Bryan P. Faulkner | bryanf81@vt.edu | (434)-962-8290 | linkedin.com/in/vteemajor | bryfaulkner.github.io

OBJECTIVE	*Seeking to become an engineering leader through a Summer 2016 internship opportunity*

EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech)
B.S. Electrical Engineering, Mathematics Minor, Expected Fall 2016
University Honors – Seeking Commonwealth Scholar Honors Diploma
GPA 3.53/4.00
Tau Beta Pi & IEEE- Eta Kappa Nu (HKN), Student Member

RELEVANT COURSES

Electromagnetic Fields I & II*, Microelectronics I & II*, Continuous and Discrete Systems, Probability & Stat for EE, AC & DC Circuit Analysis, Signals and Systems, Microcontroller Interfacing, Intro to Numerical Analysis, Multivariable Calculus, Differential Equations, Technical Writing *Presently Enrolled**

COMPUTER SKILLS

Software:		Languages:		Operating Systems:
MS Office/Visio***	Mathematica**	MATLAB**	C/C++**	Windows 8.1***
Simulink**	LabVIEW**	HTML/CSS3/JS**	Verilog HDL**	Mac OS X**
OrCAD PSpice**	Inventor*	R*	Assembly*	Linux (Ubuntu, Arch)**

Familiarity: *Novice**   *Intermediate***   *Advanced****

TECHNICAL EXPERIENCE

Virginia Tech Center for Power Electronics Systems-CPES, Undergraduate Student Researcher
Virginia Tech, Fall 2015, Blacksburg, VA
Advisor: Dr. Dushan Boroyevich, American Electric Power Professor of Electrical Engineering
- Research Title: *Analysis, Construction, and Testing of High-voltage Power Supplies*
  - Full voltage tests: 1.3kV – 1.7kV

National Science Foundation REU, Undergraduate Student Research Fellow
University of Maryland-College Park Power Electronics, Energy Harvesting and Renewable Energies Lab, Summer 2015, College Park, MD
- Collaborated with the Principal Investigator and Graduate Students to advance research efforts
- Utilizing Simulink's *SimPowerSystems* package, successfully designed, modeled, and simulated a novel control strategy power electronics systems Boeing-787
  - Control strategy only required one PI-controller (similar systems require three or more)
  - Control strategy came to fruition using Space Vector Pulse Width Modulation, State-Space Averaging, Park Transforms (abc-to-dq0), and a time-varying transfer function
- Composed conference publication from research efforts
- *Featured Research Intern* and *Best Written Report Award Winner*

National Science Foundation REU, Undergraduate Student Research Fellow
Virginia Tech Electronic-Textiles Configurable Computing Lab, Summer 2014, Blacksburg, VA
- Developed and wrote programs, using terminal interfaces, involving Bluetooth Serial Port Profiles, which were successfully incorporated into a multithreaded embedded program
- Scrutinized potential medical devices for purchase, which were proposed and obtained
- Reverse-engineered devices to communicate via C++ with an embedded system
- Applied various numerical analysis methods to project-generated data
- Simulated and built various linear current sources for stretch-sensors

LEADERSHIP EXPERIENCE

Newman Community - Catholic Campus Ministry at Virginia Tech,
- Student Campus Minister (*President*), Spring 2015 – Present
  - Lead and engage a significant percentage of the university population in their Catholic Faith, while creating a welcoming environment to any and all, at the Newman Community
  - Work in tandem with the Newman Community Staff, as well as the Assistant Student Campus Minister, in order to maintain a well working leadership foundation
  - Collaborate with university officials to establish and guide events and services campus-wide
- Communication Minister, Spring 2014 – Fall 2014

HONORS

College of Engineering Dean's List with Distinction, Spring 2015
Association for Computing Machinery, *ISWC/UbiComp – Seattle,* Student Travel Grant Recipient, Fall 2014
National Security Agency Electrical Engineering Student Scholarship, Fall 2013

PUBLICATION

(Pending Acceptance – October 2015) A. Mallik; B. Faulkner; A. Khaligh, "Control of Single-Stage Three-Phase Buck-Boost-Type Power Factor Correction Rectifier," *in Proc. IEEE Applied Power Electronics Conference and Exposition*, Mar. 2016