

Brad Saund PhD

Work Experience

- 2022–present **Staff Applied Scientist**, *Cruise*, San Francisco.
I led technical projects for behaviors and simulation of autonomous vehicles
- 2021–2022 **SDE II**, *AWS Robotics*, Sunnyvale.
I founded a team for a new AWS service offering robotic solutions for AWS customers
- 2014–2015 **SDE**, *Amazon*, Seattle.
I supported ad deployments to Kindle E-readers and Tablets.
- 2012–2014 **Robotics Engineer**, *Electroimpact*, Seattle.
I designed, built, and programmed robots that build airplanes

Education (BS, MS, PhD in Robotics)

- 2017–2021 **PhD Robotics**, *University of Michigan*.
Path planning for manipulation
- 2015–2017 **Master's of Robotics**, *Carnegie Mellon*.
Path planning and precision localization in confined spaces
- 2008–2012 **BS Mechanical Engineering**, *Caltech*.
- 2010–2012 **Research Fellow**, *Caltech*, Pasadena.
Fluid Dynamics Research

Skills

- Programming Git, ROS, Tensorflow, OpenCV, C++, Python, Java, Matlab
- Deployment Supporting 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

Selected Publications (see www.bradsaund.com for a complete list)

- 2021 **Brad Saund** and Dmitry Berenson "CLASP: Constrained Latent Shape Projection for Refining Object Shape from Robot Contact", CoRL
- 2020 **Brad Saund** and Dmitry Berenson "Diverse Plausible Shape Completions from Ambiguous Depth Images", CoRL
Brad Saund and Dmitry Berenson "Fast Planning Over Roadmaps via Selective Densification" 2020, RA-L (with ICRA presentation)
- 2019 **Brad Saund**, Sanjiban Choudhury, Siddhartha Srinivasa and Dmitry Berenson "The Blindfolded Robot: A Bayesian Approach to Planning with Contact Feedback", ISRR
- 2017 **Brad Saund** "Planning and Localizing under Contact Uncertainty", Carnegie Mellon Master's Thesis
- 2013 **Brad Saund** and Russell DeVlieg. "High Accuracy Articulated Robots with CNC Control Systems", 2013 SAE-Aerotech

References

U. Michigan

- o Dmitry Berenson

Carnegie Mellon

- o Reid Simmons
- o Howie Choset

Electroimpact

- o Russ DeVlieg

Caltech

- o Matthew Heverly

San Carlos, CA

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