

JOSEPH ANTHONY

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EDUCATION

- University of Texas at Austin** Aug 2013-Present
M.S. in Mechanical Engineering with concentration in Thermal and Fluid Systems
- Dartmouth College** Aug 2008-Mar 2013
Bachelor of Engineering with focus in mechanical engineering and energy
Bachelor of Arts in Engineering Sciences
- Overall GPA: 3.78, Engineering Major GPA: 3.85

ENGINEERING EXPERIENCE

- University of Texas at Austin**, Graduate Researcher Sept 2013-Present
- Designing a reactor that uses a solar energy input to convert biomass to useful biocrude.
- Arup Group Ltd, New York, NY**, Mechanical Engineering Intern Summer 2012
- Performed pressure drop, duct leakage, cooling load and stack height calculations, applied for LEED credits, and wrote reports for clients including JetBlue, UBS and the US government.
- Dartmouth College**, Undergraduate Researcher Sept 2010-Mar 2011
- Created a testing setup to compare a new energy-efficient heat exchanger against the state of the art.
- Dartmouth College**, Teaching Assistant Oct 2008-Mar 2013
- Taught course material in a group and individual setting and prepared labs for Calculus (Fall 2008), Intro Physics (Winter 2011), Machine Engineering (Fall 2013), and Energy Utilization (Winter 2013).

AWARDS

- Dartmouth Society of Engineers Prize**, Outstanding Performance in an Engineering Project June 2013
- Worked on a four student team to design and fabricate two prototype iterations of a mechanical actuation system that maintained precise torch height during a live plasma cut by a six-axis robot arm.
- USA EPA: People, Prosperity and Planet Student Design for Sustainability Grant** Aug 2010-Aug 2013
- Designed two pico-hydroelectric plants for implementation in Rwanda with Dartmouth Humanitarian Engineering.
 - Project Leader: Led a group of 20 students with the goal of rural electrification in developing countries. Managed technical subgroups, collaborated with NGO and university partners, and planned international trips.
 - Assistant Trip Leader: Twice co-managed a group of 8 students during a 2-month project in Rwanda to implement a hydroelectric site and identify potential new sites.

SKILLS

- Certified SolidWorks Professional with experience in iMachining on SolidCAM
- Fabricated ~100 aluminum and steel parts in machine shop
- Highly skilled in MATLAB with experience in C and VHDL programming languages

ACADEMIC COURSES AND PROJECTS

- Machine Engineering – Designed and fabricated a small robot to compete against classmates.
- Structural Analysis – Designed and built a wooden beam and cable wire support system for 1500lbs tree house.
- Digital Electronics – Programmed a digital alarm clock with a VGA display.
- Introduction to Engineering – Developed an insulated oven insert to reduce cooking volume and improve efficiency by up to 20%. The project was awarded 2nd place at the Dartmouth Undergraduate Business Competition.
- Other Courses – Advanced Thermodynamics, Fluid Dynamics, Energy Utilization, Energy Conversion, Dynamics, Computer Aided Design, Numerical Methods.