**William Ermlick**

Primary Address ermlickw@vt.edu Secondary Address

14514 Flag Staff Court Cell: (703) 554-3241 5400 Heather Drive Apt. J

Centreville, VA 20121 Blacksburg, VA 24060

**EDUCATION**

**B.S. Engineering Science and Mechanics** **GPA: 3.92 Graduation: May 2016**

*Minors: Mathematics / Science, Engineering and Law* Commonwealth Scholar Diploma

Virginia Tech, Blacksburg, VA

**Honors:** Dean’s List all semesters, Pratt Engineering Scholarship (2012), Honors Awards Dinner (2013), ESM Advisory Board Scholarship (2015), John B. Greiner Engineering Scholarship (2015), AIAA Region I Young Professional, Student, and Education Conference Undergraduate Award (2015), Virginia Tech University Honors: Commonwealth Scholar Diploma, Accelerated Undergraduate/Graduate Master’s Program in Engineering Mechanics (2015), ESM Outstanding Senior Award (2016), Best Senior Design Project Peletta Award (2016)

**PROFESSIONAL EXPERIENCE**

**Patent Examiner, United States Patent and Trademark Office (USPTO)** June 2016-Present

**Alexandria, VA**

* Prepared semi-judiciary responses on the patentability of patent applications filed before the Office
* Examined computer related technologies in the educational domain as an Examiner in Art Unit 3715
* Conducted interviews with patent Applicants in aim of obviating application deficiencies
* Automated several office tasks utilizing Visual Basic and Microsoft Excel

**Intern, Harrity & Harrity LLP** Summer/Winter 2014, 2015

Fairfax, VA

* Drafted two complete patent applications relating to wireless communications and business methods
* Drafted a patent application relating to search technology and prepared a response to an Office Action
* Streamlined collection and analysis of client patent data by programming automated data collection tools
* Automated several office tasks using Visual Basic and Microsoft Excel
* Programmed a web crawler using Visual Basic
* Created a database for USPTO CPC patent classification codes
* Prepared formal reports on competitor firms and international firms

**PROJECTS & RESEARCH EXPERIENCE**

**Robotic Batoid Prototype** January 2015—May 2016

Crashworthiness for Aerospace Structures and Hybrids (CRASH) Lab

Dr. Javid Bayandor and Dr. Sunny Jung at Virginia Tech

* Design and development of a robot that mimics the propulsion and dynamics of an undulating stingray
* Development of an electronic system that controls mechanical actuation using an Arduino microcontroller
* Acquisition and analysis of force and fluid velocity data using LABVIEW architecture and Particle Image Velocimetry

**Automatic Brake System for Wheeled Walker** March 2015—April 2015

Department of Biomedical Engineering and Mechanics

Dr. Sunny Jung at Virginia Tech

* Designed and prototyped an automatic braking system triggered by detecting accelerations indicative of a fall
* Fabricated a mechanical brake that interfaced with an accelerometer and an Arduino microcontroller

**Vortex Induced Vibration (VIV) Modeling** May 2014—December 2014

Department of Biomedical Engineering and Mechanics

Dr. Mark Stremler at Virginia Tech

* Created an analytical model of tandem cylinder wake interactions using Mathematica
* Explored VIV as an efficient and environmentally conscious method to harvest energy from slow moving river currents
* Analyzed accuracy of analytical model with experimental data using MATLAB and LabVIEW

**TECHNICAL SKILLS**

|  |  |  |
| --- | --- | --- |
| * Mathematica * Visual Basic * Python | * MATLAB * Microsoft Excel, Office * C++ | * JAVA * Autodesk Inventor Professional * LabVIEW |