Jonathan Goldfarb

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Education

Florida Institute of Technology   **Melbourne, FL**

PhD, Applied Mathematics   *Spring 2016 (Expected)*

Dissertation Topic: *On the Optimal Control of Free Boundary Problems for Second Order Parabolic Equations*

Florida Institute of Technology

BS, Environmental Sciences   *2009*

Experience

Florida Institute of Technology   **Melbourne**

Graduate Student Assistant   *August 2009–May 2012, August 2015–Present*

o Instructional experience in partial differential equations, applied statistical analysis, and mathematical modelling
o Developed models in MATLAB, R, and Julia for applications in statistics and physics and delivered training on computational tools.

Florida Tech REU in PDEs and Dynamical Systems

Graduate Mentor   *May 2014–August 2014, May 2015–August 2015*

o Lead NSF-supported research group working with PI Dr. Ugur Abdulla in the fields of Nonlinear PDEs, Inverse Free Boundary Problems, and Dynamical Systems and Chaos Theory.
o Develop high performance C, MATLAB, and Julia implementations of research codes.
o Created website and custom application management system implemented in PHP/SQL, with Python (back-end/data processing) and Javascript (front-end).

Instructor   *August 2012–May 2015*

o Deliver instruction on partial differential equations, calculus, and statistics with applications to physical models.
o SIAM Southeastern Atlantic Section conference organizer. Created document preparation pipeline (in Python) for conference website and program.

Selected Invited Talks

o SIAM Conference on Analysis of PDE, December 2015: *On the Optimal Control of the Stefan Problem*, Dr. Ugur Abdulla and Jonathan Goldfarb.
o Joint Mathematics Meetings, January 2015: *Analysis of Interfaces for the Nonlinear Diffusion Equation with Linear Convection*, Dr. Ugur Abdulla, Dr. Jian Du, Jonathan Goldfarb, Kev Johnson, Lauren Lanier, and Taylor Schluter.

Selected Awards

o SIAM Student chapter award for outstanding efforts, 2012–2013 and 2013–2014.
o Outstanding Graduate in Applied Mathematics at Florida Institute of Technology, 2011–2012 and 2013–2014.
o SIAM SEAS Conference Student Presentation Award, 2014 (selected by independent committee)

Core Skills

Platforms: Linux, Unix, and Windows

Languages: C, C++, C#, FORTRAN, IDL, JavaScript, Julia, LaTeX, Maxima, Perl, PHP, Python, R, SQL

Tools & Libraries: IDV, Grads, Gempak, Mathematica, MATLAB, PETSc, Sage, SPSS, Sundials, ViSit

Publication/conference talks and more details in my CV at http://jgoldfar.github.io/media/cv.pdf.