Bryan Ptucha
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EDUCATION

Dual Bachelor of Science and Bachelor of Arts Degree Program
Columbia University, The Fu Foundation School of Engineering and Applied Sciences New York, NY
Bachelor of Science in Mechanical Engineering GPA: 3.20/4.00 May 2015
College of the Holy Cross Worcester, MA
Bachelors of Arts in Physics (Fall 2010 – Spring 2013) GPA: 3.15/4.00 May 2015
Honors: Dean's List Recipient (Fall 2012)
Relevant Coursework: Techniques of Programming, Essential Data Structures in C/C++, Discrete Mathematics (Current), and Mechatronics and Embedded Microcomputer Control (Current)

FELLOWSHIPS

College of the Holy Cross Summer Science Research Fellowship (2012, 2013)

TECHNICAL SKILLS

Programming: C, C++, Java, MATLAB/Simulink, NI LabVIEW, Wolfram Mathematica
Web Design: HTML, CSS, JavaScript, jQuery
Modeling/Simulations: Creo Parametric, AutoCAD, SIMION
Lab Equipment: Oscilloscope, Lock-In Amplifier, Digital Multimeter, Waveform Generator
General: Microsoft Office (Word, Excel, PowerPoint)

PROJECT EXPERIENCE

Columbia University Senior Design Project
iPowr: Inverted Pendulum Omni wheel Robot

- Solve the dynamics for a ballbot and then model the system in MATLAB/Simulink
- Develop and test a control system for stabilizing the ballbot in Simulink and then implement the software on the real system using an Arduino as a controller

EXPERIENCE

College of the Holy Cross, Lab of Professor Paul Oxley Worcester, MA
Research Assistant, Detection Apparatus for Co-Linear Charged and Neutral Hydrogen Beams Spring - Summer 2013

- Constructed and ran computer simulations for a detection apparatus for co-linear charged and neutral hydrogen beams
- Implemented a system for viewing an ion beam under vacuum

College of the Holy Cross, Lab of Professor Paul Oxley Worcester, MA
Research Assistant, Design and Analysis of a Chopped Lithium Atomic Beam Spring 2012 - Fall 2012

- Developed a system of in vacuum apertures for focusing an atomic lithium beam
- Designed and constructed a system for using lasers in determining the density of the atomic lithium beam
- Wrote an abstract and created a poster presentation showing the results of my research which was presented at the College of the Holy Cross Undergraduate Summer Research Symposium

LEADERSHIP AND ACTIVITIES

Columbia University Men's Varsity Lightweight Rowing Team Fall 2013 – Present

- Won the 2014 Eastern Sprints third varsity lightweight 8
- Commit 30 hours a week to practice, strength training, and competition

New York Athletic Club Rowing Team June 2014 - Present

- Won two events at the 2014 USRowing Club National Championship, the men's intermediate lightweight 8 and the men's intermediate lightweight 4, as well as finishing second in four other events
- Finished 3rd in the Under-23 Lightweight 4- at the 2014 Royal Canadian Henley Regatta

College of the Holy Cross Men's Varsity Rowing Team Fall 2010 - Spring 2012

- Dedicated 25 hours a week to training, traveling, and racing
- Highest finishing second varsity 8 in team history at the Eastern Sprints
- Highest finishing freshman 8 in team history at the Eastern Sprints