BENJAMIN W. GASSER

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Research Interests

I am a research engineer who enjoys realizing the future through the blending of mechatronics, aerospace design and materials, and human health and adventure. Presently I am engaged in designing an upper-limb exoskeleton for strength augmentation and functional positioning of the hand and arm in post-stroke populations.

Education

Doctor of Philosophy in Mechanical Engineering – Vanderbilt University, Nashville, TN (2017, Expected)

Bachelor of Science in Mechanical Engineering - *University of Alabama in Huntsville (UAH)*, Huntsville, AL (2011)

Emergency Medical Technician - *Southern Union State Community College*, Opelika, AL (2007)

Fellowships:

- NSF Graduate Research Fellowship
- 2012 Tau Beta Pi Centennial Fellowship
- Vanderbilt University Graduate Fellowship

Academic Honors:

- GPA: 4.0 (Undergraduate, *Summa Cum Laude*), 3.962 (Graduate)
- NASA Student Launch Initiative winning team 2015
- NASA ESMD Paper winner and scholarship recipient
- Most Outstanding Undergraduate Student from the College of Engineering 2011
- Mechanical Engineering Department Student of the Year 2011
- Mechanical Engineering Program Outstanding Undergraduate Student for 2010
- *Member:* Tau Beta Pi – *Chapter President 2010-2011*
  Phi Kappa Phi
- Zhan Undergraduate Research Scholarship recipient

Positions Held

Graduate Assistant: Center for Intelligent Mechatronics - *Vanderbilt University*, Nashville, TN (2012-Present)

- Currently developing a powered orthosis for individuals suffering from upper-limb motor deficit post stroke.
- Vanderbilt Aerospace club Robotics Mentor and Payload Bay Project Coordinator
- Support of the continuing development of the Vanderbilt Lower-Limb Exoskeleton/Parker Hannifin Indego®
- Graduate Teaching assistant for Mechatronics and System Dynamics.

Engineer: RMCI, Inc., Huntsville, AL (2012)

- Developed UH-60 A/L/M (Blackhawk) main rotor track and balance algorithms based on neural network processes.
- Investigated tail rotor balancing solutions for the AH-64 Apache.

University of Alabama in Huntsville, Huntsville, AL (2009-2011)

Student Specialist IV: Research of Osseointegrated Prosthetic Devices

- Lead a team in the development of a load releasing joint for direct skeletal attachment of prosthetic legs.

Student Aide/Grading Assistant

- Various undergraduate courses in Numerical methods, CAD design, and Introduction to Engineering

Research Intern: Laboratory for Intelligent Mechanical Systems - *Northwestern University*, Chicago, IL *(2011)*

- Developed and prototyped designs for energy absorbing limb components for use in osseointegrated prosthetics.

Engineering Intern: Systems Integration Lab - *Northrop Grumman Corporation*, Madison, AL (2010)

- Developed prototype designs for portable military communication systems and troop assistive robotics.

40/40 Senior Instructor (Level 4) - ***Solid Rock Outdoor Ministries (SROM),*** Laramie, WY (2006-2008)

- Taught teamwork and leadership through a hands-on, experiential education curriculum worth 6 college credit hours and nationally accredited by the Association for Experiential Education.