Jessica B. Hamrick · Curriculum Vitae

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EDUCATION

University of California, Berkeley. Berkeley, CA
Pursuing a Ph.D. in Psychology, August 2012 – present.
Advisor: Thomas L. Griffiths

Massachusetts Institute of Technology. Cambridge, MA
B.S. in Computer Science and Engineering, June 2012 (GPA: 4.4/5.0)
Academic Advisor: Gerald Jay Sussman

M.Eng. in Electrical Engineering and Computer Science, June 2012 (GPA: 5.0/5.0)
Thesis Advisor: Joshua B. Tenenbaum

ACADEMIC POSITIONS

Graduate Researcher *August 2012 – present*
University of California, Berkeley (Advisor: Thomas L. Griffiths)

Graduate Research Assistant *June 2011 – July 2012*
Undergraduate Researcher *January 2009 – May 2011*
Massachusetts Institute of Technology (Advisor: Joshua B. Tenenbaum)

Undergraduate Researcher *June 2008 – December 2009*
Personal Robotics Group – MIT Media Lab (Advisor: Cynthia Breazeal)

FELLOWSHIPS AND GRANTS

- National Science Foundation Graduate Fellowship (three years, 2014–2017), tuition and stipend. Awarded April 2013.
- Berkeley Fellowship, University of California Berkeley (two years, 2012–2014), tuition and stipend. Awarded March 2012.

PUBLICATIONS

- Goodman, N. D., Frank, M. C., Griffiths, T. L., Tenenbaum, J. B., Battaglia, P. W., & **Hamrick, J. B.** (in press). Relevant and robust. A response to Marcus & Davis (2013). *Psychological Science*.
- Lieder, F., Plunkett, D., **Hamrick, J. B.**, Russell, S. J., Hay, N. J., & Griffiths, T. L. (2014). Algorithm selection by rational metareasoning as a model of human strategy selection. *Advances in Neural Information Processing Systems*, 27.
- **Hamrick J. B.** & Griffiths T. L. (2014). What to simulate? Inferring the right direction for mental rotation. In P. Bello, M. Guarini, M. McShane & B. Scassellati (Eds.), *Proceedings of the 36th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- **Hamrick J. B.** & Griffiths T. L. (2013). Mental Rotation as Bayesian Quadrature. In *NIPS Bayesian Optimization Workshop*.
- Battaglia P. W., **Hamrick J. B.**, & Tenenbaum J. B. (2013). Simulation as an engine of physical scene understanding. *Proceedings of the National Academy of Sciences*, 110(45), 18327–18332.
- Abbott J. T., **Hamrick J. B.**, & Griffiths T. L. (2013). Approximating Bayesian inference with a sparse distributed memory system. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- **Hamrick J. B.** (2012). Physical reasoning in complex scenes is sensitive to mass. M.Eng. thesis, Massachusetts Institute of Technology, Cambridge, MA.
- **Hamrick J. B.**, Battaglia P. W., & Tenenbaum J. B. (2011). Internal physics models guide probabilistic judgments about object dynamics. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

TALKS AND POSTERS

- **Hamrick J. B.** & Griffiths, T. L. (2014, August). What to simulate? Inferring the right direction for mental rotation. Talk to be presented at the 36th Annual Conference of the Cognitive Science Society. Quebec City, Canada.

- **Hamrick J. B.** & Battaglia, P. W. (2014, April). Games for Science: Creating interactive psychology experiments in Python with Panda3D. Talk presented at PyCon 2014. Montreal, Canada.

- **Hamrick J. B.** & Griffiths, T. L. (2013, December). Mental Rotation as Bayesian Quadrature. Poster presented by Jessica Hamrick at the NIPS Bayesian Optimization Workshop.

- **Hamrick J. B.** (2013, November). Rewriting Python Docstrings with a Metaclass. Talk presented at the San Francisco Python Meetup.

- **Hamrick J. B.**, Battaglia P. W., Griffiths T. L, & Tenenbaum J. B. (2013, August). Inferring mass in complex physical scenes via probabilistic simulation. Talk presented by Jessica Hamrick at the 46th Annual Meeting of the Society of Mathematical Psychology. Potsdam, Germany.

- **Hamrick J. B.**, Battaglia P. W., Griffiths T. L, & Tenenbaum J. B. (2013, August). Inferring mass in complex physical scenes via probabilistic simulation. Poster presented by Jessica Hamrick at the 35th Annual Conference of the Cognitive Science Society. Berlin, Germany.

- Abbott J. T, **Hamrick J. B.**, & Griffiths T. L. (2013, August). Approximating Bayesian inference with a sparse distributed memory system. Poster presented by Joshua Abbott at the 35th Annual Conference of the Cognitive Science Society. Berlin, Germany.

- Battaglia P. W., **Hamrick J. B.**, & Tenenbaum J. B. (2012, May). Intuitive mechanics in visual reasoning about complex scenes with unknown forces. Poster presented by Peter Battaglia at Annual Meeting of the Vision Sciences Society. Naples, FL.

- **Hamrick J. B.**, Battaglia P. W., & Tenenbaum J. B. (2012, May). Physics knowledge aids object perception in dynamic scenes. Poster presented by Jessica Hamrick at Annual Meeting of the Vision Sciences Society. Naples, FL.

- **Hamrick J. B.**, Battaglia P. W., & Tenenbaum J. B. (2011, July). Internal physics models guide probabilistic judgments about object dynamics. Paper presented at the 33rd Annual Conference of the Cognitive Science Society. Boston, MA.

- Battaglia P. W., **Hamrick J. B.**, & Tenenbaum J. B. (2011, May). Intuitive physics judgments guided by probabilistic dynamics model. Poster presented by Peter Battaglia at the Annual Meeting of the Vision Sciences Society. Naples, FL.

TEACHING

- Software Carpentry (September 22-23, 2014, Berkeley, CA)
  http://software-carpentry.org/
  Instructor for a boot camp teaching computer skills to scientists at the Lawrence Berkeley National Laboratory, including Python programming, Git version control, the command line, and data processing.

- Software Carpentry (April 14-15, 2014, Montreal, CA)
  http://software-carpentry.org/
  Instructor for a boot camp teaching computer skills to librarians, including Python programming, Git version control, the command line, and data processing.

- COGSCI 131: Computational Models of Cognition (Spring 2014, UC Berkeley)
  Graduate student instructor.

- Python FUNdamentals (August 19-22, 2013, UC Berkeley)
  https://github.com/dlab-berkeley/python-fundamentals
  Helper for a crash course teaching introductory Python to gradate students.

- Software Carpentry (April 13-14, 2013, UC Berkeley)
  http://software-carpentry.org/
  Helper for a boot camp teaching scientists computer skills in Python programming, Git version control, testing, the command line, and data management.

- Python for Computational Cognitive Science (Summer 2012, MIT).
  https://github.com/jhamrick/python-course
  Co-instructor for a crash course in scientific Python for computational cognitive science.

- Boston Python Workshop (May, July, and December 2011, Boston, MA)
  `http://openhatch.org/wiki/Boston_Python_Workshop`
  Helper for workshops teaching Python to women and their friends.

SERVICE AND SOCIETIES

- Cognitive Science Society (July 2011 – Present), Student Member
  `http://www.cognitivesciencesociety.org/`
- Sigma Xi (May 2011 – Present), Junior Member
  `http://www.sigmaxi.org/`
- MIT Student Information Processing Board (September 2008 – June 2012)
  Volunteer student computing group, `http://sipb.mit.edu/`

  - Associate Member (June 2012 – present)
  - Full Member (February 2009 – June 2012). I helped other students with computer problems and worked on multiple service projects, including Gutenbach, MITEX, Debathena (MIT's operating system), and Dodona. I also co-taught a class on the structure of the internet in January 2009.
  - Executive Committee (February 2009 – February 2012)
  - Chair (February 2010 – February 2011). While I was Chair, SIPB received the Karl Taylor Compton prize, MIT's most prestigious award given to students or student groups.