

# Daniel Joseph Gempesaw

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## Education

- The Georgia Tech Institute of Technology, Atlanta, GA (2008 - present)
  - Candidate for M. S. in Mechanical Engineering GPA: 3.11/4.00
  - Research Topic: Advanced Simulation Strategies for Data Center Cooling
- University of Delaware, Newark, DE (2004 - 2008) Graduated: May 2008
  - Honors Bachelor of Mechanical Engineering GPA: 3.859/4.000
  - Honors Bachelor of Science in Mathematics
  - Minor in Physics
  - GRE Scores: Verbal: 710/800, Quantitative: 800/800, Writing: 5.5/6.0 Sept 2007

## Experience

- Gempesaw, Daniel and Yogendra Joshi. "A Review of Wavelet-Based Algorithms for Applications in Reduced Order Modeling of Thermal Management Systems." Oct 2010
  - Refereed Conference Paper presented at NATO RTO-AVT-178 Specialists' Meeting on System Level Thermal Management for Enhanced Platform Efficiency: Bucharest, Romania.
- Senior Design Project - Shock Mitigating Marine Seat Fall 2007
  - Designed a seat using advanced composite analysis to minimize weight & optimize strength
  - learned about composite manufacturing in a hands-on environment
- Mathematical Modeling - Rigid Hollow Cylinders at a Liquid-Air Interface Fall 2007
  - Designed experiments to analyze self assembly of straws floating on water
  - Modeled the meniscus of multiple straws interacting by using Calculus of Variations
- Summer Internship at DuPont - Chestnut Run Plaza: Pump Selection Tool Summer 2007
  - Created a web-based expert system for Pump Selection including web interface
  - Gained experience with pumps, expert systems, web servers, customer interaction
- Research with Dr. Kausik Sarkar: Drops in Shear Flow Spring 2007
  - Performed simulations of drops in shear flow with custom front tracking code
  - Worked towards validating the custom code by comparing simulations
- Research with Dr. Russell Luke: The Phase Retrieval Problem Summer 2005
  - Conducted research regarding the phase retrieval problem, with applications in Optics
  - Assisted in the design of an Optics lab to perform experiments

## Honors and Activities

- Study Abroad in Argentina - Buenos Aires Jan 2008
- Tau Beta Pi Engineering Honor Society Fall 2007
- Phi Kappa Phi Honor Society Member Spring 2007 - 2008
- Participant in the William Lowell Putnam Mathematical Competition December 2006
- Recipient of the UD General Honors Award Fall 2006
- Recipient of the UD Alumni Book Award Spring 2006
- Study Abroad in China - Beijing, Xi'an, and Shanghai Jan 2006
- UD Undergraduate Research Program Science and Engineering Scholar Summer 2005
- Alpha Lambda Delta Honor Society Member 2005 - 2008
- Member of the UD Honors Program 2004 - 2008
- UD College of Engineering Dean's List 2004 - 2008
- University of Delaware 1743 Scholar 2004 - 2008

## Skills

Proficient in L<sup>A</sup>T<sub>E</sub>X, C, C++, Fortran, HTML5, XHTML, JavaScript, CSS3; Matlab, Maple, Microsoft Word, Excel, Powerpoint, ExSys Corvid. Familiar with Unix, MYSQL. Can set up, maintain, and trouble shoot computers and computer networks. Typing: 120WPM. Limited fluency in Spanish and Mandarin.