

# James M. Bern

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## Education

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### ETH Zürich

Zürich, Switzerland

GRADUATE STUDENT

2017-Present

- PhD Candidate in Computer Science, advised by Prof. Stelian Coros

### Carnegie Mellon University Robotics Institute

Pittsburgh, PA

GRADUATE STUDENT

2015 - 2017

- MS in Robotics, advised by Prof. Stelian Coros

### California Institute of Technology

Pasadena, CA

UNDERGRADUATE STUDENT

2011 - 2015

- BS in Mechanical Engineering, with double minor in Computer Science + Control and Dynamical Systems
- 4.0 GPA

## Publications

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Interactive Robotic Manipulation of Elastic Objects

Simon Duenser, James M. **Bern**, Roi Poranne, Stelian Coros

*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2018

Computational Design of Robotic Devices From High-Level Motion Specifications

Sehoon Ha, Stelian Coros, Alexander Alspach, James M. **Bern**, Joohyung Kim, Katsu Yamane

*IEEE Transactions on Robotics (T-RO)*, 2018

Interactive Design of Animated Plushies

James M. **Bern**, Kai-Hung Chang, Stelian Coros

*ACM Transactions on Graphics (SIGGRAPH)*, 2017

Fabrication, Modeling, and Control of Plush Robots

**Japan Toy Culture Foundation Novel Technology Paper Award for Amusement Culture**

*This award recognizes practical technology contributing to toys, toy models, and amusement culture.*

James M. **Bern**, Grace Kumagai, Stelian Coros

*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017

Reconfiguration Planning for Pivoting Cube Modular Robots

Cynthia Sung, James M. **Bern**, John Romanishin, Daniela Rus

*IEEE International Conference on Robotics and Automation (ICRA)*, 2015

## Talks and Demos

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2019 **SAM - The Soft Robotic Hand**, World Economic Forum

Davos

2017 **Fabrication, Modeling, and Control of Plush Robots**, Symposium for Computational Fabrication

MIT

## Teaching

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2018 **Teaching Assistant**, 252-0206-00L: Visual Computing

ETH Zürich

2017 **Teaching Assistant**, 252-0206-00L: Visual Computing

ETH Zürich

2015 **Teaching Assistant**, CS 021: Decidability and Tractability

Caltech

2014 **Teaching Assistant**, CS 171: Introduction to Computer Graphics Laboratory

Caltech

2014 **Teaching Assistant**, ME 071: Introduction to Engineering Design

Caltech

2013 **Teaching Assistant**, BI 001: Principles of Biology

Caltech

## Honors & Awards

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2016 **Fellow**, Presidential Fellowship

CMU

2014 **Winner**, Campus Life and Masters Award

Caltech

2014 **1st Place**, 29th Annual Engineering Design Competition

Caltech