**Matthew Drake Perrella**

(706)366-2143 mperrella6@gatech.edu

**Summary**

* Mechanical Engineering PhD student with heat transfer and fluid dynamics focus
* Conducting research in cryogenic cooling and two-phase heat transfer
* Highly analytical, performance-driven personality
* Expertise in applied research, new concept development, simulation, and validation
* Broad knowledge in quality control, manufacturing, and design
* Superior problem-solving and time-management abilities
* Team spirited with effective communication and presentation skills
* Microsoft Windows, Mac OS X, MATLAB, EES, Solid Edge, Solid Works, ANSYS, Sage
* Spanish (rudimentary)

**Education**

**Georgia Institute of Technology** Atlanta, GA

PhD student in Mechanical Engineering 3.77/4.0 May 2015-May 2017

Non-thesis Masters in Mechanical Engineering August 2012-May 2015

**Auburn University** Auburn, AL

Bachelor of Mechanical Engineering 3.98/4.0 August 2007-May 2012

Cooperative Education Certificate (VT Miltope)

**Work Experience**

**Georgia Institute of Technology** Atlanta, GA

Graduate Research Assistant August 2012-May 2016

* Expertise in modeling of complex thermodynamic and fluid systems
* Ability to design and execute complex experiments and interpret results

**Focus Engineering** Auburn, AL

Quality Control/ Design Engineer May 2012-July 2012

* Performed quality control inspection of precision-machined parts for custom fabrications
* Designed and constructed small-volume custom products to meet unique and unusual customer needs

**Naval Surface Warfare Center** Panama City, FL

Summer Intern May 2011-July2011

* Assisted in testing and maintenance of Airborne Mine Neutralization System equipment
* Designed test equipment and implemented cost-saving refurbishment of maintenance equipment

**VT Miltope** Hope Hull, AL

Co-op Student May 2008-April 2010

* Performed environmental and qualification testing on ruggedized computer equipment
* Developed and executed testing procedures for new products, systems, and components
* Determined root-cause of product failures and developed solutions
* Created and maintained mechanical models and drawings for computer components and accessories
* Led small design projects and proposed improvements to existing products

**Leadership**

**Boy Scouts of America**

* Cub Scout Den Leader Troop 858 August 2009-May 2012
* Eagle Scout November 2006

**Auburn University Band**

* Auburn University Marching Band and Basketball Pep Band August 2008-May 2011
* Sousaphone Section Leader August 2010-January 2011

**Activities and Awards**

**Undergraduate Research** January 2011-May 2012

* Awarded undergraduate research fellowship to explore the use of Encapsulated Phase Change Materials (EPCM) for thermal energy storage
* Conducted literature survey of possible applications of EPCM such as energy-saving building materials, temperature-controlled textiles, etc.
* Designed lab-scale thermal storage system to establish the feasibility of EPCM-infused gypsum wallboard as a residential thermal energy storage mechanism

**Study Abroad** May 2010-June 2010

* Completed five-week program in Spanish language and sustainable engineering practices at the Pamplona Learning Spanish Institute in Pamplona, Spain
* Studied renewable energy generation and anthropogenic impacts
* Researched thermal power generation as a source of renewable energy

**Cooperative Education** May 2008-April 2010

* Frank Vandegrift Co-op of the Year Award Finalist
* Lead Co-op at VT Miltope

**University Honors Scholar** May 2012

* 21 Honors Core Credit Hours
* Honors Thesis

**Scholarships**

* Georgia Institute of Technology President’s Fellowship August 2012
* Auburn University Spirit of Auburn Founder’s Scholarship August 2007

**GRE**

**Verbal Reasoning:** 163/170 93%

**Quantitative Reasoning:** 164/170 87%

**Analytical Writing:** 5/6 87%