

Robert X.D. Hawkins

CONTACT INFORMATION	Stanford University 450 Serra Mall Stanford, CA 94305	Cell: (217)-549-6923 E-mail: rxdh@stanford.edu WWW: http://rxdhawkins.com/
EDUCATION	Stanford University , 2014 – Present PhD Student, Psychology (Expected 2019) Indiana University , 2010 – 2014 BS, Mathematics and Cognitive Science Santa Fe Institute , Summers 2012 & 2013 Edward A. Knapp Undergraduate Fellow	
AWARDS AND HONORS	Cognitive Science Society travel grant, 2016 Cognitive Science Society prize for modeling in Applied Cognition, 2015 E.K. Potter Fellow, Stanford Graduate Fellowship, 2014 NSF Graduate Research Fellowship, 2014 Phi Beta Kappa, 2013 Sigma Xi Outstanding Undergraduate Research Award, 2013 IU Cognitive Science Program Award for Outstanding Achievement, 2013 IU Cognitive Science Program Award for Outstanding Contribution, 2012 Hutton Honors College Research Partnership Grant, 2011 Arthur R. Metz Scholarship, 2010 Science, Technology, and Research Scholar, 2010	
PRE-PRINTS	Hawkins, R.X.D. , Goodman, N.D. (<i>under revision</i>). Questions and answers in dialogue. Hawkins, R.X.D. , Gweon, H. Goodman, N.D. (<i>under review</i>). Speakers account for asymmetries in visual perspective so listeners don't have to. Achlioptas, P., Fan, J., Hawkins, R.X.D. , Goodman, N.D., Guibas, L. (<i>under review</i>). Learning to Refer to 3D Objects with Natural Language.	
JOURNAL PUBLICATIONS	Hawkins, R.X.D. , Goodman, N.D., Goldstone, R.L. (<i>in press</i>). The emergence of social norms and conventions. <i>Trends in Cognitive Sciences</i> . Hawkins, R.X.D.* , Smith, E.*, Au, C., Arias, J.M., Catapano, R., Hermann, E., Keil, M., Lampinen, A., Raposo, S., Reynolds, J., Salehi, S., Salloum, J., Tan, J., Frank, M.C. (2018). Improving the Replicability of Psychological Science Through Pedagogy. <i>Advances in Methods and Practices in Psychological Science</i> , 1 (1), 7–18. Monroe, W., Hawkins, R.X.D. , Goodman, N.D., Potts, C. (2017). Colors in Context: A Pragmatic Neural Model for Grounded Language Understanding. <i>Transactions of the Association for Computational Linguistics</i> , 5, 325–338.	

Avena-Koenigsberger, A, Misic, B., **Hawkins, R.X.D.**, Griffa, A., Hagmann, P., Goñi, J., and Sporns, O. (2017). Path ensembles and a tradeoff between communication efficiency and resilience in the human connectome. *Brain Structure and Function*, 222 (1), 603-618.

Hawkins, R.X.D., Goldstone, R. L. (2016). The formation of social conventions in real-time environments. *PLoS ONE*, 11 (3), e0151670.

Hawkins, R.X.D., Houpt, J.W., Eidels, A., Townsend, J.T. (2016). Can two dots form a Gestalt? Measuring emergent features with the capacity coefficient. *Vision Research*, 126, 19–33.

Silbert, N. H., **Hawkins, R.X.D.** (2016). A tutorial on general recognition theory. *Journal of Mathematical Psychology*, 73, 94-109.

Hawkins, R.X.D. (2015). Conducting real-time multiplayer experiments on the web. *Behavior Research Methods*, 47 (4), 966-976

DeDeo, S., **Hawkins, R.X.D.**, Klingenstein, S., Hitchcock, T. (2013). Bootstrap methods for the empirical study of decision-making and information flows in social systems. *Entropy*, 15 (6), 2246-2276.

PEER-
REVIEWED
CONFERENCE
PROCEEDINGS

Hawkins, R.X.D., Franke, M., Smith, K., Goodman, N.D. (2018). Emerging abstractions: Lexical conventions are shaped by communicative context. *Proceedings of the Fortieth Annual Conference of the Cognitive Science Society*.

Hawkins, R.X.D., Frank, M.C., Goodman, N.D. (2017). Convention-formation in iterated reference games. *Proceedings of the Thirty-Ninth Annual Conference of the Cognitive Science Society*.

Graf, C., Degen, J., **Hawkins, R.X.D.**, Goodman, N.D. (2016). Animal, dog, or dalmatian? Level of abstraction in nominal referring expressions. *Proceedings of the Thirty-Eighth Annual Conference of the Cognitive Science Society*.

Hawkins, R.X.D., Goodman, N.D. (2016). Conversational expectations account for apparent limits on theory of mind use. *Proceedings of the Thirty-Eighth Annual Conference of the Cognitive Science Society*.

Hawkins, R.X.D., Stuhlmüller, A., Degen, J., Goodman, N.D. (2015). Why do you ask? Good questions provoke informative answers. *Proceedings of the Thirty-Seventh Annual Conference of the Cognitive Science Society*.

Krafft, P.M. **Hawkins, R.X.D.**, Pentland, A.S., Goodman, N.D., Tenenbaum, J.B. (2015). Emergent collective sensing in human groups. *Proceedings of the Thirty-Seventh Annual Conference of the Cognitive Science Society*.

BOOK
CHAPTERS

Algom, D., Eidels, A. **Hawkins, R.X.D.**, Jefferson, B., Townsend, J.T. (2015). Features of response times: Identification of cognitive mechanisms through mathematical modeling. In *The Oxford Handbook of Computational and Mathematical Psychology*.

BOOKS
(PRINT/WEB)

N. D. Goodman, J. B. Tenenbaum, and The ProbMods Contributors (2016). Probabilistic Models of Cognition (2nd ed.). (<https://probmods.org/>)

- TECHNICAL REPORTS Stuhlmüller, A., **Hawkins, R.X.D.**, Narayanaswamy, S., Goodman, N.D. (2015). Coarse-to-fine sequential Monte Carlo for probabilistic programs. arXiv:1509.02962.
- INVITED TALKS Concepts and Categories (ConCats) Seminar, NYU, December 2018.
PDP Seminar, Princeton University, September 2018.
Symbolic Systems Society Symposium, Stanford University, February 2018.
Interacting Minds Center (IMC) Seminar, Aarhus University, August 2017.
Language Evolution Seminar, University of Edinburgh, August 2017.
Linguistics Colloquium, University of Tübingen, July 2017.
Platform Speaker at STARS Research Symposium, Indiana University, March 2014.
‘Grey Matters’ Seminar, Indiana University, November 2013.
- SELECTED CONFERENCE PRESENTATIONS **Hawkins, R.X.D.**, Franke, M., Smith, K., Goodman, N.D. (2018). Emerging abstractions: Lexical conventions are shaped by communicative context. Talk at 40th Annual Conference of the Cognitive Science Society; Madison, WI.
- Fan, J.E. **Hawkins, R.X.D.**, Wu, M., Goodman, N.D. (2018). Modeling contextual flexibility in visual communication. Talk at *Vision Sciences Society Annual Meeting*, St. Pete Beach, FL.
- Hawkins, R.X.D.**, Franke, M., Smith, K., Goodman, N.D. (2018). Learning to communicate about conceptual hierarchies. Talk at *Evolang XII*, Torun, Poland.
- Kreiss, E., **Hawkins, R.X.D.**, Degen, J., and Goodman, N.D. (2017) Mentioning atypical properties of objects is communicatively efficient. Poster at 39th Annual Conference of the Cognitive Science Society; London, UK.
- Hawkins, R.X.D.**, Frank, M.C., Goodman, N.D. (2017). Convention-formation in iterated reference games. Talk at 39th Annual Conference of the Cognitive Science Society; London, UK.
- Hawkins, R.X.D.**, Goodman, N.D. (2017) Why do you ask? Good questions provoke informative answers. Poster at CSLI Workshop (*Bridging computational and psycholinguistic approaches to the study of meaning*), Stanford, CA.
- Degen, J., Graf, C., **Hawkins, R.X.D.**, and Goodman, N.D. (2017) “Overinformative” referring expressions aren’t really overinformative. LSA Annual Meeting, Jan 5-8.
- Hawkins, R.X.D.** (2016). The emergence of conventions in real-time environments. Talk at 38th Annual Conference of the Cognitive Science Society; Philadelphia, PA.

- Hawkins, R.X.D.**, N.D. Goodman (2016). Conversational expectations account for apparent limits on theory of mind use. Talk at 38th Annual Conference of the Cognitive Science Society; Philadelphia, PA.
- A. Eidels, **Hawkins, R.X.D.**, J.W. Houpt, J. T. Townsend (2015). The quest for the simplest Gestalt. Talk presented at Psychonomic Society Conference; Chicago, IL; November 19, 2015.
- Hawkins, R.X.D.**, N.D. Goodman (2015). Why do you ask? Good questions provoke informative answers. Talk at 14th Annual Summer Interdisciplinary Conference, Mammoth Lakes, CA, July 11, 2015.
- A. Avena-Koenigsberger, O. Sporns, B. Corominas-Murtra, **Hawkins, R.X.D.**, J. A. Contreras, J. Goñi (2015). Generalized Search Information: an information theoretical approach to network communication through ensembles of shortest-paths. Poster presented at NetSci 2015, Zaragoza, Spain, June 4, 2015.
- Hawkins, R.X.D.**, R.L. Goldstone (2014). Efficiency, fairness, and stability in a real-time, asynchronous game. Talk presented at 4th Annual Midwest Cognitive Science Conference, Dayton, OH, May 31, 2014.
- J.T. Townsend, **Hawkins, R.X.D.**, M.J. Wenger (2013). A feature story on faces: Dimensions, features, and holism. Talk presented at Psychonomic Society Conference; Toronto, Canada, November 14, 2013.
- Hawkins, R.X.D.**, R.L. Goldstone. (2013). Real-time strategy: Multi-level group dynamics in an uncertain environment. Poster at 35th Annual Conference of the Cognitive Science Society; Berlin, Germany, August 2, 2013.
- J.W. Houpt, **Hawkins, R.X.D.**, D. Burns, J.T. Townsend (2013). Measuring Configural Superiority with the Capacity Coefficient. Poster at Vision Sciences Society Annual Meeting, Naples, FL, May 12, 2013.
- Hawkins, R.X.D.**, J.W. Houpt, A. Eidels, J.T. Townsend (2012). Fundamental properties of simple emergent feature processing. Poster at Vision Sciences Society Annual Meeting, Naples, FL, May 14, 2012.
- Hawkins, R.X.D.** (2012). Quantifying emergence in perceptual organization. Talk presented at Midwest Undergraduate Cognitive Science Conference; Bloomington, IN, April 15, 2012. [**Winner of Best Paper Award**]
- Hawkins, R.X.D.**, J.W. Houpt, A. Eidels, J.T. Townsend, M.J. Wenger (2011). Fundamental properties of simple emergent feature processing. Poster at Object Perception, Attention, and Memory; Seattle, WA, November 3, 2011.
- Hawkins, R.X.D.**, J.W. Houpt (2011). Basic features in visual perception. Talk presented at Midwest Undergraduate Cognitive Science Conference; Bloomington, IN, April 2, 2011.

ADVISING &
TEACHING

Students

- Kushin Mukherjee, undergraduate at Vassar (2018)
- Megumi Sano, undergraduate at Stanford (2018)
- Ethan Herenstein, Master's student at Stanford (2018)
- Karl Mulligan, undergraduate at Rutgers (2017)
- Nicole Maslan, undergraduate at Claremont McKenna (2015-2016)

Graduate Teaching Assistant, Stanford University

- Computation and Cognition: a Probabilistic Approach, Falls 2016 - 2018
- Bayesian Statistics for Psychologists, Summer 2016
- Lab in Experimental Methods, Winter 2016
- Statistical Methods for Behavioral and Social Sciences, Fall 2015

Undergraduate Teaching Assistant, Indiana University

- Programming Languages, Fall 2012, Spring 2013
- Philosophical Foundations of Cognitive Science, Spring 2012

PROFESSIONAL
SERVICE

Ad Hoc Reviewer

- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Human Perception and Performance
- Journal of Memory & Language
- Cognition
- Cognitive Science
- Computational Brain & Behavior
- Behavior Research Methods
- Cognitive Science Society conference proceedings

Conference Service

- Co-organizer for "Emergence of Conventions" symposium at the 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA, 2016
- Co-organizer for Stanford-Berkeley Cognitive Area Meetup, 2015
- Co-organizer for 5th Annual Midwest Undergraduate Cognitive Science Conference, Bloomington, IN, 2013

Departmental Service

- Graduate program committee, 2015-2018
- Co-organizer for Stanford cognitive science training seminar, 2017-2018
- Co-organizer for Stanford Cog/Neuro area training seminar, 2016-2017
- Stanford graduate admissions committee, 2015-2016

President of IU Student Organization for Cognitive Science, 2011 - 2012

IU Vice Provost for Undergraduate Education Advisory Board, 2011 - 2012