

# Siddhartha Banerjee

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## Education

- 2015 —** Ph.D. in Robotics. Advised by Dr. Sonia Chernova. *In Progress.*  
*Georgia Institute of Technology, Atlanta, GA, USA.*
- 2009 — 2013** B.S. Electrical Engineering/Computer Science with Distinction.  
*Yale University, New Haven, CT, USA.*

## Employment

- Fall 2018** Teaching Assistant for CS7633: Human-Robot Interaction.  
*Georgia Institute of Technology, Atlanta, GA, USA*
- Summer 2018** Robotics Intern. Advised by Vivian Chu.  
*Diligent Robotics, Austin, TX, USA*
- Summer 2017** Research Intern. Advised by Dan Bohus and Sean Andrist.  
*Microsoft, Seattle, WA, USA*
- Fall 2016** Teaching Assistant for CS6601: Introduction to Artificial Intelligence.  
*Georgia Institute of Technology, Atlanta, GA, USA*
- 2013 — 2015** Software Engineer on Data Team.  
*Redfin, Seattle, WA, USA*
- 2012 — 2013** Peer Tutor for CPSC 202 and CPSC 223  
*Yale University, New Haven, CT, USA*
- Summer 2012** Hardware Verification Intern.  
*Microsoft, Mountain View, CA, USA*

## Publications

### *Journals*

**S. Banerjee**, A. Silva, and S. Chernova, “Robot Classification of Human Interruptibility and a Study of Its Effects,” in *ACM Transactions on Human-Robot Interaction (THRI)*, 7(2), p. 14, 2018

### *Conference Proceedings*

D. Kent, **S. Banerjee**, and S. Chernova, “Learning Sequential Decision Tasks for Robot Manipulation with Abstract Markov Decision Processes and Demonstration-Guided Exploration,” in *18th Int. Conf. on Humanoid Robots, IEEE-RAS*, 2018

**S. Banerjee** and S. Chernova, “Temporal Models for Robot Classification of Human Interruptibility,” in *Int. Conf. on Autonomous Agents & Multiagent Systems*, no. 16. IFAAMAS, 2017, pp. 1350–1359

### *Workshops, Symposia, Other*

**S. Banerjee** and S. Chernova, “Fault Diagnosis in Robot Task Execution,” in *AAAI Spring Symposium Series*, 2019

**S. Banerjee** and S. Chernova, “Efficient Human-Robot Interaction for Robust Autonomy in Task Execution,” in *ACM/IEEE Int. Conf. on Human-Robot Interaction Pioneers Workshop*, 2018

A. Silva, **S. Banerjee**, and S. Chernova, “Excuse Me, Could You Please Assemble These Blocks For Me?” in *What Could Go Wrong? Workshop at HRI*, 2018

**S. Banerjee** and S. Chernova, “Robots Predicting the Interruptibility of Humans,” in *RSS Workshop on Planning for HRI*, 2016

B. Harrison, **S. Banerjee**, and M. O. Riedl, “Learning from Stories: Using Natural Communication to Train Believable Agents,” in *IJCAI Workshop on Interactive Machine Learning*, 2016

## Awards and Leadership Positions

|                    |   |
|--------------------|---|
| <b>HRI 2019</b>    | Panel Chair, <i>HRI Pioneers Workshop</i>   |
| <b>2018 — 2019</b> | Co-chair, Student Activities Committee, <i>IEEE Robotics and Automation Society</i> |
| <b>2017 — 2018</b> | President, RoboGrads, <i>Georgia Institute of Technology</i>                        |
| <b>2016 — 2017</b> | Social Chair, RoboGrads, <i>Georgia Institute of Technology</i>                     |
| <b>Q3 2014</b>     | Employee of the Quarter, <i>Redfin</i>  |
| <b>2012 — 2013</b> | Team Mentor, Formula Hybrid FSAE Team, <i>Yale University</i>                       |
| <b>2011 — 2012</b> | Vice President, Formula Hybrid FSAE Team, <i>Yale University</i>                    |
| <b>Summer 2011</b> | Yale Entrepreneurial Institute Fellowship, <i>Yale University</i>                   |

## Projects

|                    |   |
|--------------------|---|
| <b>ICRA 2019</b>   | <b>FetchIt! Challenge.</b> <i>Robotics Competition</i><br>Developed robot software to complete a mobile manipulation challenge at the ICRA 2019 FetchIt! Challenge hosted by Fetch Robotics. The team placed first, winning a Fetch mobile manipulator robot.   |
| <b>Spring 2016</b> | <b>Quadrotor Control via Backstepping.</b> <i>Class Project</i><br>Verified and simulated the control of a quadrotor through Backstepping to show provably correct control that uses less energy than traditional Inner-loop Outer-loop control.  |
| <b>Spring 2016</b> | <b>Treeminder: An SMS-based Goal Completion System for the United Way Achievement Club.</b> <i>Class Project</i><br>Designed a goal tracking and completion system in partnership with the United Way Achievement Club to help members of at-risk populations avoid homelessness. Conducted usability and feasibility analyses to justify and support the design. |

- 2009 — 2013**     **Yale Formula Hybrid FSAE Team.** *Student Organization*  
Designed and built formula style gas-electric hybrid car to compete against other schools in an annual national competition. Team awards: Best Hybrid Car (2013), Ford Efficiency Award (2013), Chrysler Innovation Award (2013), GM Best Engineered Hybrid System Award (2010, 2013)
- 2012 — 2013**     **Synchronization and Collective Behaviour.** *Senior Class Project*  
Simulated agent-based modeling of multi-agent systems. Explored the role of synchronization and chaos in dynamical systems.
- Spring 2012**     **Assigning Blame to Self-Driving Cars.** *Class Project*  
Surveyed drivers to determine whether blame is assigned to a self-driving car or the human driver using simulations of accidents between self-driving cars with human-driven cars.
- Fall 2011**     **Design and Fabrication of Simple Data Encryption Standard (S-DES) Encryption/Decryption chip.** *Class Project*  
Designed a VLSI chip to perform S-DES encryption/decryption and created CAD models of the chip and its layout in preparation for fabrication. Tested and verified the function of the chip post-fabrication.

## Professional Memberships

Institute for Electrical and Electronics Engineers (IEEE)

Last updated: June 16, 2019