David Carabis

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Education

Rensselaer Polytechnic Institute, Troy, NY
Ph.D. Candidate in Mechanical Engineering, *Degree Currently In Progress*

Union College, Schenectady, NY
Bachelor of Science in Mechanical Engineering, Summa Cum Laude, 3.9 GPA (June 2013)

Engineering Experience

Graduate Student Research Assistant at Rensselaer Polytechnic Institute, NY (August 2015 – Present)

- Working with the Manufacturing Innovation Center (MIC) robotics lab on satellite servicing research in support of the NASA Restore-L mission.
- Focus on massive object manipulation and trajectory generation for lightweight flexible space manipulators.

Mechanical Engineer at Plug Power in Latham, NY (September 2013 – August 2015)

- Designed test apparatus and experimental procedures for reliability testing of fuel cell power unit components.
- Analyzed component failures and offered design solutions to improve reliability.

Student Research Assistant at Union College Aerogel Lab (Summer 2011/2012 Sept. 2012- Sept. 2013)

- Designed and tested a five-component gas mixing system, which allows a lab technician to create custom blends of simulated exhaust, using partial pressures.

Senior Project at Union College (Sept. 2012-Feb. 2013)

- Designed, constructed, and tested a teleoperated maneuverable rolling robot.

Engineering Internship at Ecovative Design in Green Island, NY (Nov. 2010-Dec. 2010)

- Fabricated and assembled process automation equipment for compostable packaging production.

Campus Involvement

Co-Captain at Union College Baja Racing (Jan. 2012-June 2013)
Treasurer (Jan. 2012-June 2012)

- Organized fundraising efforts and build days, managed materials purchases, and managed other team members.

Publications

- "Slip Avoidance in Dual-Arm Manipulation." David S. Carabis and John T. Wen. 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). IEEE, 2018.
- "Collaborative manipulation with multiple dual-arm robots under human guidance." Yuan-Chih Peng, David S. Carabis, and John T. Wen. International Journal of Intelligent Robotics and Applications 2.2 (2018): 252-266.

Awards and Honors

Dr. Mortimer F. Sayre Prize (May 2013)
Union College ASME Speaking Competition Winner (Mar. 2013)
John S. Hadala Endowed Book Award, Union College (June 2012)
Tau Beta Pi, Member (Mar. 2012)
Pi Tau Sigma, Member (Mar. 2012)
Goldwater Scholarship Honorable Mention (Mar. 2012)
Eagle Scout, Troop 49, Valley Falls, NY(June 2009)

Special Skills

Experience with Microsoft Office, MATLAB, Simulink/Simscape, Python, Solidworks, and Pro-Engineer