Ryan Reed Grove

MAIL:	M-306 Martin Hall	EMAIL:	rgrove@clemson.edu
	Clemson University		
	Clemson, SC 29634	TELEPHONE:	(609)-374-5724
WEB PAGE:	http://people.clemson.edu/~rgrove/	CITIZENSHIP:	United States of America

SKILLS, QUALIFICATIONS, AND EXPERTISE

Programming:

- C++ with MPI & OpenMP
- C with MPI
- Matlab
- Python
- Java
- HTML
- SQL
- R

Software Packages: (* implies contributed to)

- deal.II* (open source finite element library)
- ASPECT* (open source mantle convection program)
- AMPL, CPLEX, and Girobi (nonlinear and linear optimization)
- LaTeX & Beamer
- Sage

Platforms:

- Linux & Ubuntu

Computational Mathematics:

- Finite element method
- Stabilization schemes
- Viscoelastic fluid flow
- Navier Stokes equations
- Stochastic models and processes
- Linear, nonlinear, & network optimization
- Finite difference method
- Immersed boundary method
- Modeling and simulation
- Numerical linear algebra
- Numerical differential equations

Physics:

- Nuclear & quantum
- Electricity & magnetism
- Mechanics, optics, & electronics

Version Control:

- GIT & Subversion

EDUCATION

- ***Ph.D., Mathematical Sciences, Clemson University*** *2017(expected)*
  Thesis area: Finite element method, stabilization schemes, and parallelization **QPA: 3.69/4.00**
- ***M.S., Applied Mathematics, Indiana University of Pennsylvania*** *2013*
  Thesis area: Viscoelastic fluid flow, Navier Stokes equations **QPA: 3.83/4.00**
- ***B.S., Physics, Indiana University of Pennsylvania*** *2012*
  Minor: Computer Science **QPA: 3.95/4.00**
- ***B.S., Applied Mathematics, Indiana University of Pennsylvania*** *2012*
  QPA: 3.95/4.00

INTERNSHIPS

- **Software Engineer, The Aerospace Corporation** *Jun - Aug 2015*
  TBD.

RESEARCH APPOINTMENTS

- **Research Assistant, Clemson University** *Aug 2013 - present*
  Simulate problems in thermal convection using ASPECT software package.
  Compare nonlinear stabilization schemes for advection-diffusion equations using deal.II.
- **Web Analyst, Indiana University of Pennsylvania** *Sep - Dec 2012*
  Prepare and interpret multiple web traffic reports for the Communications Department.
  Find efficient ways to query and maintain a large database of web traffic information.
- **ASPECT Hackathon, Various Universities** *May 2015 & May 2014*
  Served as research and personal mentor to participants at this workshop.
  Helped graduate students in the geoscientific community program in deal.II and use ASPECT.

CONFERENCE PRESENTATIONS AND SEMINARS

Given over **8** contributed talks and **1** poster session at seminars and conferences. This includes:

- **2015 SIAM Conference on Computational Science and Engineering** *Mar 2015*
  The Calvin L. Rampton Salt Palace Convention Center, Salt Lake City, UT **Poster**
  <u>Title:</u> "Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations"
- **Fall Southeastern Sectional Meeting of the American Mathematical Society** *Nov 2014*
  The University of North Carolina at Greensboro, Greensboro, NC **Talk**
  <u>Title:</u> "Comparison of Nonlinear and Linear Stabilization Schemes for Advection-Diffusion Equations"
- **Pennsylvania State System of Higher Education Mathematics Association** *Apr 2013*
  Clarion University, Clarion, PA **Talk**
  <u>Title:</u> "Immersed Boundary Modeling of Journal Bearings in a Viscoelastic Fluid"

SERVICE AND VOLUNTEER WORK

- **SIAM Webmaster, Clemson University** *Aug 2014 - present*
  Maintainer of the website: http://people.clemson.edu/~siam/
- **Volunteer Firefighter, Portage Area Fire Department** *Jul 2012 - May 2013*
  Respond to emergency calls such as QRS, fire, and hazardous materials calls.
- **Volunteer Assistant, Cambria Residential Services** *Aug 2006 - Jun 2012*
  Take individuals with mental health disabilities into the community on social outings.
  Cook, clean, and transport individuals with mental health disabilities.

HONORS, AWARDS, AND SCHOLARSHIPS

Received over **$29,000** in honors, awards, and scholarships combined.

- **Travel Support** *2013 - present*
  Received travel support for **6** conferences totalling around **$3,000** over **2** years.
- **S-COAM, Indiana University of Pennsylvania** *2009 - 2013*
  Scholarship renewed **7** times totalling around **$25,000** over **4** years.
  Participated in the Mathematics Enrichment Activities Network.