

# Jeremy O. McCaslin

*Cornell University*

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CONTACT INFORMATION      Sibley School of Mechanical and Aerospace Eng.  
Cornell University  
105 Upson Hall  
Ithaca, New York, 14853  
jom48@cornell.edu  
jomccaslin@gmail.com  
Personal website  
720.984.5699 (*cell*)

RESEARCH INTERESTS      atmospheric flows, magnetohydrodynamics, flows involving vorticity, coherent  
turbulent structures, multiphase flows

EDUCATION                  **Cornell University**, Ithaca, NY USA

M.S., Ph.D., Mechanical Engineering (2011 - present; expected graduation  
May 2013)

- Advisor: Professor Olivier Desjardins
- Research: Computational Modeling of Energy Systems - turbulent multiphase flows and turbulent two-phase boundary layers

**University of Colorado at Boulder**, Boulder, Colorado USA

M.S., Mechanical Engineering (2008 - 2011)

- Advisor: Professor Mark Rast
- Research: Statistics of coherent turbulent structures
- Department Advisor: Professor Olivier Desjardins

**Covenant College**, Lookout Mountain, Georgia USA

B.A., Physics (2004 - 2008)

- Advisor: Phill Broussard  
Graduated Magna cum Laude, 3.76 cum. GPA

**Faith Christian High School**, Arvada, Colorado USA

(2001-2004)

- Graduated Valedictorian, 4.0 cum. GPA

AWARDS,  
HONORS AND  
SCHOLARSHIPS

**University of Colorado at Boulder**

Outstanding Teaching Assistant Award, 2009  
Dean's Outstanding Merit Fellowship, 2008

**Covenant College**

Academic All-American (four years)  
High Honor Roll (four years)  
Dean's List (four years)  
Athletic Scholarship: Varsity Soccer (four years)  
Academic Scholarship (four years)

**Faith Christian High School**

High Honor Roll (all four years)  
Outstanding Mathematics Student Award (senior year)  
Outstanding Spanish Student Award (junior, senior years)  
Outstanding Chemistry Student Award (junior year)  
Outstanding Biology Student Award (sophomore year)  
Four-year Letterman (varsity soccer)  
All-State Team (varsity soccer, senior year)  
Voted MVP, recipient of Leadership Award (varsity soccer, senior year)

ACADEMIC  
EXPERIENCE

**Courses Assisted, University of Colorado at Boulder**

MCEN 4047, Mechanical Engineering Laboratory

MCEN 5021, Fluid Mechanics

ASEN 5051, Introduction to Fluid Dynamics

MCEN 3022, Heat Transfer

MCEN 3021, Fluid Mechanics

**Courses Tutored, Covenant College**

PHY 131, General College Physics I

CHE 121, General Chemistry I

PAPERS T. S. Wood, J. O. McCaslin, & P. Garaud, 2011. *Solar Meridional Circulation and Interior Magnetic Field*, ApJ, 738, 47 ([ADS link](#))

J. O. McCaslin & P. R. Broussard, 2007 *Search for Chaotic Behavior in a Flapping Flag*, Physics Arxiv

INSTITUTIONAL SERVICE **University of Colorado at Boulder**

GEARS Committee, Spring 2009

SRI Committee, Spring 2009

MEMBERSHIPS **American Physical Society**

**International Summer Institute for Modeling in Astrophysics**

**Flying Club**, University of Colorado at Boulder

AFFILIATIONS **Computational Modeling of Energy Systems**

**Collaborative for Fluid and Energy Sciences**

**APS - Division of Fluid Dynamics**

**American Geophysical Union**

SKILLS Experience in organizing multiple literature reviews  
 Leadership and teamwork experience  
 Strong social and communication skills  
 Solid mathematical background  
 Programming in MATLAB, Fortran, IDL, Perl, Mathematica  
 Good writing and presentation skills  
 Proficiency with Microsoft Office (or Linux OpenOffice) products  
 Experimental research experience  
 Well-versed in L<sup>A</sup>T<sub>E</sub>X typesetting  
 Experience with Linux systems

OUTREACH 5/99: Urban ministry in Montreal, Canada  
 4/01: Building project in Mexicali, Mexico  
 6/04: Building project in Quito, Ecuador  
 7/07: Painting project/Orphanage ministry in Nuevo Leon, Mexico  
 7/08: Construction/plumbing project in Sardinas, Ecuador

PROFESSIONAL  
EXPERIENCE

8/10 - present: Graduate Research Assistant, Department of Mechanical Engineering, Computational Modeling of Energy Systems  
3/10 - 8/10: Graduate Research Assistant, Dept. of Mechanical Eng./Laboratory for Atmospheric and Space Physics, University of Colorado at Boulder  
1/10 - 5/10: Laboratory Assistant, MCEN 4047 Mechanical Engineering Lab, Department of Mechanical Engineering, University of Colorado at Boulder  
5/09 - 12/09: Teaching Assistant, MCEN 5021/ASEN 5051 Fluid Mechanics, Department of Mechanical Engineering, University of Colorado at Boulder  
5/09 - 8/09: Research Assistant under Kamran Mohseni, Department of Aerospace Engineering Sciences, University of Colorado at Boulder  
1/09 - 5/09: Teaching Assistant, MCEN 3022 Heat Transfer, Department of Mechanical Engineering, University of Colorado at Boulder  
5/08 - 12/08: Teaching Assistant, MCEN 3021 Fluid Mechanics, Department of Mechanical Engineering, University of Colorado at Boulder  
1/08 - 5/09: Tutor, PHY 131 General College Physics I and CHE 121 General Chemistry I, Covenant College, Lookout Mountain, GA  
5/06 - 8/08: Co-owner, Innovative Paint Solutions, Arvada, CO  
5/01 - 8/05: Various part-time summer jobs