

Brad Saund

Education

- 2017–current **PhD Robotics**, *University of Michigan*, Ann Arbor.
ARM lab
Path planning for manipulation
- 2015–2017 **Master's of Robotics**, *Carnegie Mellon*, Pittsburgh.
Biorobotics lab
Path planning and precision localization in confined spaces
- 2008–2012 **BS Mechanical Engineering**, *Caltech*, Pasadena.

Work Experience

- 2014–2015 **Software Development Engineer**, *Amazon*, Seattle.
I created software for the Amazon Kindle E-Readers and Tablets.
- 2012–2014 **Robotics Engineer**, *Electroimpact*, Seattle.
I designed, built, and programmed robots that build airplanes
- 2010–2012 **Research Fellow**, *Caltech*, Pasadena.
Fluid Dynamics Research

Skills

- Programming Git, ROS, Tensorflow, OpenCV, C++, Python, Java, Matlab
- Deployment Deployment to production environments of both software and hardware to millions of machines (Kindle) and machines worth millions of dollars (aerospace robots)
- Robotics Path Planning with Uncertainty, Sensor Fusion, Localization, Autonomous Vision and Navigation

Publications

- 2018 **Brad Saund** and Dmitry Berenson "Motion Planning for Manipulation with Uncertainty from Contact Sensing" 2018, ISER
- 2017 Shiyuan Chen, **Brad Saund**, and Reid Simmons "The datum particle filter: Localization for objects with coupled geometric datums" 2017, IROS
Brad Saund "Planning and Localizing under Contact Uncertainty". 2017, Carnegie Mellon Master's Thesis
Alex Ansari, Julian Whitman, and **Brad Saund**. "Modular platforms for advanced inspection, locomotion, and manipulation" 2017. Waste Management Symposium
- 2016 **Brad Saund**, Shiyuan Chen, and Reid Simmons. "Touch based localization of parts for high precision manufacturing", 2016 ICRA
- 2013 **Brad Saund** and Russell DeVlieg. "High Accuracy Articulated Robots with CNC Control Systems", 2013 SAE-Aerotech

Service

- 2013–current **Volunteer Mentor**, *FIRST Robotics*.
- 2011–2012 **House President**, *Caltech Student Government*.

References

U. Michigan

- o Dmitry Berenson

Carnegie Mellon

- o Reid Simmons
- o Howie Choset

Electroimpact

- o Russ DeVlieg

Caltech

- o Matthew Heverly

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