

# Jonathan Goldfarb

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## Education

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<b>Florida Institute of Technology</b> <i>PhD, Applied Mathematics</i>	<b>Melbourne, FL</b> <i>2009–2016 (Expected)</i>
<b>Florida Institute of Technology</b> <i>BS, Environmental Sciences</i>	<b>Melbourne, FL</b> <i>2005–2009</i>

## Experience

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<b>Florida Institute of Technology</b> <i>Graduate Student Assistant</i>	<b>Melbourne</b> <i>Fall 2009–Summer 2012, Fall 2015–Spring 2016</i>
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- o Worked in: Calculus 1 (TA coordinator) and Calculus 2 • Differential Equations with Linear Algebra • Introduction to PDE • Models in Applied Math • Applied Statistical Analysis • Probability and Statistics • Applied Discrete Math • Theory of Stochastic Processes
- o Cofounder and president of Florida Tech SIAM Student chapter, 2012–2014.
- o Developed materials for computational math labs.

<b>Florida Institute of Technology</b> <i>Instructor</i>	<b>Melbourne</b> <i>Fall 2012–Spring 2015</i>
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- o Taught Algebra, Calculus, Introduction to PDE, and Statistics courses.
- o SIAM Southeastern Atlantic Section conference organizer under chair Dr. Ugur Abdulla.

<b>Florida Tech REU in PDEs and Dynamical Systems</b> <i>Graduate Mentor</i>	<b>Melbourne</b> <i>Summer 2014, Summer 2015</i>
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- o Completed research and mentored students on advanced level material.
- o Generated numerical codes and documents for groups working in Nonlinear PDEs, Inverse Free Boundary Problems, and Dynamical Systems and Chaos Theory
- o Created website and application management system under <http://math.reu.fit.edu>

## Core Skills

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**Platforms:** Linux, Unix, and Windows

**Tools & Libraries:** IDV, Grads, Gempak, Mathematica, MATLAB, R, PETSc, Sage, ViSit

**Languages:** C, C++, C#, FORTRAN, IDL, JavaScript, Julia, L<sup>A</sup>T<sub>E</sub>X, Perl, PHP, Python, SQL

## Research Interests and Topics

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**PDE:** Inverse problems, mathematical physics and modeling, qualitative theory for nonlinear equations, free boundary problems, control problems, degenerate and non-uniformly parabolic equations

**Optimization, Functional Analysis, Numerical Methods and Algorithm Development, and Geophysical Fluid Dynamics.**

*Publication/conference talks and more details in my CV at <http://my.fit.edu/~jgoldfar>.*