Charles Rymal

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Education

Master of Science in Mechanical Engineering

Oregon State University — Corvallis, Oregon
April 2012 to March 2015 — GPA: 3.91

Bachelor of Science in Mechanical Engineering

Oregon State University — Corvallis, Oregon
September 2007 to March 2012 — GPA: 3.78

Employment

Graduate Research Assistant — **September 2012 to September 2014**

Oregon State University - Corvallis, OR

- Title of research - Numerical Design of a High-Flux Microchannel Solar Receiver.
- Project was funded by the US Dept. of Energy SunShot Initiative.
- Worked with faculty and other students to design microchannel receivers for solar thermal power production
- Performed numerical simulations of heat transfer and fluid flow using commercial software: Ansys Fluent and StarCCM+
- Assessed pressure drop, thermal efficiency, structural integrity and flow distribution
- Published two conference papers for the ASME conference on Energy Sustainability
- Used C, Java, Python, Bash scripts, Make, and Tcl for automation, customization, and data analysis of numerical simulations

MECOP Engineering Intern — **March 2011 to September 2011**

Allied Systems Company - Sherwood, OR

- Managed several plant-wide manufacturing engineering projects with significant benefit for the company
- Designed various tooling, particularly welding fixtures, with consideration for ease of use and manufacturability
- Worked extensively with design engineers, manufacturing engineers, machinists, welders, and many others

MECOP Engineering Intern — **March 2010 to September 2010**

ATI Wah Chang - Albany, OR

- Designed material handling equipment for various applications
- Performed stress analysis calculations as well as FEA on equipment designs
- Designed creative mechanical solutions to issues with existing machinery
- Worked with area operators, supervisors, mechanical engineers, and outside fabrication contractors

Skills

- 3 years of experience using CAD software (Solidworks and Inventor)
- experience using FEA, heat transfer analysis, and CFD software (Ansys and Star-CCM+)
- experience using geometric dimensioning and tolerancing
- proficient in several programming languages (c++, java, MATLAB, python)
- working knowledge of Microsoft Office (including Excel, Access, and Visual Basic)
- excellent written and verbal communication skills

applications	SolidWorks, AutoCAD Inventor, Ansys Fluent, StarCCM+, Microsoft Visual Studio, LabVIEW, Microsoft Office
systems	Microsoft Windows, Red Hat, Debian, Ubuntu
programming languages	C/C++, Python, MatLab, x86 assembly, Java, VBA, HTML, Javascript, PHP, SQL, TCL, make, CMake, bash, lisp