

THOMAS A. COOPER

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- Objective** To obtain a Summer 2010 internship in the field of electrical (communications) engineering.
- Education** **B.S. Electrical Engineering**, Mathematics Minor; Expected May, 2010
M.S. Electrical Engineering; (B.S./M.S. Program) Expected May, 2011
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA
Harry Lynde Bradley Scholarship, Fall 2006-Present
GPA: 3.68
Dean's List with Distinction: Fall 2006, Spring 2007, Fall 2008, Spring 2009
- Related Experience** **DSP and Filter Design Projects**, Blacksburg, VA, Fall 2009
- Designed and simulated a signal flow graph module with quantization in Matlab.
- Digital Communications Lab**, Blacksburg, VA, Fall 2009
- Analyzed effects of modulation techniques, channel noise, and other communication concepts using TIMS hardware modules and an oscilloscope.
- Signals and Systems Design Project**, Blacksburg, VA, Spring 2008
- Designed a band-pass filter and corresponding circuit that attenuated frequencies outside the limits of human speech using MatLab and Bode plots.
- Activities** **Eta Kappa Nu – Beta Lambda (VT) Chapter**, Blacksburg, VA, Spring 2008-Present
- ECE Honor Society, Member at Large, voted and attended weekly meetings.
 - Reported news and events at weekly meetings as the SEC Representative.
 - Edited and co-produced online problem solving tutorials as the Video Editing Chair.
 - Tutored and helped ECE students at Academic Workshops.
- Student Engineers' Council**, Blacksburg, VA, Fall 2006-Present
- Advertised and created flyers as a member of the Publicity Committee.
 - Attended and voted at general assembly meetings as a Member at Large.
- I.E.E.E. – VT Chapter**, Blacksburg, VA, Fall 2007-Present
- Attended general assembly meetings.
- National Society of Collegiate Scholars – VT Chapter**, Blacksburg, VA, Fall 2007-Present
- Invited to select honor organization based on GPA and class rank.
- Volunteer**, The Big Event, Blacksburg, VA, Spring 2007, 2008, 2009
- Raked leaves, trimmed shrubs, cleaned yards, and weeded flowerbeds of senior citizens as a team.
- Freshman Galileo Engineering Community**, Blacksburg, VA, Fall 2006-Spring 2007
- Lived with other engineers all year and attended a seminar class.
- Soccer**, Oak Ridge and Knoxville, TN, and Blacksburg, VA, Fall 1998-Present
- Played four seasons of Fall intramural soccer at Virginia Tech.
 - Played club soccer on several traveling teams, competed in many tournaments.
- Skills** **Computer Applications:**
Matlab, Autodesk Inventor, AutoCAD, LabView, PSpice, MS Office Suite
- Work Experience** **Undergraduate Research Assistant**, Virginia Tech, Blacksburg, VA, Summer 2009-Present
- Conducted a literature survey and defined metrics and meta-data for spectrum sensing techniques and dynamic spectrum access (DSA) algorithms.
 - Compiled a list of current DSA algorithms and further investigated two algorithms for simulation and performance evaluation in Matlab.
- Research Intern**, Oak Ridge National Lab, Oak Ridge, TN, Summer 2008
- Tested multi-layer PZT actuators for fatigue effects under extreme conditions.
 - Used Matlab, LabView, and MS Excel to analyze data and prepare presentations.
 - Co-published "Mechanical Strain and Piezoelectric Properties of PZT Stacks Related to Semi-Bipolar Electric Cycling Fatigue" with H.T. Lin, H. Wang, and A. Wereszczak.