Justin M. Ketterer (justin.ketterer@gmail.com) http://justinketterer.com/
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Professional Goal: I aim to continue exercising my passion and increasing my skills as a design engineer by being a key contributor to the design of novel, feasible, life-improving products.

Employment

Mechanical Engineer Oct '09-Feb '10
Design Catapult, Fountain Valley, CA
Engineering the development of medical, dental, and consumer devices. Solidworks model creation and part and assembly augmentation. Creating drawing packages. Simple analytical engineering analysis to support design decisions. Researching rapid prototyping and other specialized vendors per spec'd material and process, obtaining quotes. Ensuring first prototypes received are correct through clear communication of design details to vendors. Inspection and assembly of prototypes for conceptual validation. Communication with Chinese manufacturers. Material selection, overmolding and plastics.

GE Wind Power Co-Op Sum '05-Spr '06, Sum '07
General Electric Gas Turbine Facility, Greenville, SC
Product Services (three rotations): Identified flaws in program identifying turbine-tripping faults/ downtime; wrote better method. Assisted in analysis of vibration issue. Proposed & analyzed new component concept.
Machine Head Assembly (one rotation): 75% of time spent on shop floor observing machine head assembly process, then documenting it by creating detailed manufacturing instructions for over half of the machine head assembly process, recommended new cost-out projects, assisted in ongoing projects.

Education

Georgia Institute of Technology, Atlanta, Georgia Aug 2009
M.S.M.E., GPA 3.28. Focus on solid mechanics, fatigue of materials and structures, composite mechanics and design theory. Thesis: "Fatigue Crack Initiation in Cross-Ply Carbon Fiber Laminates." Teaching assistant for "Creative Decisions & Design", Spring '09. Taught sophomores design tools, technical writing & presenting, machine tools, microcontrollers for motors, solenoids, valves, sensors.

Michigan State University, East Lansing, Michigan May 2007
B.S. Mech. Engineering, G.P.A. 3.80. Garnered many awards in design class projects (refer to design portfolio): 'The Juicenami' beverage device, a human powered water purifier, the 'Sparty Tank,' and a solar hot dog cooker. Select Courses: Computer Aided Structural Design, Manufacturing Processes, Intermediate Solid Mechanics, Machine Tool lab. Personally taught UG / NX course, fall '04.

Technical Skills

Experience: ABAQUS, pbasic PLC, HEEDS optimization software, ASME Y14.5-2009 GD&T, machine tools and waterjet machining
Proficiency: SolidWorks 2009, Matlab, UG NX, MTS TestStar, MS Excel, Word, Powerpoint, Fatigue and Solid Mechanics theory, Conceptual Design Organization, Project Planning Tools.

Leadership

Triathlon Club President: Spring 2008. National's registration maxed out—first time in club's history.
Eagle Scout: Organized and completed a project that improved a trail behind my middle school.

Activities & Interests

Philosophy: epistemology, design pedagogy, and cognitively efficient design methods. Design ethics.
Fascinated by and passionate about the design of novel, effectively efficient mechanical devices.
Worked at an outdoor power equipment store, summer '03. Assembly & troubleshooting new products.
Took small engine mechanics, auto mechanics, and shop classes in middle school and high school.
Consistently physically active; sporadic triathlete, swimmer, cyclist, sailor, and rock climber.
Lived and worked on a carferry, summer '02. Studied abroad in Aachen, Germany, spring 2005.

For quite a bit more about my professional interests, please refer to my website: http://justinketterer.com