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", 2016 SAE-Aerotech

Service

2013–current **Volunteer Mentor**, *FIRST Robotics*.

2011–2012 **House President**, *Caltech Student Government*.

References

U. Michigan
- Dmitry Berenson

Carnegie Mellon
- Reid Simmons
- Howie Choset

Electroimpact
- Russ DeVlieg

Caltech
- Matthew Heverly

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