

# CURRICULUM VITAE

## RYAN REED GROVE

### CONTACT INFORMATION

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ADDRESS Department of Mathematical Sciences  
M-306 Martin Hall  
Clemson University  
Clemson, SC 29634

EMAIL [rrgrove6@gmail.com](mailto:rrgrove6@gmail.com)

WEB PAGE <http://people.clemson.edu/~rgrove/>

CITIZENSHIP United States of America

### EDUCATION

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DEGREE Ph.D. in Mathematical Sciences  
Dissertation: *N/A*  
Overall QPA: 3.69  
May 2017 (Expected)  
Clemson University  
Clemson, SC

DEGREE M.S. in Applied Mathematics  
Thesis: *Immersed Boundary modeling of journal bearings in a viscoelastic fluid.*  
Overall QPA: 3.83  
May 2013  
Indiana University of Pennsylvania  
Indiana, PA

DEGREE B.S. in Applied Mathematics, B.S. in Physics  
Minor in Computer Science  
May 2012  
Overall QPA: 3.95  
Indiana University of Pennsylvania  
Indiana, PA

### RESEARCH INTERESTS

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Geometric Multi-grid, Finite Element Method, Navier-Stokes equations, Parallelization, Mantle Convection Simulation, deal.II, Parallel Linear Algebra

### LEARNED PROGRAMMING LANGUAGES/SOFTWARE PACKAGES

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MATHEMATICS deal.ii, Matlab, Mathematica, Maple, Sage, R, Girosi, Lingo, Lindo, LaTeX

GENERAL C, C++, Python, HTML, Fortran, Java, SQL, Visual Basic

PHYSICS	LabVIEW
GEOSCIENCE	ASPECT
VERSION	GIT, Subversion
CONTROL	

## CONTRIBUTED TALKS

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(\* = received travel support)

TITLE	Graduate Student Seminar
LOCATION	Clemson University, Clemson, SC
DATE	September 23, 2013
TALK TITLE	How to Get a Summer Internship

TITLE	Graduate Student Seminar
LOCATION	Clemson University, Clemson, SC
DATE	August 26, 2013
TALK TITLE	An Introduction to Graduate School

TITLE	*The 9th Annual UNCG Regional Mathematics and Statistics Conference
LOCATION	The University of North Carolina at Greensboro, Greensboro, NC
DATE	November 2, 2013
TALK TITLE	Immersed Boundary Modeling of Journal Bearings in a Viscoelastic Fluid

TITLE	Graduate Student Seminar
LOCATION	Clemson University, Clemson, SC
DATE	October 30, 2013
TALK TITLE	Immersed Boundary Modeling of Journal Bearings in a Viscoelastic Fluid

TITLE	*Pennsylvania State System of Higher Education Mathematics Association
LOCATION	Clarion University, Clarion, PA
DATE	April 17-18, 2013
TALK TITLE	Immersed Boundary Modeling of Journal Bearings in a Viscoelastic Fluid

TITLE	*Allegheny Mountain Section of the Mathematical Association of America Spring 2013 meeting
LOCATION	Indiana University of Pennsylvania, Indiana, PA
DATE	April 5-6, 2013
TALK TITLE	Immersed Boundary Modeling of Journal Bearings in a Viscoelastic Fluid

TITLE	Computational Mathematics Seminar
LOCATION	Clemson University, Clemson, SC
DATE	October 30, 2014
TALK TITLE	Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations

TITLE	*The 10th Annual UNCG Regional Mathematics and Statistics Conference
LOCATION	The University of North Carolina at Greensboro, Greensboro, NC
DATE	November 1, 2014
TALK TITLE	Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations

TITLE Graduate Student Seminar  
LOCATION Clemson University, Clemson, SC  
DATE November 5, 2014  
TALK TITLE Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations

TITLE Fall Southeastern Sectional Meeting of the American Mathematical Society  
LOCATION The University of North Carolina at Greensboro, Greensboro, NC  
DATE November 8-9, 2014  
TALK TITLE Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations

#### POSTER PRESENTATION

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(\* = received travel support)

TITLE \*2015 SIAM Conference on Computational Science and Engineering  
LOCATION The Calvin L. Rampton Salt Palace Convention Center  
Salt Lake City, UT  
DATE March 14-18, 2015  
POSTER TITLE Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations

#### CONFERENCES ATTENDED WITH NO PRESENTATION

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(\* = received travel support)

TITLE \*2014 SIAM Student Conference  
LOCATION West Virginia University  
Blacksburg, WV  
DATE March, 2014

## KEY COURSES

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Introduction to Scientific Computing  
Data Structures  
Stochastic Processes  
Stochastic Models  
Mathematical Programming  
Finite Element Method  
Finite Element Method in Scientific Computing  
Network Flow Programming  
Linear Analysis  
Matrix Analysis  
Probability  
Analysis for Applied Mathematics  
Complex Analysis  
Ordinary and Partial Differential Equations  
Applied Regression Analysis and Design of Experiments  
Modeling and Simulation  
Advanced Simulation  
Applied Statistical Methods  
Deterministic Models in Operations Research  
Stochastic Models in Operations Research  
Linear Algebra  
Mathematical Statistics  
Advanced Mathematics for Applications  
Theoretical Physics  
Electricity and Magnetism  
Nuclear Physics  
Mechanics  
Thermal and Statistical Physics  
Optics  
Electronics  
Quantum Mechanics  
Modern Physics

## SERVICE

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DESCRIPTION	SIAM Webmaster
DATE	Fall 2014 - Present

DESCRIPTION	GSG Senator
DATE	Fall 2015 - Present

DESCRIPTION	GSG Financial Committee
DATE	Fall 2015 - Present

## WORKSHOPS GIVEN

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PROGRAM	Personal Webpage Workshop
DATE	April 15, 2015
INSTITUTION	Clemson University
LOCATION	Clemson, SC
COMMENT	Conducted a workshop to help graduate students start up their own personal webpage

## WORKSHOPS ATTENDED

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PROGRAM	ASPECT Hackathon
DATE	May 20-30, 2015
INSTITUTION	UC Davis
LOCATION	?, CA

PROGRAM	ASPECT Hackathon
DATE	May 14-23, 2014
INSTITUTION	Texas A&M University
LOCATION	College Station, TX

## INTERNSHIPS

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JOB TITLE	Member of the Technical Staff
LOCATION	The Aerospace Corporation, Chantilly, VA
DATE	June 1, 2015 to August 14, 2015
DESCRIPTION	Developer and analyst of multiple software packages including: GRIPS, ViCE, and UNCOLA..

## WORK EXPERIENCE

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JOB TITLE    Member of the Technical Staff  
LOCATION      The Aerospace Corporation, Chantilly, VA  
DATE          June 1, 2015 to present  
DESCRIPTION   Create a test suite for the Genetic Resources for Innovation and Problem Solving (GRIPS) program.

JOB TITLE    Research Assistant  
LOCATION      Clemson University, Clemson, SC  
DATE          August 30, 2013 to May 1, 2015  
DESCRIPTION   Simulate problems in thermal convection using ASPECT

JOB TITLE    Teaching Assistant  
LOCATION      Clemson University, Clemson, SC  
DATE          August 21, 2013 to December 13, 2013  
DESCRIPTION   Calculus II teaching assistant

JOB TITLE    Sub aide  
LOCATION      Cambria Residential Services, Richland, PA  
DATE          June 4, 2012 to May 31, 2013  
DESCRIPTION   Cook, clean, and transport individuals with mental health disabilities

JOB TITLE    Web Analyst, Research Assistant  
LOCATION      Indiana University of Pennsylvania, Indiana, PA  
DATE          September 7, 2012 to December 14, 2012  
DESCRIPTION   Prepare and interpret multiple web traffic reports for the IUP Communications Department

JOB TITLE    Teaching Assistant  
LOCATION      Indiana University of Pennsylvania, Indiana, PA  
DATE          February 4, 2013 to May 13, 2013  
DESCRIPTION   Tutor at the IUP branch campuses located in Punxsutawney and Northpointe, Pennsylvania

## VOLUNTEER WORK

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JOB TITLE    Volunteer Assistant  
LOCATION      Cambria Residential Services, Richland, PA  
DATE          08/2006 – 06/2012  
DESCRIPTION   Take individuals with mental health disabilities into the community on outings

JOB TITLE    Volunteer Firefighter  
LOCATION      Portage Area Fire Department, Portage, PA  
DATE          July 10, 2012 to May 31, 2013  
DESCRIPTION   Respond to emergency calls such as QRS, fire, and hazardous materials calls

JOB TITLE    Volunteer Tutor  
LOCATION      Indiana University of Pennsylvania, Indiana, PA  
DATE          08/2009 - present  
DESCRIPTION   Tutor for calculus, differential equations, physics, and statistics

## HONORS AND AWARDS

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HONORS SOCIETY    Sigma Alpha Lambda Honor Fraternity  
Indiana University of Pennsylvania  
Fall 2009 – Spring 2012

HONORS SOCIETY    Phi Kappa Phi Honor Fraternity  
Indiana University of Pennsylvania  
Fall 2010 – Spring 2011

AWARD              Deans List  
Indiana University of Pennsylvania  
Fall 2008 – Spring 2012

SCHOLARSHIP      S-COAM  
Indiana University of Pennsylvania  
Academic years 2009 – 2013