

Joe SHIELDS

PERSONAL DATA

PLACE AND DATE OF BIRTH: United States — 1990 April 15
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EDUCATION

- Portland State University **Sep. 2013 – Jun. 2016**
B.S. Mechanical Engineering, Maseeh College of Engineering and Computer Science
B.S. Physics, College of Liberal Arts and Sciences
3.65 GPA
- Portland Community College **Sep. 2008 – Jun. 2010, Sep. 2011 – Sep. 2013**
General education and prerequisites for PSU and MCECS
3.0 GPA

COMPUTER SKILLS

- R, MATLAB, C++, Bash, Vim, Git, SolidWorks, Abaqus, AutoCAD, GIMP, Inkscape, Finale
- \LaTeX , Microsoft Office, Libre Office, Google Docs, etc.
- Ubuntu, Windows

PUBLICATIONS

Joseph P Shields and Leslie Elwood. Design and manufacture of an open-hardware university rocket airframe using carbon fiber. In *AIAA SPACE 2016*, page 5365. 2016

PROJECTS AND AWARDS

- Director of Airframe Design and Manufacture **Dec. 2015 – Nov. 2016**
Created an open-hardware carbon fiber rocket airframe for the Portland State Aerospace Society
Managed interdisciplinary projects among students and professionals
Published and presented a conference paper on the project for AIAA SPACE 2016

- PCC Art Beat competition May 2012
 Composed and conducted an original piece for about 30 members
 Earned 1st place in the composition competition

SKILLS AND INTERESTS

- Classical field theory engineering
- Mathematical physics • Music theory
- Statistics and reliability • Leading small groups
- Thermal and fluid analysis • Composites manufacturing
- Interdisciplinary research and methods

RELEVANT COURSES

Below is a list of courses I've taken which I consider important or relevant to my study of physics. Please note that Advanced E&M is only offered as pass/no-pass.

COURSE TITLE	GRADE	CREDIT HOURS
Classical Mechanics I	A	4
Classical Mechanics II	ongoing	4
Electricity & Magnetism I	A	4
Electricity & Magnetism II	A	4
Advanced Electricity & Magnetism	pass	1
Intro to Quantum Mechanics	A	4
Mathematical Methods for Physics	A	4
Vibrations and System Dynamics	A	4
Fluid Mechanics	A	4
Advanced Fluid Mechanics	A	4
Viscoelasticity	A	4
Heat Transfer	A	4
Advanced Heat Transfer	A	4
Finite Element Modelling	A	4
Reliability Engineering	A	4
Applied Statistics	A	4
Technical Report Writing	A-	4
Programming and Numerical Methods	B+	2
Computer Science I	A	4
Scientific Glassblowing	B+	1
Experimental Physics	A	4
Design of Experiments	A	4