemannian manifolds*. J. Evol. Equ. **1**, no. 14, 211-248 (2014). 38 pages. (With Gieri Simonett)
3. *A family of parameter-dependent diffeomorphisms acting on function spaces over a Riemannian manifold and applications to geometric flows*. NoDEA Nonlinear Differential Equations Appl. **22**, no. 1, 45-85 (2015).
4. *Continuous maximal regularity on manifolds with singularities and its applications*. Submitted. arXiv: 1410.1082. 32 pages.
5. *Some remarks on uniformly regular Riemannian manifolds*. Submitted. arXiv:1410.8627. (With Marcelo Disconzi, and Gieri Simonett)
6. *On the regularity of the interface of a thermodynamically consistent two-phase Stefan problem*. Submitted. arXiv: 1412.5222. 42 pages. (With Jan Prüss, and Gieri Simonett)
7. *Singular parabolic equations of second order on manifolds with singularities*. Submitted. arXiv:1502.06696. 46 pages.
8. *Comparison principles for degenerate parabolic equations on singular manifolds and their applications*. In preparation.

Conference Presentations

- *The 34th Southeastern Atlantic Regional Conference on Differential Equations*, Department of Mathematics, University of Memphis, USA, October 11-12, 2014.
- *The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, the Universidad Autónoma de Madrid, Madrid, Spain, July 07- July 11, 2014.
- *Maxwell-Stefan meets Navier-Stokes, Modeling and Analysis of Reactive Multi-Component Flows*, Martin-Luther Universität Halle-Wittenberg, Germany, March 31-April 2, 2014.
- *The 4th Ohio River Analysis Meeting*, University of Kentucky, Lexington, USA, March 8-9, 2014.
- *SIAM Conference on Analysis of Partial Differential Equations*, Hilton Orlando Lake Buena Vista, Lake Buena Vista, Florida, USA, December 7-10, 2013.
- *The 33rd Southeastern-Atlantic Regional Conference on Differential Equations, 2013*, the University of Tennessee, Knoxville, USA, September 21-22.

- *The 9th Mississippi State - UAB Conference on Differential Equations and Computational Simulations*, Mississippi State University, Starkville, USA, October 4-6, 2012.

Invited Seminar Talks

- *Analysis Seminar*, Binghamton University, Binghamton, NY, USA, November 5, 2014.
- *PDE and Differential Geometry Seminar*, University of Connecticut, Storrs, CT, USA, November 3, 2014.
- *Geometry-Topology Seminar*, University of Tennessee, Knoxville, TN, USA, October 6, 2014.
- *Nonlinear PDEs Seminar*, University of California, Irvine, CA, USA, September 30, 2014.
- *Analysis and Partial Differential Equations Seminar*, University of Kentucky, Lexington, KY, USA, March 11, 2014.

Departmental Seminar Talks

- *Partial Differential Equations Seminar*, Vanderbilt University, Nashville, TN, USA, August 29, 2014.
- *Partial Differential Equations Seminar*, Vanderbilt University, March 21, 2014.
- *Partial Differential Equations Seminar*, Vanderbilt University, October 4, 2013.
- *Partial Differential Equations Seminar*, Vanderbilt University, October 19, 2012.

Conferences Attended

- *Southeast Geometry Seminar XXV*, University of Tennessee, Knoxville, TN, USA, October 26, 2014.
- *The 7th Yamabe Memorial Symposium*, University of Minnesota, Twin cities, Minneapolis, USA, October 17-19, 2014.
- *The 34th Southeastern Atlantic Regional Conference on Differential Equations*, Department of Mathematics, University of Memphis, USA, October 11-12, 2014.
- *The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, the Universidad Autónoma de Madrid, Madrid, Spain, July 07-July 11, 2014.

- *The 17th Rivière-Fabes Symposium on Analysis and PDE*, University of Minnesota, Twin cities, Minneapolis, USA, April 25-27, 2014.
- *The 29th Annual Geometry Festival*, Stony Brook University, Stony Brook, USA, April 11-13, 2014.
- *Maxwell-Stefan meets Navier-Stokes, Modeling and Analysis of Reactive Multi-Component Flows*, Martin-Luther Universität Halle-Wittenberg, Germany, March 31-April 2, 2014.
- *The 4th Ohio River Analysis Meeting*, University of Kentucky, Lexington, USA, March 8-9, 2014.
- *SIAM Conference on Analysis of Partial Differential Equations*, Hilton Orlando Lake Buena Vista, Lake Buena Vista, Florida, USA, December 7-10, 2013.
- *The 33rd Southeastern-Atlantic Regional Conference on Differential Equations*, the University of Tennessee, Knoxville, USA, September 21-22, 2013.
- *The 9th Mississippi State - UAB Conference on Differential Equations and Computational Simulations*, Mississippi State University, Starkville, USA, October 4-6, 2012.
- *The 15th Rivière-Fabes Symposium on Analysis and PDE*, University of Minnesota, Twin cities, Minneapolis, USA, April 20-22, 2012.
- *The 36th Annual SIAM Southeastern Atlantic Section Conference*, University of Alabama, Huntsville, USA, March 24-25, 2012.

Teaching Experiences

- Fall 2014 Teaching Assistant, MATH 196, Diff Eq with Linear Algb.
- Spring 2014 Teaching Assistant, MATH 155B, Accel Single-Var Calc II.
- Fall 2013 Teaching Assistant, MATH 155A, Accel Single-Var Calc I.
- Summer 2013 Teaching Assistant, MATH 218, Intro Prob/Math Stats.
- Spring 2013 Teaching Assistant, MATH 205B, Multivar Calc/Linear Algb.
- Fall 2012 Teaching Assistant, MATH 205A, Multivar Calc/Linear Algb.
- Summer 2012 Teaching Assistant, MATH 218, Intro Prob/Math Stats.
- Spring 2012 Teaching Assistant, MATH 150B, Single-Var Calc II.
- Fall 2011 Teaching Assistant, MATH 150A, Single-Var Calc I.

Honors and Awards

- Vanderbilt University Graduate Student travel grant, 2014 (\$500).
- AIMS travel award for the 10th AIMS International Conference, 2014 (\$1000).

- Travel award for the 4th Ohio River Analysis Meeting, 2014 (\$600).
- Travel award for the 34th Southeastern Atlantic Regional Conference, 2014 (\$300).
- Travel award for the 9th Mississippi State - UAB Conference, 2012 (\$635).
- Assistantship-Scholarship, Department of Mathematics, Vanderbilt University, 2010-Present.

Work Experiences

- Accounting Internship, Hornby Electronic, May 2006 - August 2006.
- Manager Assistant, Shanghai Zunyou Genierobot Ltd.Co., November 2007 - June 2008.