

Joshua Heck

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OBJECTIVE	Obtain a full time mechanical engineering position, emphasis in energy, thermal, and fluid sciences.			
EDUCATION	Graduate: Missouri University of Science and Technology (MS&T)		Expected: May 2017	
	M.S. Mechanical Engineering (ME)		GPA: 4.0/4.0	
	<u>Thesis:</u> Design Methodology for PEMFC Flow Fields Using Inspiration from Natural Flow Structures			
	Undergraduate: Missouri University of Science and Technology		May 2015	
	B.S. Mechanical Engineering (ME)		GPA: 4.0/4.0	
EXPERIENCE	<u>Specialty Courses:</u>			
	Fuel Cell Principals	Combustion Theory	Intermediate Thermofluid Mechanics	
	Convection Heat Transfer	Applied Numerical Methods	Computational Fluid Dynamics	
	Internal Combustion Engines	Micro/Nano Thermophysics	Principles and Practices of CAD	
	Mechanical Engineering Department (MS&T)		Rolla, MO	
	Graduate Research Assistant		May 2015-Present	
	<ul style="list-style-type: none">• Researched the impact of flow structure design and operating conditions on hydrogen fuel cells in context of system level performance.• Used commercial CFD software package with parallel computing to simulate fuel cell performance on the campus FORGE computing cluster via Linux command line interface.• Developed design principles for producing flow channel geometries in fuel cells of varying sizes to improve reactant supply distribution and product removal capabilities.			
	Mechanical Engineering Department (MS&T)		Rolla, MO	
	Graduate Teaching Assistant- Mechanical Engineering Design		Aug 2015- Present	
	<ul style="list-style-type: none">• Coordinated design projects between sponsors and student teams.• Provided design guidance and performance feedback to students.			
SKILLS	Show Me Controls and Automation		Grain Valley, MO	
	Summer Intern		July- Aug 2014	
	<ul style="list-style-type: none">• Analyzed heat loss through a sensor casing for low temperature operation.• Recommended insulation materials and thicknesses and heating element power requirements.			
	Self Employed/Volunteer		Kansas City, MO	
	Construction/Renovation/Home Improvement		2005-2013	
	<ul style="list-style-type: none">• Assisted in ground up construction of my parents' house.• Remodeled a house for my sister and brother in law.• Projects included framing, roofing, plumbing, electrical, flooring, and finishing work.			
SKILLS	COMPUTER			
	SolidWorks	MATLAB	Ansys Fluent (CFD)	Ansys Workbench Meshing
	Siemens NX	MS Excel	MS Word	MS Power Point
HONORS, ACTIVITIES	Chancellor's Fellowship Recipient (Graduate)			
	Missouri S&T 3MT (Three Minute Thesis) 2 nd Place- Fall 2015 (Graduate)			
	Missouri S&T Dean's List (Undergraduate)			
	Mary Lou Castleman and Mathew's Endowed Scholarship awards (ME Departmental, Undergraduate)			
	Burns and McDonnell Student Success Center– Peer Tutoring (Undergraduate)			