

JEREMY SWERDLOW

Designer, Engineer, Fabricator

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- PERFORMANCE-DRIVEN, HIGHLY CREATIVE AND INNOVATIVE MECHANICAL ENGINEER/DESIGNER with established track record of successful hands-on invention and product development
- DESIGN AND FABRICATION SUBJECT MATTER EXPERT: 10+ years of COMPLEX FABRICATION EXPERIENCE and 7+ years of collaborating, developing, and providing GROUNDBREAKING DESIGNS AND SOLUTIONS for challenging projects from initial ideation to proof of concept prototype and beyond.
- AREAS OF EXPERTISE: Machine Design, Medical, Environmental, Construction, Power, Water, Robotics and Mobility. **Patent pending** for “Water Vending Apparatus” (20100101929).

PROFESSIONAL EXPERIENCE & SELECTED ACHIEVEMENTS

ENGINEER / DESIGNER

05/23/12-Present

AFTEC Aviation Fuel Technicians, LLC

(Independent contractor)

- Designed jet fuel offloading skids for commercial and military application.
- Optimize design for manufacturing, generated detailed 3-D solid models, complete set of production drawings and renderings for marketing purposes.
- Provided CAD (SolidWorks) training and support for current employees.

ENGINEER / FABRICATER

04/23/12-05/04/12

MythBusters / Beyond Productions Inc.

(Independent contractor)

- Assisted in the construction / MIG welding of myth testing apparatus for upcoming episode
- Participated in filming of upcoming MythBusters episode

LEAD ENGINEER / PROJECT TEAM LEADER

08/28/11-02/11/12

OAS DESIGN GROUP, INC.

(Independent contractor)

- Project team leader and lead designer in charge of design, fabrication, implementation and integration of first-ever fully automatic mobile pizza vending food truck capable of rapidly producing and serving hundreds of custom cooked pizzas on demand.
- Managed a 4-person team, set design and production goals, managed deadlines.
- Designed ultrahigh speed infrared radiant oven, pizza storage transport and management system, automatic food tray dispenser and carbonated beverage production/dispensing system, all patent pending.
- Drafted all production drawings and enforced quality control
- Coordinated with vendors for parts production and on-time delivery

ENGINEER / DESIGNER

07/2009-07/2011

National Institute of Standards and Technology (NIST) (Internship: 6 months, 2003)
Construction, Automation, and Metrology Group (CAMG), Gaithersburg, MD.

- Conceived, designed, fabricated and validated **first-ever robotic end effector** for the ROBOCRANE laser-guided autonomous Crane system to enable precision and autonomous

pick-and-place of full-scale structural steel shapes for automated construction research and development.

- **Successfully delivered complete design** for radar-transparent universal testing apparatus for wall-penetrating radar research study commissioned by the Office of Law Enforcement Standards (OLES), intended to test state-of-the-art wall penetrating radar imaging technology for first responders and the Department of Homeland Security (DHS).
- Designed and constructed **portable 3D artifacts** to evaluate laser-scanning performance for state-of-the-art search and rescue/bomb disposal robots.
- Designed, constructed and implemented **test bed**, including laser, calibrated camera and sensor network hardware, for the Indoor Intelligent & Automated Construction Job Site (IACJS).

ENGINEER/DESIGNER

09/2006-03/2009

DEKA R&D, Manchester, NH.

(Internships: 9 months, 2003; 3 months, 2005)

- Achieved major battery life extension **milestone in prosthetic limb design**: designed, constructed, implemented and tested a new electromechanical motor braking system for the LUKE prosthetic arm project sponsored by the Defense Advanced Research Project Agency (DARPA) \$18M "Revolutionizing Prosthetics Program."
- Participated in **successful high stakes demonstration** of the "SLINGSHOT" water purification systems to a national television audience on the "Colbert Report."
- Conceived, designed, fabricated and validated **innovative fluid management** storage and dispensing system for the **Water Vending Apparatus** (currently **patent pending** 20100101929).
- Optimized design and fabricated prototype of **advanced diesel jet fuel combustion chamber** for **Stirling Engine** auxiliary power unit (APU).

LABORATORY TECHNICIAN

2000-2006 (part-time)

Rochester Institute of Technology (RIT), Fabrication Laboratory, Rochester, NY.

- Emerged as **subject matter expert** on **design and fabrication** for students and professors.
- Designed and fabricated custom made parts for academic engineering research.
- Assisted professors and students with engineering projects as a machine tool expert.
- Taught lessons on proper use of machine tools and equipment.
- Implemented all safety protocols and ensured the safety of all students and professors

EDUCATION

Bachelor of Science in Mechanical Engineering Technology (2006), Rochester Institute of Technology, (RIT), Rochester, NY.

TECHNICAL ENGINEERING SKILLS and CORE COMPETENCIES: 10+ years' fabrication experience and familiarity with machining, TIG and MIG welding, fine pitch SMD soldering, SolidWorks, Pro/Engineer, and Microsoft Office, plastic injection molding, die casting, aluminum extrusion, vacuum forming, traditional and nontraditional manufacturing processes, design for manufacturing, carbon fiber design and fabrication, lasers and optical technologies, prototyping, product testing, rapid prototyping (FDM, SLS) & Plastics, prosthetics, plastic injection molding and Safety Compliance