

---

# Samuel H. R. Whitman

PhD Candidate  
Department of Mechanical Engineering  
University of Colorado, Boulder

948 North Street, Apt. 10  
Boulder, CO 80304  
☎ +1 (503) 805 3264  
✉ [samuel.whitman@colorado.edu](mailto:samuel.whitman@colorado.edu)  
📄 [tesla.colorado.edu/Sam-Whitman](http://tesla.colorado.edu/Sam-Whitman)

---

## Education

- Fall 2020 **Ph.D. in Mechanical Engineering**, *University of Colorado Boulder*, Boulder, CO.  
(Anticipated) Advisor: Dr. Peter E. Hamlington.  
June 2011 **B.A. in Physics**, *Carleton College*, Northfield, MN.

---

## Professional Experience

### Research Experience

- 2017–Present **Research Assistant**, *Turbulence and Energy Systems Laboratory*, University of Colorado Boulder.  
2011 **Research Assistant**, *Titus Research Group*, Carleton College.  
2010–2011 **Research Assistant**, *Weiss Research Group*, Carleton College.

### Teaching Experience

- 2017 **Teaching Assistant**, *MCEN 2043 Dynamics*, University of Colorado Boulder.  
2016 **Teaching Assistant**, *MCEN 3021 Fluid Mechanics*, University of Colorado Boulder.  
2008–2011 **Tutor**, *Math Skills Center*, Carleton College.

### Private Sector

- 2012–2015 **Technical Coordinator**, *Professional Billing*, Epic, Verona, WI.  
2011–2015 **Technical Services / Problem Solver**, *Professional Billing*, Epic, Verona, WI.

---

## Research Interests

Turbulence, combustion, reacting flows, intermittency, energy cascade, coherent structures, computational fluids.

---

## Publications

### Refereed Journal Publications - Submitted

- [1] S. H. R. Whitman, P. E. Hamlington, C. A. Z. Towery, and A. Y. Poludnenko. Scaling and Collapse of Conditional Velocity Structure Functions in Turbulent Premixed Flames. *37th International Symposium on Combustion*. (Submitted 2017).

### Other Conference Proceedings

- [2] S. H. R. Whitman, C. A. Z. Towery, A. Y. Poludnenko, and P. E. Hamlington. Dependence of intermittency on turbulence intensity, fuel type, and simulation fidelity in premixed reacting flows. In *2017 Fall Technical Meeting, Western States Section of The Combustion Institute*, October 2017.  
[3] S. H. R. Whitman, A. Y. Poludnenko, and P. E. Hamlington. Intermittency in Turbulent Premixed Hydrogen-Air Flames. In *10th U.S. National Combustion Meeting*, April 2017.

---

## Conference and Seminar Presentations

### Oral Presentations

- [P.1] A Structure Function Analysis of Intermittency and Universality in Turbulent Premixed Flames. American Physical Society Division of Fluid Dynamics - 2017 Meeting. Denver, CO, November 19-21, 2017.  
[P.2] Dependence of Intermittency on Turbulence Intensity, Fuel Type, and Simulation Fidelity in Premixed Reacting Flows. Western States Section of the Combustion Institute – Fall 2017 Meeting, US Sections of the Combustion Institute. Laramie, WY, October 2-3, 2017.

- 
- [P.3] Dependence of Intermittency on Turbulence Intensity and Simulation Fidelity in Premixed Reacting Flows. 3rd Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 11, 2017.
  - [P.4] Intermittency in Turbulent Premixed Hydrogen-Air Flames. 10th U.S National Combustion Meeting, US Sections of the Combustion Institute. College Park, MD, April 23-26, 2017.

### Posters Presented

- [PP.1] A Structure Function Analysis of Intermittency and Universality in Turbulent Premixed Flames. Frontiers in Turbulence – KRS70 at Denver Symposium. Denver, CO, November 17-18, 2017.

---

### Honors and Awards

- 2016 Vogel Family Graduate Energy & Fluids Fellowship Recipient, Department of Mechanical Engineering, University of Colorado Boulder
- 2016 CU Dean's Outstanding Merit Fellowship Recipient, Department of Mechanical Engineering, University of Colorado Boulder
- 2011 Graduated *Magna cum Laude*, Department of Physics, Carleton College
- 2010 Minnesota Space Grant, Department of Physics, Carleton College
- 2007 National Merit Scholarship, Carleton College

---

### Activities

- 2017 Timing & A.V. Assistant, Local Organizing Committee, 70th Meeting of the Division of Fluid Dynamics, American Physical Society. Denver, CO, November 19–21, 2017.
- 2017 Volunteer, Local Organizing Committee, 70th Meeting of the Division of Fluid Dynamics, American Physical Society. Denver, CO, November 19–21, 2017.
- 2017 Organizing Committee, 3rd Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 11, 2017.
- 2016 – Present Volunteer, Mechanical Engineering Graduate Student Research and Recruitment Committee, Department of Mechanical Engineering, University of Colorado Boulder
- 2016 Organizing Committee, 2nd Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 9, 2016.