

Mark F Czajkowski

3465 Eastman Ave, Boulder, CO 80303
mfczajkowski@gmail.com, (315) 271-6481

- Education**
- Doctor of Philosophy* August 2009 - Present
University of Colorado, Boulder, CO
Major: Mechanical Engineering
Focus: Energy and the Environment 3.94/4.0 GPA
- Bachelor of Science* August 2004 - May 2008
Clarkson University, Potsdam, NY
Major: Mechanical Engineering
Minor: Mathematics
Graduated: Summa Cum Laude, 3.97/4.0 GPA
- Research Experience**
- Graduate Research Assistant* 2008-Present
University of Colorado at Boulder
- Investigation of turbulent flows using numerical methods. In particular, research is focused on developing numerical methods for multiphase turbulent flows.
- Undergraduate Research Thesis* 2007-2008
Honors Program, Clarkson University
- Researched the feasibility of a contra rotating vertical axis wind turbine powered home heating system
 - Developed and constructed a new wind turbine design
 - Experimented using prototype in Clarkson University’s wind tunnel
 - Analyzed data of various wind turbine configurations
 - Performed an economic analysis of conventional versus wind turbine powered heating systems
 - Won first place at AIAA North Eastern Regional Student Paper Conference
- Research Presentations**
- ILASS-Americas 22nd Annual Conference on Liquid Atomization and Spray Systems, Cincinnati, OH. *Quadrature-free Discontinuous Galerkin Level Set Scheme* May 2010
 - American Physical Society’s Division of Fluid Dynamics 62nd Annual Meeting, Minneapolis, MN *Direct Numerical Simulation of Turbulent Pipe Flows subjected to Transverse Oscillations* November 2009
 - Graduate Engineering Annual Research Symposium (GEARS) March 2009
 - 47th AIAA Aerospace Sciences Conference and National Undergraduate Student Competition *Feasibility of Unique Wind Powered Home Heating System* January 2009
 - AIAA Northeastern Regional Student Conference April 2008
1st Place finish in Undergraduate Student Competition Division
 - Symposium on Undergraduate Research Experiences (SURE) April 2008
 - Clarkson University Center for the Environment Poster Session February 2008
 - Commission of Independent Colleges and Universities (cIcu) Research Exposition for New York State Legislators, Albany, NY January 2008
 - Symposium on Undergraduate Research Experiences (SURE) August 2007

Work Experience	<i>Intern</i> Summer and Fall 2006 General Electric Company, Energy Division
	<ul style="list-style-type: none"> • Worked with Systems Reliability Engineering team on wind turbines, IGCC, and nuclear projects • Earned the highest score on my coop review • Developed a Lessons Learned Database to help categorize failure data • Wrote an program to optimize the preventative maintenance schedules • Was Activities Coordinator and scheduled numerous activities for interns including a whitewater rafting trip.
	<i>Intern</i> Summer 2004 and 2005 Millennium Global Technology, INC
	<ul style="list-style-type: none"> • Worked at engineering firm that developed products through the complete process of design through prototype development • Leaned design skills, engineering knowledge, computer skills including computer aided design (CAD), and manufacturing skills with work in the machine shop
Academic Activities	<i>Graduate Student Body Representative</i> 2009 University of Colorado
	<ul style="list-style-type: none"> • Attend Graduate Committee meetings where decisions are made that intimately affect graduate students
	<i>Teaching Assistant</i> 2008 University of Colorado
	<ul style="list-style-type: none"> • Held office ours, led review sessions, and graded undergraduate fluid mechanics course. • Won “Outstanding Teaching Assistant Award” from the Department of Mechanical Engineering, 2009
	<i>Member</i> 2005 - 2008 Honors Program, Clarkson University
	<ul style="list-style-type: none"> • Was selected to join prestigious group that focused on developing skills through problem based learning. The problems came from courses with open ended questions and the undergraduate research experience.
	<i>Tutor</i> 2006 - 2008 Clarkson University
	<ul style="list-style-type: none"> • Helped other students to understanding and learn material in various classes, including Fluid Mechanics, Environmental Economics, Statics, and Ridgid Body Dynamics.
Extra-Curricular Activities	<i>Committee Member</i> 2009 - 2010
	<i>Committee Coordinator</i> 2008 - 2009
	Graduate Engineering Annual Research Symposium Committee, University of Colorado
	<ul style="list-style-type: none"> • Led group that organized a department wide research conference with over 20 presenters and numerous poster presentations. • Worked with industrial sponsors and fundraising, visiting prospective students, catering, advertising, web-site development, and the presenters
	<i>Team Leader</i> 2007 - 2008 Human Powered Vehicle, Clarkson University

- Led team of 11 senior mechanical engineers with the design and construction of a fully enclosed recumbent bicycle
- Managed a \$5,500 budget
- Competed in the 2008 ASME human powered vehicle competition in Wisconsin and earned the best finish in Clarkson University's history

Suspension Sub-team Leader

2004 - 2007

Mini-Baja, Clarkson University

- Used teamwork skills in the development and fabrication of an amphibious, all terrain vehicle
- Learned and taught the suspension sub-team the engineering theories on suspension design
- Competed in the SAE Mini-Baja competitions. Won 2nd place out of 66 teams in the 2006 race.

Honor Societies

- Phalanx - Clarkson University's Highest Honorary Society
- Tau Beta Pi - Engineering Honor Society
- Phi Kappa Phi - Honor Society

Professional Societies

- American Physical Society (APS)
- American Society of Mechanical Engineers (ASME)
- Society of Automotive Engineers (SAE)
- American Institute of Aeronautics and Astronautics (AIAA)

Honors and Awards

- University of Colorado at Boulder
 - Graduate Student Service Award, March 11, 2010 - Dept. of Mechanical Engineering
 - Student of the Month, April 2009 - Dept. of Mechanical Engineering
 - Outstanding Teaching Assistant Award
 - Deans Outstanding Merit Fellowship
- Clarkson University
 - Most Promising Senior in Mechanical Engineering by the Department of Mechanical and Aeronautical Engineering at Clarkson University
 - Phalanx Commendable Leadership Award
 - Robert E. Rosati '52 Award for Excellence in Mechanical Engineering
 - Holcroft Alumni Recognition Award
- New York State Leaders of Tomorrow
- James D Cartin Memorial Leadership Award

Computer Skills

Languages, Software, & Operating Systems:

Fortran, Latex, Matlab, Mathematica, Solidworks, Pro/Engineer, Microsoft Office, Open Office, HTML, Dreamweaver, Windows, Ubuntu, Mandriva, Mac