

## Roger Levy

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### RESEARCH INTERESTS

My research focuses on theoretical and applied questions in the processing and acquisition of natural language. Inherently, linguistic communication involves the resolution of uncertainty over a potentially unbounded set of possible signals and meanings. How can a fixed set of knowledge and resources be deployed to manage this uncertainty? To address these questions I combine computational modeling, psycholinguistic experimentation, and analysis of large naturalistic language datasets. This work furthers our understanding of the cognitive underpinning of language processing and acquisition, and helps us design models and algorithms that will allow machines to process human language.

### POSITIONS HELD

Associate Professor (with tenure)	2016–
Department of Brain & Cognitive Sciences, Massachusetts Institute of Technology	
Associate Professor (with tenure)	2012–2016
Department of Linguistics, University of California, San Diego	
Assistant Professor	2006–2012
Department of Linguistics, University of California, San Diego	
UK Economic & Social Research Council Postdoctoral Fellow	2005–2006
<i>Syntax, Probability, Prediction, and Memory in Human Sentence Processing</i>	
Institute for Communicating and Collaborative Systems	
School of Informatics, University of Edinburgh	

### EDUCATION

Stanford University, Ph.D. in Linguistics	2005
Dissertation Title: <i>Probabilistic Models of Word Order and Syntactic Discontinuity</i>	
Committee: Christopher Manning (chair), Dan Jurafsky, Ivan Sag, Tom Wasow	
Stanford University, M.S. in Anthropological Sciences	2002
Thesis Title: <i>Evolution of Inbreeding Avoidance</i>	
Advisor: Arthur Wolf	
University of Tokyo, Research Student in Biological Anthropology	1997–1998
Advisor: Kenichi Aoki	
Inter-University Program for Chinese Language Study	1996–1997
Fulbright Fellow	
Taipei, Taiwan (Stanford Center)	
University of Arizona, B.S. in Mathematics	1996

Magna cum Laude (Minor: Physics)

## HONORS AND AWARDS

Cambridge Community Television Rossi Award for Creative and Responsive Leadership, presented to MIT Day of Action	2017
MIT Institute Community and Equity Award, for work on the Day of Action	2017
Fellow, Center for Advanced Study of the Behavioral Sciences, Stanford, CA	2013–2014
Alfred P. Sloan Research Fellowship	2012–2014
NSF Faculty Early Career Development (CAREER) Award	2010–2015
UC San Diego Hellman Fellow	2010–2011
UC San Diego Faculty Career Development Program Award	2009–2010
UC San Diego Academic Senate Grants	2009, 2010, 2011, 2015
Royal Society of Edinburgh travel grant	2007
UK Economic & Social Research Council Postdoctoral Fellowship	2005–2006
Departmental Fellowship, Stanford University	2003–2004
Summer Research Grant, Center for East Asian Studies, Stanford University	2003
Departmental Fellowship, Stanford University	2001–2002
National Science Foundation Graduate Fellowship	1998–2001
Japanese Ministry of Education Graduate Fellowship	1997–1998
Fulbright Graduate Fellowship	1996–1997
University of Michigan Technical Japanese Program Summer Fellowship	1996
Phi Beta Kappa	1996
Outstanding Graduate in Mathematics, University of Arizona	1996
Minnesota Supercomputer Institute Summer Internship	1995
National Security Education Program Scholarship	1994–1995
Flinn Scholarship	1991–1996

## BOOKS

**In progress.** Roger Levy. *Probabilistic Models in the Study of Language*. Accepted for publication by MIT Press.

## REFEREED JOURNAL ARTICLES

Gibson, E., Jara-Ettinger, J., Levy, R. P., & Piantadosi, S. T. (2017). The use of a computer display exaggerates the connection between exact and approximate number ability in remote populations. *Open Mind*, 1(3), 159–168.

Meylan, S., Frank, M. C., Roy, B. C., & Levy, R. (2017). The emergence of an abstract grammatical category in children's early speech. *Psychological Science*, 28(2), 181–192.

Jara-Ettinger, J., Piantadosi, S., Spelke, E. S., Levy, R., & Gibson, E. (2017). Mastery of the logic of natural numbers is not the result of mastery of counting: Evidence from late counters. *Developmental Science*, 20(6), e12459.

Wittenberg, E. & Levy, R. (2017). If you want a quick kiss, make it count: How choice

- of syntactic construction affects event construal. *Journal of Memory and Language*, 94, 254–271.
- Leininger, M., Myslín, M., Rayner, K., & Levy, R. (2017). Do resource constraints affect lexical processing? Evidence from eye movements. *Journal of Memory and Language*, 93, 82–103.
- Gibson, E., Piantadosi, S. T., & Levy, R. (2017). *Post Hoc* analysis decisions drive the reported reading time effects in Hackl, Koster-Hale & Varvoutis (2012). *Journal of Semantics*, 34, 539–546.
- Futrell, R., Levy, R., & Gibson, E. (2017). Generalizing dependency distance: Comment on “dependency distance: A new perspective on syntactic patterns in natural languages” by Haitao Liu et al. *Physics of Life Reviews*, 21, 197–199.
- Morgan, E. & Levy, R. (2016a). Abstract knowledge versus direct experience in processing of binomial expressions. *Cognition*, 157, 384–402.
- Potts, C., Lassiter, D., Levy, R., & Frank, M. C. (2016). Embedded implicatures as pragmatic inferences under compositional lexical uncertainty. *Journal of Semantics*, 33(4), 755–802.
- Bergen, L., Levy, R., & Goodman, N. (2016). Pragmatic reasoning through semantic inference. *Semantics and Pragmatics*, 9(20).
- Pajak, B., Creel, S. C., & Levy, R. (2016). Difficulty in learning similar-sounding words: A developmental stage or a general property of learning? *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 42(9), 1377–1399.
- Myslín, M. & Levy, R. (2015a). Codeswitching and predictability of meaning in discourse. *Language*, 91(4), 871–905.
- Myslín, M. & Levy, R. (2015d). Comprehension priming as rational expectation for repetition: Evidence from syntactic processing. *Cognition*, 147, 29–56.
- Kao, J. T., Levy, R., & Goodman, N. D. (2015). A computational model of linguistic humor in puns. *Cognitive Science*.
- Pajak, B. & Levy, R. (2014). The role of abstraction in non-native speech perception. *Journal of Phonetics*, 46, 147–160.
- Pereira, J. C., Coviello, E., Doyle, G., Rasiwasia, N., Lanckriet, G., Levy, R., & Vasconcelos, N. (2014). On the role of correlation and abstraction in cross-modal multimedia retrieval. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 36(3), 521–535.
- Schotter, E. R., Bicknell, K., Howard, I., Levy, R., & Rayner, K. (2014). Task effects reveal cognitive flexibility responding to frequency and predictability: Evidence from eye movements in reading and proofreading. *Cognition*, 131(1), 1–27.
- Levy, R., Fedorenko, E., & Gibson, E. (2013). The syntactic complexity of Russian relative clauses. *Journal of Memory and Language*, 69(4), 461–495.
- Smith, N. J. & Levy, R. (2013). The effect of word predictability on reading time is logarithmic. *Cognition*, 128(3), 302–319.
- Levy, R. & Gibson, E. (2013). Surprisal, the PDC, and the primary locus of processing difficulty in relative clauses. *Frontiers in Psychology*, 4(229).

- Barr, D. J., Levy, R., Scheepers, C., & Tily, H. J. (2013). Random effects structure for confirmatory hypothesis testing: Keep it maximal. *Journal of Memory and Language*, 68(3), 255–278.
- Levy, R. & Keller, F. (2013). Expectation and locality effects in German verb-final structures. *Journal of Memory and Language*, 68(2), 199–222.
- Bicknell, K. & Levy, R. (2012a). The utility of modeling word identification from visual input within models of eye movements in reading. *Visual Cognition*, 20(4–5), 422–456.
- Levy, R., Fedorenko, E., Breen, M., & Gibson, T. (2012). The processing of extraposed structures in English. *Cognition*, 122(1), 12–36.
- Levy, R. & Daumé III, H. (2011). Computational methods are invaluable for typology, but the models must match the questions: Commentary on Dunn et al. (2011). *Linguistic Typology*, 15(2), 393–399.
- Rohde, H., Levy, R., & Kehler, A. (2011). Anticipating explanations in relative clause processing. *Cognition*, 118(3), 339–358.
- Levy, R., Bicknell, K., Slattery, T., & Rayner, K. (2009a). Eye movement evidence that readers maintain and act on uncertainty about past linguistic input. *Proceedings of the National Academy of Sciences*, 106(50), 21086–21090.
- Levy, R. (2008c). Expectation-based syntactic comprehension. *Cognition*, 106(3), 1126–1177.
- Benor, S. B. & Levy, R. (2006). The chicken or the egg? A probabilistic analysis of English binomials. *Language*, 82(2), 233–278.

## REFEREED CONFERENCE PROCEEDINGS PAPERS

- Hofer, M. & Levy, R. (2017). Modeling sources of uncertainty in spoken word learning. In *Proceedings of the 39th annual meeting of the Cognitive Science Society*.
- Futrell, R. & Levy, R. (2017). Noisy-context surprisal as a human sentence processing cost model. In *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics (EACL)* (pp. 688–698).
- Doyle, G. & Levy, R. (2016). Data-driven learning of symbolic constraints for a log-linear model in a phonological setting. In *Proceedings of the 26th International Conference on Computational Linguistics (COLING)* (pp. 2217–2226).
- Gutiérrez, E. D., Levy, R., & Bergen, B. (2016). Finding non-arbitrary form-meaning systematicity using string-metric learning for kernel regression. In *Proceedings of the 54th annual meeting of the Association for Computational Linguistics* (pp. 2379–2388). Best Paper Award.
- Zhan, M., Levy, R., & Kehler, A. (2016a). Bayesian pronoun interpretation in Mandarin Chinese. In *Proceedings of the 38th annual meeting of the Cognitive Science Society* (pp. 2393–2398).
- Poppels, T. & Levy, R. (2016d). Structure-sensitive noise inference: Comprehenders expect exchange errors. In *Proceedings of the 38th annual meeting of the Cognitive Science Society* (pp. 378–383).

- Morgan, E. & Levy, R. (2016b). Frequency-dependent regularization in iterated learning. In S. Roberts, C. Cuskley, L. McCrohon, L. Barceló-Coblijn, O. Feher, & T. Verhoef (Eds.), *The evolution of language: Proceedings of the 11th international conference (EVO LANG11)*.
- Poppels, T. & Levy, R. (2015a). Resolving quantity and informativeness implicature in indefinite reference. In W. Zuidema & J. Szymanik (Eds.), *Proceedings of the 2015 Amsterdam Colloquium: The Workshop on Reasoning in Natural Language* (pp. 313–322).
- Morgan, E. & Levy, R. (2015b). Modeling idiosyncratic preferences: How generative knowledge and expression frequency jointly determine language structure. In *Proceedings of the 37th annual meeting of the Cognitive Science Society* (pp. 1649–1654).
- Potts, C. & Levy, R. (2015). Negotiating lexical uncertainty and speaker expertise with disjunction. In *Proceedings of the 41st annual meeting of the Berkeley Linguistics Society*.
- Levy, R., Bergen, L., & Goodman, N. D. (To appear). *Roses and flowers: An informativeness implicature in probabilistic pragmatics*. In *Proceedings of the 24th Conference on Semantics and Linguistic Theory*.
- Doyle, G., Bicknell, K., & Levy, R. (2014b). Nonparametric learning of phonological constraints in Optimality Theory. In *Proceedings of the 52nd annual meeting of the Association for Computational Linguistics* (pp. 1094–1103).
- Kao, J., Levy, R., & Goodman, N. (2013). The funny thing about incongruity: A computational model of humor in puns. In *Proceedings of the 35th annual meeting of the Cognitive Science Society* (pp. 728–733).
- Bicknell, K., Higgins, E., Levy, R., & Rayner, K. (2013). Evidence for cognitively controlled saccade targeting in reading. In *Proceedings of the 35th annual meeting of the Cognitive Science Society* (pp. 197–202).
- Meylan, S., Frank, M. C., & Levy, R. (2013). Modeling the development of determiner productivity in children’s early speech. In *Proceedings of the 35th annual meeting of the Cognitive Science Society* (pp. 3032–3037).
- Doyle, G. & Levy, R. (2013). Combining multiple information types in Bayesian word segmentation. In *Proceedings of the 2013 conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies* (pp. 117–126).
- Bicknell, K. & Levy, R. (2012c). Word predictability and frequency effects in a rational model of reading. In *Proceedings of the 34th annual meeting of the Cognitive Science Society* (pp. 126–131). Sapporo, Japan.
- Bergen, L., Goodman, N. D., & Levy, R. (2012). That’s what she (could have) said: How alternative utterances affect language use. In *Proceedings of the 34th annual meeting of the Cognitive Science Society* (pp. 120–125).
- Bergen, L., Levy, R., & Gibson, E. (2012). Verb omission errors: Evidence of rational processing of noisy language inputs. In *Proceedings of the 34th annual meeting of the Cognitive Science Society* (pp. 1320–1325).
- Pajak, B., Creel, S. C., & Levy, R. (2012). Can native-language perceptual bias facilitate learning words in a new language? In *Proceedings of the 34th annual meeting of the Cognitive Science Society* (pp. 2174–2179).
- Pajak, B. & Levy, R. (2012). Distributional learning of L2 phonological categories by lis-

- teners with different language backgrounds. In A. Biller, E. Chung, & A. Kimball (Eds.), *Proceedings of the 36th Boston University conference on language development* (pp. 400–413). Somerville, MA: Cascadilla Press.
- Park, Y. A. & Levy, R. (2011). Automated whole sentence grammar correction using a noisy channel model. In *Proceedings of the 49th annual meeting of the Association for Computational Linguistics: Human Language Technologies* (pp. 934–944).
- Levy, R. (2011a). Integrating surprisal and uncertain-input models in online sentence comprehension: Formal techniques and empirical results. In *Proceedings of the 49th annual meeting of the Association for Computational Linguistics: Human Language Technologies* (pp. 1055–1065).
- Pajak, B. & Levy, R. (2011). Phonological generalization from distributional evidence. In *Proceedings of the 33rd annual meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- Smith, N. J. & Levy, R. (2011). Cloze but no cigar: The complex relationship between cloze, corpus, and subjective probabilities in language processing. In *Proceedings of the 33rd annual meeting of the Cognitive Science Society* (pp. 1637–1642).
- Rasiwasia, N., Pereira, J. M. C., Coviello, E., Doyle, G., Lanckriet, G. R. G., Levy, R., & Vasconcelos, N. (2010). A new approach to cross-modal multimedia retrieval. In *Proceedings of the ACM international conference on multimedia* (pp. 251–260).
- Bicknell, K. & Levy, R. (2010a). A rational model of eye movement control in reading. In *Proceedings of the 48th annual meeting of the Association for Computational Linguistics* (pp. 1168–1178). Uppsala, Sweden.
- Bicknell, K. & Levy, R. (2010c). Rational eye movements in reading combining uncertainty about previous words with contextual probability. In *Proceedings of the 32nd annual meeting of the Cognitive Science Society* (pp. 1142–1147).
- Smith, N. J. & Levy, R. (2010). Fixation durations in first-pass reading reflect uncertainty about word identity. In *Proceedings of the 32nd annual meeting of the Cognitive Science Society* (pp. 1313–1318).
- Smith, N. J., Chan, W.-H., & Levy, R. (2010). Is perceptual acuity asymmetric in isolated word recognition? Evidence from an ideal-observer reverse-engineering approach. In *Proceedings of the 32nd annual meeting of the Cognitive Science Society* (pp. 1483–1488).
- Colavin, R., Levy, R., & Rose, S. (2010). Modeling OCP-Place with the Maximum Entropy Phonotactic Learner. In *Proceedings of the Chicago Linguistic Society*.
- Levy, R., Reali, F., & Griffiths, T. L. (2009). Modeling the effects of memory on human online sentence processing with particle filters. In *Proceedings of the 22nd conference on Neural Information Processing Systems (NIPS)*.
- Bicknell, K. & Levy, R. (2009). A model of local coherence effects in human sentence processing as consequences of updates from bottom-up prior to posterior beliefs. In *Proceedings of the 10th annual meeting of the North American chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT) conference* (pp. 665–673). Boulder, Colorado, USA.
- Park, Y. A. & Levy, R. (2009). Minimal-length linearizations for mildly context-sensitive

dependency trees. In *Proceedings of the 10th annual meeting of the North American chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT) conference* (pp. 335–343). Boulder, Colorado, USA.

Bicknell, K., Levy, R., & Demberg, V. (2009). Correcting the incorrect: Local coherence effects modeled with prior belief update. In *Proceedings of the 35th annual meeting of the Berkeley Linguistics Society* (pp. 13–24).

Levy, R. (2008b). A noisy-channel model of rational human sentence comprehension under uncertain input. In *Proceedings of the 13th conference on Empirical Methods in Natural Language Processing* (pp. 234–243). Waikiki, Honolulu.

Doyle, G. & Levy, R. (2008). Environment prototypicality in syntactic alternation. In *Proceedings of the 34th annual meeting of the Berkeley Linguistics Society*. To appear.

Smith, N. J. & Levy, R. (2008a). Optimal processing times in reading: A formal model and empirical investigation. In *Proceedings of the 30th annual meeting of the Cognitive Science Society* (pp. 595–600). Washington, DC.

Levy, R. & Jaeger, T. F. (2007). Speakers optimize information density through syntactic reduction. In *Proceedings of the 20th conference on Neural Information Processing Systems (NIPS)*.

Levy, R. & Andrew, G. (2006). Tregex and Tsurgeon: Tools for querying and manipulating tree data structures. In *Proceedings of the 2006 conference on Language Resources and Evaluation* (pp. 2231–2234).

Levy, R. & Manning, C. (2004). Deep dependencies from context-free statistical parsers: Correcting the surface dependency approximation. In *Proceedings of the 42nd annual meeting of the Association for Computational Linguistics*.

Levy, R. & Manning, C. (2003). Is it harder to parse Chinese, or the Chinese Treebank? In *Proceedings of the 41st annual meeting of the Association for Computational Linguistics*.

Levy, R. & Oshima, D. (2003). Non-transitive information flow in Japanese noun-classifier matching. In S. Müller (Ed.), *Proceedings of the 10th international conference on Head-Driven Phrase Structure Grammar* (pp. 257–277). Available online at <http://csli-publications.stanford.edu/HPSG/4/>. CSLI Publications.

Thompson, C., Levy, R., & Manning, C. (2003). A generative model for FrameNet semantic role labeling. In *Proceedings of the 14th European Conference on Machine Learning* (pp. 397–408).

Levy, R. & Pollard, C. (2001). Coordination and neutralization in HPSG. In F. V. Eynde, L. Hellan, & D. Beermann (Eds.), *Proceedings of the 8th international conference on Head-Driven Phrase Structure Grammar* (pp. 221–234). Available online at <http://csli-publications.stanford.edu/HPSG/2/>. CSLI Publications.

## REFEREED WORKSHOP PROCEEDINGS PAPERS

Pająk, B., Bicknell, K., & Levy, R. (2013c). A model of generalization in distributional learning of phonetic categories. In *Proceedings of the 4th annual workshop on Cognitive Modeling and Computational Linguistics* (pp. 11–20).

Fossum, V. & Levy, R. (2012). Sequential vs. hierarchical syntactic models of human incremental sentence processing. In *Proceedings of the 3rd annual workshop on Cognitive Modeling and Computational Linguistics* (pp. 61–69). Montreal, Quebec.

Bicknell, K. & Levy, R. (2012b). Why long words take longer to read: The role of uncertainty about word length. In *Proceedings of the 3rd annual workshop on Cognitive Modeling and Computational Linguistics* (pp. 21–30).

West, R., Park, Y. A., & Levy, R. (2011). Bilingual random walk models for automated grammar correction of ESL author-produced text. In *Proceedings of the workshop on Innovative Use of NLP for Building Educational Applications* (pp. 170–179).

Lev, I., MacCartney, B., Manning, C., & Levy, R. (2004). Solving logic puzzles: From robust processing to precise semantics. In *Proceedings of the 2nd workshop on Text Meaning and Interpretation* (pp. 9–16).

## BOOK CHAPTERS

Wasow, T., Levy, R., Melnick, R., Zhu, H., & Juzek, T. (2015). Processing, prosody, and optional to. In L. Frazier & E. Gibson (Eds.), *Explicit and implicit prosody in sentence processing* (pp. 133–158). Springer.

Levy, R. (2013). Memory and surprisal in human sentence comprehension. In R. P. G. van Gompel (Ed.), *Sentence processing* (pp. 78–114). Hove: Psychology Press.

Aoki, K., Satoh, D., & Levy, R. (2002). Theoretical aspects of brother–sister mating in birds and mammals. In K. Aoki & T. Akazawa (Eds.), *Human mate choice and prehistoric marital networks* (pp. 5–15). Nichibunken, Kyoto.

## TECHNICAL REPORTS

Rambow, O., Chiang, D., Diab, M., Habash, N., Hwa, R., Sima'an, K., Lacey, V., Levy, R., Nichols, C., & Shareef, S. (2006). *Parsing Arabic dialects*. Johns Hopkins University.

## OTHER PUBLICATIONS

Futrell, R., Levy, R., & Dryer, M. (2017). A statistical comparison of some theories of NP word order. arXiv: 1709.02783 [cs.CL].

Levy, R. (2014, May 12). Using R formulae to test for main effects in the presence of higher-order interactions. arXiv: 1405.2094 [stat.ME].

Levy, R. (2011b). Probabilistic linguistic expectations, uncertain input, and implications for eye movements in reading. *Studies of Psychology and Behavior*, 9(1), 52–63.

## THESES

**2005.** Roger Levy. “Probabilistic Models of Word Order and Syntactic Discontinuity”. Ph.D. Thesis, Stanford University.

**1999.** Roger Levy. “Evolution of Inbreeding Avoidance.” Master’s Thesis, Stanford University. (Degree awarded 2002.)



## MANUSCRIPTS

**2002.** Roger Levy. "Parallelism and Weight Effects in English Coordinate Noun Phrases and Daughter Annotation of PCFGs." Manuscript, Stanford University.

**2001.** Roger Levy. "Feature Indeterminacy and the Coordination of Unlikes in a Totally Well-Typed HPSG." Manuscript, Stanford University. Available online at <http://idiom.ucsd.edu/~rlevy/papers/feature-indet.ps>

## FUNDING – EXTRAMURAL

**2016–2020.** Roger Levy (PI). *The edge of the lexicon: Productive knowledge and direct experience in the acquisition and processing of multiword expressions*. National Science Foundation (BCS-1551866).

**2015–2018.** Roger Levy (PI). *Broad-coverage probabilistic models of communication in context*. National Science Foundation (BCS-1456081; collaborative research award with Michael C. Frank and Christopher Potts, Stanford).

**2012–2014** (extended through 2016). Alfred P. Sloan Foundation Fellowship.

**2010–2015** (extended through 2016). Roger Levy (PI) and Keith Rayner. *Linguistic Processes in Sentence Comprehension and Reading*. National Institute of Child Health & Human Development (NIH 1R01HD065829-01).

**2010–2015** (extended through 2016). Roger Levy (PI). *Rational Language Processing with Uncertain and Noisy Input*. National Science Foundation CAREER (CISE/IIS-0953870, co-funded by SBE/BCS).

## FUNDING – INTRAMURAL (UCSD)

**2015–2016.** Roger Levy (PI). *Resolving Quantity and Informativity in Language Understanding*. Academic Senate Research Grant.

**2015–2016.** Eric Halgren, Victor Ferreira, Vikash Gilja, Shadi Dayeh, and Roger Levy (co-PIs). *The neural basis of syntax*. Chancellor's Interdisciplinary Collaboratories program grant.

**2011–2012.** Roger Levy (PI). *The acquisition of phonological categories as hierarchical inductive inference*. Academic Senate Research Grant.

**2011–2012.** Roger Levy, Keith Rayner and Nuno Vasconcelos (co-PIs). *How language and visual saliency jointly guide eye movements in the perception of complex scenes*. Chancellor's Interdisciplinary Collaboratories program grant.

**2010–2011.** Roger Levy (PI). *Using serial reproduction to investigate human language comprehension*. Hellman Fellowship.

**2010.** Roger Levy (PI). *Error identification and hallucinated garden paths in language comprehension*. Academic Senate Research Grant.

**2009.** Roger Levy (PI). *The deployment of probabilistic knowledge in online sentence comprehension*. Academic Senate Research Grant.

## INVITED PRESENTATIONS

**2017.** “Explicit belief and implicit expectations in language production and comprehension”. Colloquium given at:

CSLI Workshop on *Bridging computational and psycholinguistic approaches to the study of meaning*, Stanford University, 17 February 2017.

Institute of Cognitive Science, Université du Québec à Montréal, 7 April 2017.

**2016–2017.** “Life at the edge of the lexicon: Productive knowledge and direct experience in language processing and acquisition”. Colloquium given at:

Cornell Linguistics Circle Colloquium, 22 September 2016.

Institute of Cognitive Science, Université du Québec à Montréal, 7 April 2017.

Cognitive Science Colloquium, University of Maryland, 5 October 2017.

**2016.** “Probabilistic models of human language comprehension.” Colloquium given at:

Cognitive Brownbag, University of Massachusetts, Amherst, 19 October 2016.

Cognitive Science Colloquium, University at Buffalo, 21 September 2016.

Computational Linguistics Colloquium, Brandeis University, 13 October 2017.

**2016.** “Negation in probabilistic models of language comprehension: structure, expectations, and pragmatics.” Workshop on Negation, University of Geneva, 27 May 2016.

**2015.** “Bayesian pragmatics: Lexical uncertainty, compositionality, and the typology of conversational implicature”. Colloquium given at:

Natural Language Processing Colloquium, Penn State University, 2 December 2016.

Department of Linguistics, Cornell University, 23 September 2016.

Department of Linguistics, MIT, 23 September 2015.

Linguistics Program, Princeton University, 17 September 2015.

Google, 14 May 2015.

Department of Linguistics, University of Rochester, 8 May 2015.

**2015.** “Probabilistic models of human language comprehension”. University of Edinburgh Department of Informatics Colloquium, 29 May 2015.

**2015.** “Modeling the continuum of hypotheses spanning from nativism to empiricism”. Invited talk, Workshop on *Perspectives on Nativism*, University of Edinburgh, 21–22 May 2015.

**2015.** “Comprehenders as reverse engineers.” Colloquium given at the Department of Brain & Cognitive Sciences, University of Rochester, 6 May 2015.

**2015.** “Probabilistic models of language comprehension, production, and acquisition”. Special Seminar, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, 3 April 2015.

**2015.** “Not when—but how, and what?” Invited Speaker, CUNY Sentence Processing Conference, special session on *Exploring the (un)expected: The role of informativity in language production and comprehension*, 20 March 2015.

**2015.** “Expectation-based human language processing and understanding.” Departments of Linguistics and Psychology, UC Berkeley, 11 March 2015.

2015. "Probabilistic models of human language comprehension and production." Cognitive Science Colloquium, Tufts University, 4 February 2015.
2015. "Is grammatical knowledge probabilistic? Theory and evidence". Colloquium given at the Psycholinguistics Group Meeting, Stanford University, 29 January 2015.
2015. "Expectation-based language comprehension and production". Psychology Department Colloquium, Stanford University, 28 January 2015.
2014. "Noisy-channel human sentence comprehension". Invited talk given at the Workshop on The Continuous and the Discrete in Sentence Processing, 14–15 November 2014, Johns Hopkins University.
2014. "Probabilistic models of human language comprehension, production, and acquisition." Cognitive Science/Computer Science Colloquium, Johns Hopkins University, 23 September 2014.
2014. "Compositionality in probabilistic semantics and pragmatics: Bayesian *and* and *or*". UC San Diego Department of Cognitive Science Colloquium, 6 October 2014.
2014. "The Bayesian pragmatics of *and* and *or*". Invited talk given 11 August 2014, at the Formal and Experimental Pragmatics Workshop, European Summer School in Logic, Language, and Information (ESLLI), Tübingen, Germany.
2014. "Exemplars, rule-based generalization, and gradient grammatical knowledge in syntactic processing and acquisition". Talk given at the Workshop on Gradience in Grammar, Center for the Study of Language and Information, Stanford University, 17–18 January 2014.
- 2013–2014. "Probabilistic knowledge in human language comprehension and production". Colloquium presented at:  
Department of Linguistics, UC Santa Barbara, 3 October 2013.  
Department of Linguistics, University of Arizona, 24 January 2014.
2013. "The ecology of the binomial construction: processing, pragmatics, and efficiency." Colloquium given at the Stanford Linguistics Department, 8 November 2013.
2013. "Probabilistic Knowledge and Uncertain Input in Human Sentence Processing." Keynote Talk at the Seventeenth Conference on Natural Language Learning (CoNLL), 8–9 August 2013, Sofia, Bulgaria.
2013. "The internal structure of coordinate categories." Presented at *Structure and Evidence in Linguistics*, 28–30 April 2013, Stanford, CA, in honor of Ivan A. Sag.
- 2012–13. "Probability and a Quantitative Science of Language." Presented at:  
Mayfest: *The Role of Computational Models in Linguistic Theory*, University of Maryland, 4–5 May 2012.  
Department of Computational Linguistics and Phonetics, Saarland University, 13 May 2013.
2012. "Probabilistic Knowledge and Locality in Syntactic Comprehension." Department of Linguistics, University of California at Santa Cruz, 12 October 2012.
- 2010–2011. "Probabilistic Knowledge and Uncertain Input in Rational Human Sentence Comprehension." Presented at:

Plenary lecture series, Center for Language and Speech Processing, Johns Hopkins University, 30 June 2010

Computational Linguistics & Information Processing lecture series, Institute for Advanced Computer Studies, University of Maryland – College Park, 15 September 2010

Department of Cognitive Sciences, UC Irvine, 11 October 2010

Mind, Technology, & Society Lecture Series, UC Merced, 7 February 2011

Department of Linguistics, University of Massachusetts at Amherst, 16 September 2011

Institute for Research in Cognitive Science, University of Pennsylvania, 30 September 2011

Department of Cognitive, Linguistic, and Psychological Sciences, Brown University, 6 October 2011

Department of Linguistics, New York University, 21 October 2011

**2010.** “Probabilistic linguistic expectations, uncertain input, and implications for eye movements in reading.” Keynote speaker at the 4th China International Conference on Eye Movements, 24–26 May 2010, Tianjin Normal University, Tianjin, China.

**2009–2010.** “The Processing of Extraposed Structures in English.” Presented at:

Department of Linguistics, UC Berkeley, 5 April 2010

Department of Linguistics, UC San Diego, 12 October 2009

**2009–2010.** “Uncertain input in rational human sentence comprehension.” Presented at:

Stanford Psychology of Language Tea (SPLaT), Stanford University, 1 April 2010

Institute for Cognitive and Brain Sciences, UC Berkeley, 28 August 2009

Dalle Molle Institute for Artificial Intelligence, Lugano, Switzerland, 17 July 2009

**2008–2009.** “Noise and memory in rational human sentence comprehension.” Presented at:

Department of Psychology, New York University, 18 May 2009

Department of Linguistics, University of Southern California, 13 April 2009

Department of Psychology, California State University – Long Beach, 11 March 2009

Natural Language Processing Group, Information Sciences Institute, 23 January 2009

Department of Linguistics, Northwestern University, 5 December 2008

**2007–2008.** “Probabilistic knowledge in human language comprehension and production.” Presented at:

Department of Linguistics, UCLA, 11 February 2008

Department of Linguistics, Stanford University, 6 February 2008

Department of Brain & Cognitive Sciences, MIT, 4 February 2008

Department of Linguistics, Cornell University, 28 January 2008

IEEE Computational Intelligence Society, San Diego Chapter, 13 June 2007

**2007.** “Speakers optimize information density through syntactic reduction.” Invited speaker, Computational Linguistics Colloquium, University of Potsdam, 13 December 2007.

**2007.** “Modeling transactions in uncertainty in the online processing of verb-final structures.” Invited workshop presentation, *Theoretical approaches to the processing of verb-final constructions* workshop, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, 7–9 December 2007.

**2007.** “New Frontiers Opened by the Gradient View of Grammatical Knowledge.” Keynote address, *Eleventh meeting of the Texas Linguistic Society*, 9–10 November 2007.

**2007.** “Expectations, locality, and competition in human sentence comprehension.” Department of Brain & Cognitive Sciences, University of Rochester, April 18, 2007.

**2006.** “Information-density optimization in natural language grammars.” Presented at Language Evolution & Computation group meeting, University of Edinburgh, July 28, 2006.

**2005–2006.** “Expectation-based syntactic comprehension.” Presented at:

Human Communication Research Centre, University of Edinburgh, Oct. 21, 2005

Dept. of Computational Linguistics and Phonetics, Saarland University, Dec. 1, 2005

Research Centre for English and Applied Linguistics, Cambridge University, Jan. 24, 2006

Department of Psychology, University of Glasgow, Feb. 17, 2006

Department of Psychology, University of Dundee, Mar. 9, 2006

Department of Brain and Cognitive Science, MIT, Oct. 6, 2006

**2005.** “Expectation-based syntactic processing, information theory, and German word order.” Presented at:

Department of Linguistics, University of Ottawa, January 17, 2005

Department of Linguistics, University at Buffalo, February 8, 2005

Department of Linguistics, UC San Diego, February 14, 2005

Department of Linguistics, Ohio State University, February 18, 2005

Cognitive Science Program, Indiana University, February 21, 2005

Department of Linguistics, University of Texas – Austin, February 25, 2005

Department of Linguistics, University of Washington, March 12, 2005

**2004.** “Deep dependencies from context-free statistical parsers.” Presented at:

Knowledge Systems Area group, Palo Alto Research Center, March 22, 2005

School of Informatics, University of Edinburgh, August 23, 2004

**2004.** “Predicate-argument structure from broad-coverage parse trees.” Presented at the Institute of Cognitive Science, University of Colorado, Boulder, March 12, 2004.

**2004.** “The Statistical Distribution of English Coordinate Noun Phrases.” Presented at:

Department of Linguistics, Indiana University, February 22, 2005

Department of Linguistics, University of Colorado, Boulder, March 11, 2004

#### PEER-REVIEWED PRESENTATIONS WITHOUT CONFERENCE PROCEEDINGS (PUBLISHED ABSTRACTS ONLY)

Zhan, M. & Levy, R. (2018). Availability-based production, not uniform information density, predicts mandarin classifier choice. Poster presentation at the 2018 CUNY Sentence Processing Conference, 3–5 March 2016.

Boyce, V., von der Malsburg, T., Poppels, T., & Levy, R. (2018). Implicit gender biases in the production and comprehension of pronominal references. Poster presentation at the 2018 CUNY Sentence Processing Conference, 3–5 March 2016.

Aparicio, H. & Levy, R. (2018). Counting exceptions: Exception phrases and quantification. Poster presentation at the 2018 CUNY Sentence Processing Conference, 3–5 March 2016.

von der Malsburg, T., Poppels, T., & Levy, R. (2017b). The president will give her inauguration speech: Explicit belief and implicit expectations in language production and comprehension. Oral Presentation at the 30th Annual CUNY Conference on Human Sentence Processing.

Sheng, Y., Wu, F., & Levy, R. (2017). Positioning of determiner phrase affects mandarin relatives processing. Poster Presentation at the 30th Annual CUNY Conference on Human Sentence Processing.

von der Malsburg, T., Poppels, T., & Levy, R. (2017a). The president gave her inauguration speech: Explicit belief and implicit expectations in language production and comprehension. Oral presentation at the Annual Meeting of the Linguistic Society of America.

Zhan, M., Levy, R., & Kehler, A. (2017). Testing a Bayesian pronoun interpretation model with Chinese *ba* and *bei*. Oral presentation at the Annual Meeting of the Linguistic Society of America.

Wittenberg, E., Barner, D., & Levy, R. (2016b). The roles of presupposition accommodation and syntax in computing adjectival scalar thresholds. Oral presentation at the 2016 Conference on Architectures and Mechanisms for Language Processing, 1–3 March 2016.

Zhan, M., Levy, R., & Kehler, A. (2016b). Bayesian pronoun interpretation in Mandarin Chinese. Poster presentation at the 2016 Conference on Architectures and Mechanisms for Language Processing, 1–3 March 2016.

Zhan, M., Levy, R., & Kehler, A. (2016c). Bayesian pronoun interpretation in Mandarin Chinese. Presented at the 28th North American Conference on Chinese Linguistics, 5–8 May, Brigham Young University.

Myslín, M., Levy, R., & Kehler, A. (2016). Comprehenders infer influences of discourse intent and speaker knowledge state on linguistic form. Oral presentation at the 2016 CUNY Sentence Processing Conference, 3–5 March 2016.

Myslín, M., Morgan, E., & Levy, R. (2016). Comprehenders reason about competing causal sources of binomial ordering. Oral presentation at the 2016 CUNY Sentence Processing Conference, 3–5 March 2016.

Zhan, M., Levy, R., & Kehler, A. (2016d). Bayesian pronoun interpretation in Mandarin Chinese. Poster presentation at the 2016 CUNY Sentence Processing Conference, 3–5 March 2016.

Morgan, E. & Levy, R. (2016c). Frequency-(in)dependent regularization in language production and cultural transmission. Poster presentation at the 2016 CUNY Sentence Processing Conference, 3–5 March 2016.

Poppels, T. & Levy, R. (2016a). Resolving quantity and informativeness implicature in indefinite reference. Poster presentation at the 2016 CUNY Sentence Processing Conference,

3–5 March 2016.

Wittenberg, E., Barner, D., & Levy, R. (2016a). Inferring individuals' scalar thresholds: What counts as tall for you? Poster presentation at the 2016 CUNY Sentence Processing Conference, 3–5 March 2016.

Morgan, E. & Levy, R. (2016d). Productive knowledge and item-specific experience trade off gradiently and rationally. Oral presentation at the Annual Meeting of the Linguistic Society of America, 7–10 January, Washington, DC.

Wittenberg, E. & Levy, R. (2016). If you want a quick hug, make it count: How grammar affects estimated event durations. Poster presentation at the Annual Meeting of the Linguistic Society of America, 7–10 January, Washington, DC.

Poppels, T. & Levy, R. (2016b). Resolving quantity and informativeness implicature in indefinite reference. Poster presentation at the Annual Meeting of the Linguistic Society of America, 7–10 January, Washington, DC.

Poppels, T. & Levy, R. (2016c). Structure-sensitive noise inference: Comprehenders expect exchange errors. Oral presentation at the Annual Meeting of the Linguistic Society of America, 7–10 January, Washington, DC.

Wittenberg, E. & Levy, R. (2015). If you want a quick hug, make it count: How grammar affects estimated event durations. Oral presentation at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Poppels, T. & Levy, R. (2015b). Resolving quantity and informativeness implicature in indefinite reference. Oral presentation at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Bushong, W., Morgan, E., Yen, M., & Levy, R. (2015). Holistic and compositional representations in multiword expressions. Poster presentation at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

von der Malsburg, T., Vasishth, S., & Levy, R. (2015). The impact of reading modality on sentence comprehension. Poster presentation given at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Morgan, E. & Levy, R. (2015c). Productive knowledge and direct experience trade off gradiently and rationally in processing binomial expressions. Poster presentation given at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Morgan, E. & Levy, R. (2015a). Generative and item-specific knowledge jointly determine language structure. Poster presentation given at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Poppels, T. & Levy, R. (2015d). Structure-sensitive noise inference: Comprehenders expect exchange errors. Poster presentation given at the Architectures and Mechanisms in Language Processing Conference (AMLaP), 3–5 September 2015, Valletta, Malta.

Poppels, T. & Levy, R. (2015c). Resolving quantity and informativeness implicature in indefinite reference. Oral presentation at Experimental Pragmatics 2015, 16–18 July 2015, Chicago, Illinois.

Muhlstein, L., Potts, C., Frank, M. C., & Levy, R. (2015). Pragmatic coordination on context

via definite reference. Poster presentation at Experimental Pragmatics 2015, 16–18 July 2015, Chicago, Illinois.

von der Malsburg, T., Vasishth, S., Metzner, P., & Levy, R. (2015). How presentation modality influences reading comprehension. Poster presentation given at the 28th CUNY Conference on Human Sentence Processing, 19–21 March 2015, University of Southern California.

Myslín, M. & Levy, R. (2015b). Comprehenders infer interaction between meaning intent and grammatical probability. Poster presentation given at the 28th CUNY Conference on Human Sentence Processing, 19–21 March 2015, University of Southern California.

Levy, R. (2015). Grammatical knowledge is fundamentally probabilistic. Oral presentation given at the 89th Annual Meeting of the Linguistic Society of America, 8–11 January 2015, Portland, Oregon.

Myslín, M. & Levy, R. (2015c). Comprehenders infer interaction between meaning intent and grammatical probability. Oral presentation given at the 89th Annual Meeting of the Linguistic Society of America, 8–11 January 2015.

Levy, R. & Potts, C. (2015). Communicating in language, and about language, using disjunction. Poster presentation at the 89th Annual Meeting of the Linguistic Society of America, 8–11 January 2015, Portland, Oregon.

Doyle, G., Bicknell, K., & Levy, R. (2014a). Learning constraint violations directly from data: An emergentist model of phonology. Poster presented at the 39th Boston University Conference on Language Development.

Pajak, B., Piccinini, P., & Levy, R. (2014). A model of generalization in distributional learning of phonetic categories. Poster presented at the 168th Meeting of the Acoustical Society of America.

Pajak, B., Bicknell, K., & Levy, R. (2013b). A computational model of generalization in phonetic category learning. Presented orally at the 38th Boston University Conference on Language Development, 1–3 November 2013.

Levy, R., Bergen, L., & Goodman, N. D. (2013). Roses and flowers: An informativeness implicature in probabilistic pragmatics. Presented at the ESSLLI 2013 Workshop on Bayesian Natural Language Semantics and Pragmatics, 5–9 August 2013, Düsseldorf, Germany.

Pajak, B., Bicknell, K., & Levy, R. (2013a). A computational model of generalization in distributional learning: The role of phonetic variability across segment classes. Talk given at the 2013 Linguistic Society of America Summer Institute Workshop on *Variation in the Acquisition of Sound Systems*, Ann Arbor, Michigan, 28 June 2013.

Morgan, E. & Levy, R. (2013). Direct experience versus abstract knowledge in linguistic processing. Oral presentation at the 2013 CUNY Sentence Processing Conference, 21–23 March 2013.

**2013.** Klinton Bicknell and Roger Levy. “A rational account of regressions in syntactically complex sentences”. Poster presentation given at the 2013 CUNY Sentence Processing conference, University of South Carolina, 21–23 March 2013.

**2013.** Mark Myslín and Roger Levy. “Expectation adaptation for clustering of syntactic structures”. Poster presentation given at the 2013 CUNY Sentence Processing conference,



University of South Carolina, 21–23 March 2013.

**2013.** Bożena Pająk and Roger Levy. “Distributional learning of non-native phonetic categories: the role of talker variability.” Oral presentation, Annual Meeting of the Linguistic Society of America, 3–6 January 2013, Boston, MA.

**2013.** Mark Myslín and Roger Levy. “Codeswitching and predictability of meaning in discourse.” Poster presentation, Annual Meeting of the Linguistic Society of America, 3–6 January 2013, Boston, MA.

**2012.** Mark Myslín and Roger Levy. “Information Density in Multilingual Codeswitching”. DGfS Workshop on Information Density & Linguistic Variation, Frankfurt am Main, Germany, 6–9 March 2012; and the 2012 Cognition and Language Workshop (CLaW), 14 April 2012, UC Santa Barbara.

**2012.** Thomas Wasow, Rebecca Green, and Roger Levy. “Optional *to* and Prosody”. Poster presentation at the 2012 CUNY Sentence Processing conference, CUNY, 14–16 March 2012.

**2012.** Klinton Bicknell and Roger Levy. “Effects of frequency, predictability, & length in a rational model of eye movements in reading”. Poster presentation at the 2012 CUNY Sentence Processing conference, CUNY, 14–16 March 2012.

**2012.** Leon Bergen, Roger Levy, and Edward Gibson. “Verb Omission Errors: Evidence of Rational Noisy-channel Language Processing”. Poster presentation at the 2012 CUNY Sentence Processing conference, CUNY, 14–16 March 2012.

**2012.** Elizabeth Schotter, Klinton Bicknell, Roger Levy, and Keith Rayner. “The effects of task on frequency and predictability effects.” Poster presentation at the 2012 CUNY Sentence Processing conference, CUNY, 14–16 March 2012.

**2012.** Rebecca Colavin, Sharon Rose, and Roger Levy. “Under-representation and word-acceptability in Amharic: evidence from a judgment task”. Oral presentation at the Organized Session on An Introduction to Ethiosemitic Languages: Data and Theory, 86th Annual Meeting of the Linguistic Society of America, 5–8 January 2012, Portland, Oregon.

**2012.** Bożena Pająk, Sarah C. Creel, and Roger Levy. “Adults take advantage of fine phonetic detail when learning words in a novel language”. Oral presentation at the 86th Annual Meeting of the Linguistic Society of America, 5–8 January 2012, Portland, Oregon.

Levy, R., Fedorenko, E., Breen, M., & Gibson, E. (2011). Input uncertainty and cue redundancy in syntactic comprehension and adaptation. Oral presentation at the 2011 Architectures and Mechanisms in Language Processing (AMLaP) conference, 1–3 September 2011.

**2011.** Roger Levy and Klinton Bicknell. “A rational model of eye-movement control in reading.” Oral presentation at the 16th European Conference on Eye Movements, 21–25 August 2011.

**2011.** Klinton Bicknell and Roger Levy. “Between-word regressive saccades to and from words of low predictability.” Oral presentation at the 16th European Conference on Eye Movements, 21–25 August 2011.

- 2011.** Klinton Bicknell and Roger Levy. "Empirical Benchmarks for a rational model of eye movement control in reading." 44th Annual Meeting of the Society for Mathematical Psychology, 16–18 July 2011.
- 2011.** Emily Morgan, Roger Levy, Klinton Bicknell, Timothy Slattery and Keith Rayner. "Word Re-recognition Occurs During Second Pass Reading: Evidence from Eye-movements." Poster presentation given at the 2011 CUNY Sentence Processing conference, Stanford University, 24–26 March 2011.
- 2011.** Vera Demberg, Frank Keller, and Roger Levy. "Explaining the Relative Clause Asymmetry." Poster presentation given at the 2011 CUNY Sentence Processing conference, Stanford University, 24–26 March 2011.
- 2011.** Klinton Bicknell and Roger Levy. "Between-word regressions from words of low predictability and frequency." Poster presentation given at the 2011 CUNY Sentence Processing conference, Stanford University, 24–26 March 2011.
- 2011.** Nathaniel Smith and Roger Levy. "Comparing cloze versus corpus probabilities in self-paced reading." Poster presentation given at the 2011 CUNY Sentence Processing conference, Stanford University, 24–26 March 2011.
- 2011.** Gabriel Doyle and Roger Levy. "A log-linear model of language acquisition with multiple cues." Oral presentation at the 85th Annual Meeting of the Linguistic Society of America, Pittsburgh, PA, 6–9 January 2011.
- Bicknell, K. & Levy, R. (2010b). Between-word regressions as part of rational reading. Oral presentation at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- Jaeger, T. F., Levy, R., & Ferreira, V. (2010). Context-sensitive information density affects syntactic production (even in the lab). Oral presentation at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- 2010.** Roger Levy. "On hallucinated garden paths." Poster presentation given at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- 2010.** Nathaniel Smith and Roger Levy. "Fixation durations in first-pass reading reflect uncertainty about word identity." Poster presentation given at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- 2010.** Nathaniel Smith and Roger Levy. "Bias in the Cloze task." Poster presentation given at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- 2010.** Gabriel Doyle and Roger Levy. "A puzzle regarding relative pronoun choice: when frequency and difficulty disagree." Poster presentation given at the 2010 CUNY Sentence Processing conference, New York City, 18–20 March 2010.
- 2010.** Rebecca Colavin, Roger Levy, and Sharon Rose. "Modeling OCP-Place with the Maximum Entropy Phonotactic Learner." Presented at the 2010 Computational Modelling of Sound Pattern Acquisition Workshop, University of Alberta, 13–14 February 2010.
- 2010.** Roger Levy. "On hallucinated garden paths." Paper presented at the 2010 annual meeting of the Linguistic Society of America, Baltimore, MD, 7–10 January 2010.

- 2010.** Klinton Bicknell and Roger Levy. "Eye movements in reading as optimal responses to the contextualized structure of language." Paper presented at the 2010 annual meeting of the Linguistic Society of America, Baltimore, MD, 7–10 January 2010.
- 2009.** Roger Levy. "Online language processing as rational process model: garden-pathing and the particle filter." Oral presentation given at the 31st annual meeting of the Cognitive Science Society, in the symposium *Rational Process Models*, July 29–August 1, 2009.
- Levy, R., Bicknell, K., Slattery, T., & Rayner, K. (2009b). Readers maintain and act on uncertainty about past linguistic input: Evidence from eye movements. Oral presentation at the 2009 CUNY Sentence Processing Conference.
- 2009.** Roger Levy, Florencia Reali, and Thomas Griffiths. "Digging-in effects as rational limited-parallel sentence comprehension." Poster presentation given at the 2009 CUNY sentence processing conference, 26 March 2009.
- 2009.** Klinton Bicknell and Roger Levy. "A new model of local coherences as resulting from Bayesian belief update." Poster presentation given at the 2009 CUNY sentence processing conference, 26 March 2009.
- 2009.** Harry Tily, Marie-Catherine de Marneffe, and Roger Levy. "Comprehension difficulty reflects an understanding of likely production errors." Poster presentation given at the 2009 CUNY sentence processing conference, 27 March 2009.
- 2009.** Roger Levy. "With uncertain input, rational sentence comprehension is good enough". Paper presented at the 2009 annual meeting of the Linguistic Society of America, San Francisco, CA, 8–11 January 2009.
- 2009.** Klinton Bicknell and Roger Levy. "An empirical investigation and new model of local coherences". Paper presented at the 2009 annual meeting of the Linguistic Society of America, San Francisco, CA, 8–11 January 2009.
- 2008.** Nathaniel Smith and Roger Levy. "Probabilistic Prediction and the Continuity of Language Comprehension." Presented at the 9th Conference on Conceptual Structure, Discourse, and Language (CSDL 9).
- Levy, R. (2008a). A fully rational model of local-coherence effects: Modeling uncertainty about the linguistic input in sentence comprehension. Oral presentation given at the 2008 CUNY sentence processing conference.
- Smith, N. J. & Levy, R. (2008b). Surprisal as optimal behavior: A formal model and empirical investigation. Oral presentation at the 2008 CUNY sentence processing conference, 12–14 March 2008.
- 2008.** Hannah Rohde, Roger Levy, and Andrew Kehler. "Implicit Causality Biases Influence Relative Clause Attachment." Poster presentation given at the 2008 CUNY sentence processing conference, 12–14 March 2008.
- 2008.** Roger Levy, Edward Gibson, and Evelina Fedorenko. "Expectation-based processing of extraposed structures in English." Poster presentation given at the 2008 CUNY sentence processing conference, 12–14 March 2008.
- 2008.** Roger Levy and Frank Keller. "Expectation and Memory in Processing of German Verb-final Clauses: Relativization Matters." Poster presentation given at the 2008 CUNY sentence processing conference, 12–14 March 2008.

- 2008.** Klinton Bicknell, Vera Demberg, and Roger Levy. "Local coherences in the wild: An eye-tracking corpus study." Poster presentation given at the 2008 CUNY sentence processing conference, 12–14 March 2008.
- 2008.** Hannah Rohde, Roger Levy, and Andrew Kehler. "Coherence-Driven Effects in Relative Clause Processing." Oral presentation at the 2008 annual meeting of the Linguistic Society of America, Chicago, IL, 3–6 January 2008.
- 2008.** Gabriel Doyle and Roger Levy. "Mixed categories and gradient grammatical constraints." Poster presentation at the 2008 annual meeting of the Linguistic Society of America, Chicago, IL, 3–6 January 2008.
- 2007.** Roger Levy, Evelina Fedorenko, and Edward Gibson. "The syntactic complexity of Russian relative clauses." Poster presentation given at *Interdisciplinary Approaches to Relative Clauses*, Cambridge University, September 2007.
- Levy, R., Fedorenko, E., & Gibson, T. (2007). The syntactic complexity of Russian relative clauses. Oral presentation at the 2007 CUNY sentence processing conference, La Jolla, CA.
- 2007.** Roger Levy and Frank Keller. "Sentence position and time-course in expectation-based processing of final verbs." Poster presented at the 2007 CUNY sentence processing conference.
- Demberg, V., Keller, F., & Levy, R. (2007). Eye-tracking evidence for frequency and integration cost effects in corpus data. Oral presentation at the 20th CUNY sentence processing conference.
- 2007.** Evelina Fedorenko and Roger Levy. "Information-structure and word-order in Russian sentence comprehension." Poster presented at the 2007 CUNY sentence processing conference.
- 2006.** Roger Levy, Evelina Fedorenko, and Edward Gibson. "The syntactic complexity of Russian relative clauses." Poster presented at the 2006 Architectures and Mechanisms for Language Processing (AMLaP) Conference.
- Jaeger, T. F. & Levy, R. (2006). The structural basis of probabilistic syntactic production. Oral presentation at AMLaP 2006.
- 2006.** Evelina Fedorenko and Roger Levy. "Information-structure and word-order in Russian sentence comprehension." Poster presented at the 2006 Architectures and Mechanisms for Language Processing (AMLaP) Conference.
- Jaeger, F. T., Levy, R., Wasow, T., & Orr, D. M. (2005). The absence of "that" is predictable if a relative clause is predictable. Presented at the 2005 Architectures and Mechanisms for Language Processing (AMLaP) Conference.
- 2005.** "German word order and expectation-based syntactic processing." Poster presented at the 18th annual CUNY Sentence Processing Conference, March/April 2005.
- 2005.** "Processing difficulty in verb-final clauses matches syntactic expectations." Presented at the 2005 meeting of the Linguistic Society of America, January 2005.
- 2004.** "Quantifying syntactic discontinuity in natural language." Presented at the 40th annual meeting of the Chicago Linguistic Society.
- 2003.** David Oshima and Roger Levy. "Nouns with multiple classifiers and non-transitive

information flow in Japanese.” Presented at the Stanford Semantics Fest, March 2003.

**2002.** “The Statistical Distribution of English Coordinate Noun Phrases: Parallelism and Weight Effects.” Presented at the 31st annual meeting of *New Ways to Analyze Variation*, October 2002.

**2002.** “Non-events and the aspect of locative *keep*.” Presented at the Stanford Semantics Fest, March 2002.

## OTHER PRESENTATIONS

**2015.** Discussant, workshop on “Competition in Linguistics”, 12 July 2015, University of Chicago.

**2010.** Workshop panelist, “The Role of Entropy in Language, Communication & Behavioral Sequencing”, Santa Fe Institute, 14–16 June 2010.

**2009.** “A brief and friendly introduction to multi-level models in psycholinguistics: conceptual background.” Presented at the 2009 Pre-CUNY Workshop on Ordinary and Multilevel Models, 25 March 2009.

**2008.** Panelist, CUNY Sentence Processing Conference special session, *Formal Models of Human Sentence Processing*, 14 March 2008.

**2007.** Panelist, *Grammar Engineering across Frameworks* workshop, 13 July 2007.

**2007.** “Logistic regression and model selection in investigating how speakers regulate information density in language use.” Presented at the first UC San Diego workshop in statistics, biostatistics and bioinformatics: *Model selection and Statistical Learning*, 15 March 2007.

## TEACHING: UNIVERSITY COURSES

Taught at MIT

**Fall 2016.** 9.S956: Cooperation, Communication, and Pragmatics.

**Spring 2017.** 9.19: Computational Psycholinguistics.

Taught at UCSD [1xx=upper-division undergraduate, 2xx=graduate]:

**Fall 2015.** Linguistics 228: Probabilistic models of cognition (co-taught with Ed Vul, UCSD Psychology).

**Winter 2015.** Cognitive Science 200: Computational and Experimental Pragmatics.

**Winter 2015.** Linguistics 165: Computational Linguistics.

**Fall 2014.** Linguistics 247: Topics in Pragmatics (Bayesian and game-theoretic pragmatics).

**Fall 2014.** Linguistics 101: Introduction to the Study of Language.

**Spring 2013.** Linguistics 274: Computational Psycholinguistics.

**Winter 2013.** Linguistics 101: Introduction to the Study of Language.

**Winter 2013.** Linguistics 170: Psycholinguistics.

**Fall 2012.** Linguistics 251: Probabilistic Methods in Linguistics.

**Spring 2012.** Linguistics 252: Advanced Probabilistic Models of Language.

**Spring 2012.** Linguistics 170: Psycholinguistics.

- Fall 2010.** Linguistics 251: Probabilistic Methods in Linguistics.
- Fall 2010.** Linguistics 165: Computational Linguistics.
- Spring 2010.** Linguistics 170: Psycholinguistics.
- Winter 2010.** Linguistics 274: Computational Psycholinguistics.
- Fall 2009.** Linguistics 101: Introduction to the Study of Language.
- Spring 2009.** Linguistics 170: Psycholinguistics.
- Winter 2009.** Linguistics/Computer Science & Engineering 256: Statistical Natural Language Processing
- Fall 2008.** Linguistics 251: Probabilistic Methods in Linguistics.
- Fall 2008.** Linguistics 101: Introduction to the Study of Language.
- Winter 2008.** Linguistics/Computer Science & Engineering 256: Statistical Natural Language Processing.
- Winter 2008.** Linguistics 101: Introduction to the Study of Language.
- Fall 2007.** Linguistics 251: Probabilistic Methods in Linguistics.
- Spring 2007.** Linguistics 274: Computational Psycholinguistics.
- Fall 2006.** Linguistics 170: Psycholinguistics.
- Fall 2006.** Linguistics 101: Introduction to the Study of Language.
- Taught at Stanford [1xx=upper-division undergraduate, 2xx=graduate]:
- Winter 2005.** Linguistics 235: Quantitative and Probabilistic Explanation in Linguistics. Co-taught with Christopher Manning.
- Winter 2002.** Linguistics 130A: Introduction to Semantics and Pragmatics. Teaching assistant for Hana Filip.
- Spring 2001.** Computer Science 224n/Linguistics 237: Statistical Natural Language Processing. Teaching assistant for Christopher Manning.
- Winter 2000.** Anthropological Sciences 5: Biology and Evolution of Language. Teaching assistant for James Fox.

## TEACHING: SPECIAL COURSES

- Summer 2015.** Advanced Statistical Modeling in R, taught at the 2015 Institute of the Linguistic Society of America, July 2015.
- Summer 2015.** Computational Psycholinguistics, taught (jointly with Klinton Bicknell) at the 2015 Institute of the Linguistic Society of America, July 2015.
- Summer 2014.** Computational Psycholinguistics. Advanced course taught (jointly with Klinton Bicknell) at the 26th European Summer School in Logic, Language, and Information (ESSLLI), August 2014.
- Summer 2012.** Probabilistic models in the study of language. Introductory course taught at the 24th European Summer School in Logic, Language, and Information (ESSLLI), August 2012.
- Summer 2011.** Invited lecturer, UCLA Institute for Pure & Applied Mathematics Graduate Summer School: *Probabilistic Models of Cognition: The Mathematics of Mind*, July 2011.
- Summer 2011.** Computational Psycholinguistics, taught (jointly with T. Florian Jaeger) at the 2011 Institute of the Linguistic Society of America, University of Colorado at

Boulder, July–August 2011.

**June 2010.** Computational Psycholinguistics. Tutorial given at the NAACL-HLT Conference, Los Angeles, CA, 1 June 2010.

**Summer 2009.** Computational Psycholinguistics. Advanced course taught at the 21st European Summer School in Logic, Language, and Information (ESSLLI), July 2009.

**December 2007.** Computational Psycholinguistics, graduate Blockseminar (intensive short course), University of Potsdam.

**Summer 2007.** Invited lecturer on Natural Language Modeling, UCLA Institute for Pure & Applied Mathematics Graduate Summer School: *Probabilistic Models of Cognition: The Mathematics of Mind*, July 2007.

**Summer 2007.** Computational Psycholinguistics, taught at the 2007 Institute of the Linguistic Society of America, Stanford University, July 2007.

**Summer 2006.** Probabilistic Methods in Computational Psycholinguistics. Advanced course taught at the 18th European Summer School in Logic, Language, and Information (ESSLLI), August 2006.

## PREDOCTORAL RESEARCH ASSISTANTSHIPS & EXPERIENCE

### **Computational Linguistics** **2002-2005**

Research Assistant, Natural Language Processing Group, Department of Computer Science, Stanford University. Supervisor: Christopher Manning.

### **Lexical Semantics** **Summer 2002**

Visitor, Framenet and Embodied Construction Grammar projects. International Computer Science Institute, University of California at Berkeley.

### **Evolutionary Anthropology** **1997–1999**

Research student, Department of Anthropology, Faculty of Biology, University of Tokyo. Supervisor: Kenichi Aoki. Continued at Stanford University, Department of Anthropological Sciences, under Arthur Wolf.

### **Minnesota Supercomputer Institute Summer Internship** **1995**

Department of Chemical Engineering, University of Minnesota. Supervisor: Robert Tranquillo.

## OTHER PROFESSIONAL EXPERIENCE

### **Consulting, Natural Language Processing** **2006–**

Consultant to corporations & university research groups on natural language processing, including segmentation, stemming, morphological analysis, part-of-speech tagging, and parsing, for English, Chinese, German, Japanese, and Arabic.

### **Linguistic Consultant, Inxight Software** **2000–2002**

Worked on lexicon management, segmentation, stemming, morphological analysis, part-of-speech tagging, and named entity extraction in Chinese, Japanese, and Russian. Extensive experience with finite-state and statistical methods for these tasks.

### **Translator** **1996–2004**

Experienced in Chinese→English and Japanese→English freelance translation, in arts, social science, and medical domains.

## ADVISING & MENTORSHIP

### Postdoctoral Mentees

Victoria Fossum, UCSD Linguistics	2011–2012
→Software engineer, Google	
Titus von der Malsburg, UCSD Psychology and Linguistics	2014–2016
→Visiting Professor, Psycholinguistics & Neurolinguistics, Potsdam Univ.	2016–
Eva Wittenberg, UCSD Center for Research in Language	2015–2016
→Assistant Professor, UCSD Linguistics	2016–

### Ph.D. Advisees

Klinton Bicknell, UCSD Linguistics	<b>Graduated 2011</b>
→Postdoctoral researcher, UCSD Psychology	2011–2013
→Postdoctoral researcher, Rochester Brain & Cognitive Sciences	2013–2014
→Assistant Professor, Northwestern Linguistics	2014–
Nathaniel Smith, UCSD Cognitive Science	<b>Graduated 2011</b>
→Postdoctoral researcher, University of Edinburgh Informatics	2012–2015
→Computational Fellow, Berkeley Institute for Data Science	2015–
Bożena Pająk, UCSD Linguistics (co-chair with Eric Baković)	<b>Graduated 2012</b>
→Postdoctoral fellow, Rochester Brain & Cognitive Sciences	2012–2014
→Researcher and Lecturer, Northwestern University Linguistics	2014–2015
→Research Scientist, Duolingo	2015–
Rebecca Colavin, UCSD Linguistics (co-chair with Sharon Rose)	<b>Graduated 2013</b>
Y. Albert Park, UCSD Computer Science & Engineering (CSE)	<b>Graduated 2013</b>
→Chief Research Engineer, LG Electronics	
Gabriel Doyle, UCSD Linguistics	<b>Graduated 2014</b>
→Postdoctoral researcher, Stanford Psychology	2014–2017
→Assistant Professor, San Diego State University	Linguistics & Asian/Middle Eastern Languages 2017–
Anubha Kothari, Stanford Linguistics (Thomas Wasow co-chair)	<b>Graduated 2010</b>
→Facebook	
Emily Morgan, UCSD Linguistics	<b>Graduated 2016</b>
→Postdoctoral researcher, Tufts Psychology	2016–2018
→Assistant Professor, Dept. of Linguistics, UC Davis	2018–
Richard Futrell, MIT Brain & Cognitive Sciences	<b>Graduated 2017</b>
→Postdoctoral Researcher, MIT Brain & Cognitive Sciences	2017–2018
→Assistant Professor, Dept. of Linguistics, UC Irvine	2018–
Till Poppels, UCSD Linguistics	<b>2014–present</b>
Meilin Zhan, UCSD Linguistics and MIT Brain & Cognitive Sciences	<b>2014–present</b>
Mika Braginsky, MIT Brain & Cognitive Sciences	<b>2017–present</b>
Matthias Hofer, MIT Brain & Cognitive Sciences	<b>2017–present</b>

### Ph.D. Committees

Jeremy K Boyd, UCSD Linguistics	<b>Graduated 2007</b>
Hannah Rohde, UCSD Linguistics	<b>Graduated 2008</b>
Laura Kertz, UCSD Linguistics	<b>Graduated 2010</b>
Harry Tily, Stanford Linguistics	<b>Graduated 2010</b>



Elizabeth Schotter, UCSD Psychology	<b>Graduated 2013</b>
Bernhard Angele, UCSD Psychology	<b>Graduated 2013</b>
Patrick Plummer, UCSD Psychology	<b>Graduated 2015</b>
Ross Metusalem, UCSD Cognitive Science	<b>Graduated 2015</b>
Kevin Smith, UCSD Psychology	<b>Graduated 2015</b>
Gwendolyn Gillingham, UCSD Linguistics	<b>2012–</b>
Wen-Hsuan Chan, UCSD Cognitive Science	<b>2013–</b>
Nick Gruberg, UCSD Psychology	<b>2013–</b>
Gary Patterson, UCSD Linguistics	<b>2014–</b>
<b>External Thesis Examinations</b>	
Luke Maurits, PhD, Psychology, University of Adelaide	<b>2011</b>
Cyrus Shaoul, PhD, Psychology, University of Alberta	<b>2012</b>
<b>Comprehensive Paper Committees (excluding Ph.D. advisees)</b>	
Kathryn Cooke, UCSD Linguistics	<b>2007</b>
Lucien Carroll, UCSD Linguistics	<b>2009</b>
Jamie Alexandre, UCSD Cognitive Science	<b>2009</b>
Dan Michel, UCSD Linguistics	<b>2009, 2010</b>
Chris Barkley, UCSD Linguistics	<b>2009</b>
Gwen Gillingham, UCSD Linguistics (co-chair)	<b>2010</b>
Carson Dance, UCSD Cognitive Science	<b>2011</b>
Gary Patterson, UCSD Linguistics	<b>2012</b>
Page Piccinini, UCSD Linguistics (chair)	<b>2013</b>
Scott Seyfarth, UCSD Linguistics (chair)	<b>2013</b>
Jasmeen Kanwal, UCSD Linguistics (co-chair)	<b>2013</b>
<b>Masters Degree Advisees</b>	
Azadeh Monirabbassi, UCSD Computer Science & Engineering (co-chair with Gary Cottrell)	<b>Graduated 2008</b>
Randy West, UCSD CSE (co-chair with Gary Cottrell)	<b>Graduated 2011</b>
→Microsoft	
Vineet Kumar, UCSD CSE (co-chair with Charles Elkan)	<b>Graduated 2012</b>
→PhD program, UMass Computer Science	
Russell Horton, UCSD Linguistics	<b>Graduated 2012</b>
→Reverb Technologies, Inc.	
<b>Masters Degree Committees</b>	
Matt Rodriguez, UCSD CSE	<b>Graduated 2009</b>
<b>Undergraduate Research Assistants (at UCSD)</b>	
Heidi Laidemitt, Linguistics	<b>2007</b>
Margo Schwartz, Linguistics	<b>2007–2008</b>
Joel Roman, Cognitive Science	<b>2008</b>
Kenneth Dowling III, Linguistics (Eleanor Roosevelt College honors project)	<b>2008–2009</b>
Natalie Katz, Linguistics	<b>2008–2010</b>
Henry Lu, Math & Economics	<b>2009–2010</b>
Miriam Ayad, Physiology & Neuroscience	<b>2009–2010</b>
Andrew Izu, Linguistics	<b>2009–2010</b>

Elena Churilov, Linguistics & Psychology	<b>2010</b>
→PhD program in Psychology, SUNY–Stony Brook	
Emma Hendricks, Linguistics	<b>2010</b>
→PhD program in Education, Vanderbilt	
Maria Jones (née Sokolov), Linguistics	<b>2010–2012</b>
→Post-Baccalaurate in Communication Sciences & Disorders, Chapman University	
→PhD program in Education, UC Irvine	
Erin Bennett, Ling & Math	<b>2010–2011</b>
→Baggett Post-baccalaureate Fellow with Naomi Feldman (Maryland Linguistics)	
→Lab manager for Noah D. Goodman (Stanford Psychology)	
→PhD Program in Psychology, Stanford University	
Megha Ram, International Studies (Eleanor Roosevelt College honors project)	<b>2010–2011</b>
Tiffany Chiou, Biochemistry/Chemistry (Eleanor Roosevelt College honors project)	<b>2010–</b>
Daphne Tan, Economics (Eleanor Roosevelt College honors project)	<b>2011</b>
K. Michael Brooks, Linguistics	<b>2012–2013</b>
→PhD Program in Communication Sciences & Disorders, Northwestern University	
William Presant, Spanish Literature	<b>2013</b>
Melodie Yen, Linguistics & Psychology	<b>2012–2014</b>
→PhD Program in Linguistics, University of Arizona	
Agatha Ventura, Linguistics	<b>2013–2014</b>
Wednesday Bushong, Linguistics & Cognitive Science	<b>2013–2015</b>
→PhD Program in Brain & Cognitive Sciences, University of Rochester	
Bonnie Chinh, Linguistics & Cognitive Science	<b>2013–2015</b>
Abhishek Goyal, Computer Engineering	<b>2014–2015</b>
Hannah Campbell, Cognitive Science	<b>2015</b>
Miranda Clemmons, Cognitive Science	<b>2015</b>
Jake Prasad, Computer Science	<b>2014–present</b>
Suhas Arehalli, Computer Science	<b>2015–present</b>

## ACADEMIC SERVICE

### Grant proposal reviewing

- NIH LCOM Panelist, 2017
- Ad-hoc reviewer, one National Science Foundation panel, 2017
- NIH LCOM Panelist, 2016
- Panelist, one National Science Foundation panel, 2016
- Ad-hoc reviewer, one National Science Foundation panel, 2016
- Ad-hoc reviewer, one National Science Foundation panel, 2015
- Ad-hoc reviewer, one National Science Foundation panel, 2014
- Member, NSF College of Reviewers, Perception/ Action/ Cognition, 2013–
- Panelist, one National Science Foundation panel, 2013
- Panelist, one National Science Foundation panel, 2012

Ad-hoc reviewer, two National Science Foundation panels, 2012  
Panelist, one National Science Foundation panel, 2011  
Ad-hoc reviewer, two National Science Foundation panels, 2010  
Panelist, one National Science Foundation panel, 2010  
Ad-hoc reviewer, one National Science Foundation panel, 2009  
Ad-hoc reviewer, one National Science Foundation panel, 2007  
Panelist, two National Science Foundation panels, 2007

### **Editorial Work for Journals**

Associate Editor, *Language*, 2017–present  
Consulting Editor, *Journal of Experimental Psychology: General*, 2017–present  
Founding Associate Editor, *Open Mind*, 2016–present  
Standing Review Committee Member, *Transactions of the Association for Computational Linguistics*, 2014–2015  
Associate Editor, *Cognitive Science*, 2013–2015  
Editorial Board, *Linguistic Issues in Language Technology*, 2007–present

### **Service to Scholarly Societies**

Member, Governing Board of the Cognitive Science Society, 2017–2022

### **Conference & Workshop Organization**

Conference Co-chair, Conference on Natural Language Learning (CoNLL) 2017, Vancouver, Canada  
Co-organizer, Cognitive Modeling and Computational Linguistics (CMCL) 2013, Sofia, Bulgaria (collocated with ACL)  
Co-organizer, Cognitive Modeling and Computational Linguistics (CMCL) 2012, Montreal (collocated with NAACL-HLT)  
Faculty co-supervisor, North American Association for Computational Linguistics (NAACL)  
Student Research Workshop 2012, Montreal

### **Conference Area Chairs**

ACL 2013, 2016, 2017 (Cognitive Modeling and Psycholinguistics)  
NIPS 2011  
ACL 2010 (Psycholinguistics)  
COLING 2010 (Cognitive Modeling)

### **Program Committees**

ACL 2018  
Cognitive Science Society, 2008, 2009, 2016, 2018  
Semantics and Linguistic Theory (SALT), 2017, 2018  
Annual Meeting of the European Chapter of the Association for Computational Linguistics (EACL), 2016  
Annual Conference of the Cognitive Science Society, 2016  
North American Summer School for Logic, Language, and Information (NASSLLI), 2014  
7th Workshop on Innovative Uses of NLP for Building Educational Applications, NAACL 2012  
DGfS 2012 Workshop on *Information Density and Linguistic Variation*  
Architectures and Mechanisms in Language Processing (AMLaP) Conference, 2011

ACL Workshop on Cognitive Modeling and Computational Linguistics, 2010, 2011  
CUNY Sentence Processing Conference, 2009, 2010  
Quantitative Investigations in Theoretical Linguistics (QITL), 2006, 2008  
EMNLP 2006  
ACL/COLING Workshop on Multi-word Expressions, 2006  
Conference on Natural Language Learning (CONLL), 2006, 2008  
International Conference on Computer Processing of Oriental Languages, 2006

### At-large reviewing

**2018:** CUNY Sentence Processing Conference

**2017:** Annual Meeting of the Linguistic Society of America (LSA), Cognitive Modeling and Computational Linguistics workshop (CMCL), *Cognitive Science*, *Journal of Memory and Language* (JML, ×2), *Journal of Semantics*, CUNY Sentence Processing Conference, *Journal of Experimental Psychology:General*

**2016:** CUNY Sentence Processing Conference, Semantics and Linguistic Theory (SALT), *Linguistic Typology*, *International Journal of Speech-Language Pathology* (IJSLP), Empirical Methods in Natural Language Processing (EMNLP), JML (×2), Architectures and Mechanisms in Language Processing conference (AMLaP), *Language and Speech*, *Journal of Experimental Psychology: Learning, Memory, and Cognition* (JEP:LMC), *Language*

**2015:** SALT, CUNY Sentence Processing Conference, Experimental Pragmatics Conference (XPRAG), *Cognition*, *Proceedings of the National Academy of Sciences (PNAS)*, IJSLP, JML

**2014:** ACL, *Cognition* (×2), JEP:LMC, PNAS, *Philosophical Psychology*, AMLaP

**2013:** CUNY Sentence Processing Conference, *Cognition* (×4), *Cognitive Science*, PLoS One, *Language and Cognitive Processes*, The 19th Amsterdam Colloquium, *Transactions of the Association for Computational Linguistics*, PNAS

**2012:** *Computational Linguistics*, *Cognition* (×2), *Cognitive Science*, ACL, CUNY Sentence Processing Conference, Cognitive Science Society Conference, Cambridge University Press, *Psychological Science*, *Topics in Cognitive Science (TopiCS)*, AMLaP, *Cognitive Psychology*

**2011:** *Language*, CUNY Sentence Processing Conference, West Coast Conference on Formal Linguistics (WCCFL), Cognitive Science Society, *English Language & Linguistics (ELL)*, *Journal of Experimental Psychology: General*, *Psychological Science*, International Joint Conferences on Artificial Intelligence (IJCAI), Experimental and Theoretical Advances in Prosody (ETAP), *Cognitive Linguistics*, *Cognition* (×2), EMNLP, AMLaP, Linguistic Society of America (LSA) Annual Meeting, Input & Syntactic Acquisition/ Psychocomputational Models of Language Acquisition workshop, MIT Press

**2010:** *Cognition* (×2), *Computational Linguistics*, *Dialogue & Discourse*, *Data Mining and Knowledge Discovery*, *Journal of Experimental Psychology: General*, *Journal of Memory & Language* (×2), *Psychological Science* (×2), *Psychonomic Bulletin & Review*, *Research on Language and Computation*, *Syntax*, Cognitive Science Society, NIPS, AMLaP

**2009:** *Attention, Perception, & Psychophysics*, *Cognition* (×3), *Cognitive Science* (×2), *Computational Linguistics*, *Cortex*, *Data Mining and Knowledge Discovery*, *Journal of Memory and Language* (×2), *Discourse Processes*, *Language & Cognitive Processes* (×2), *Natural Language Engineering*, *Syntax*, WCCFL, NAACL/HLT, NIPS, LSA Annual Meeting, Oxford

University Press, *Computational Linguistics in The Netherlands*

**2008:** *Cognition* (×3), *Cognitive Science*, *Computational Linguistics*, *Language & Cognitive Processes* (×3), *Journal of Logic, Language, and Information*, *Memory & Cognition*, *Perception & Psychophysics*, EMNLP, Conference on Neural Information Processing Systems (NIPS), CUNY Sentence Processing Conference, Chicago Linguistic Society

**2007:** *Cognition*, *Corpora*, *Language & Cognitive Processes*, EMNLP-CoNLL, CUNY Sentence Processing Conference, AMLaP, HLT/NAACL, Chicago Linguistic Society, WECOL

**2006:** *Cambridge Handbook on Computational Cognitive Modeling*, *Cognitive Science* (2 times), CUNY Sentence Processing Conference, EACL

**2005:** *Cognitive Science* (2 times), HLT/EMNLP, ACL, Springer Text, *Speech, and Language Technology* series

**2004:** COLING

### **Institute Service, MIT**

Faculty Committee on the Library System, 2018– (Chair, spring 2018–spring 2019)

Core organizing team, MIT Day of Action 2018

### **Departmental Service, MIT**

BCS Graduate Student Affairs Committee 2016–present

### **Departmental Service, UC San Diego**

Research/Travel Committee 2015–2016

Chair, Language Evolution and/or Development Search Committee 2014–2015

Admissions Committee 2014–2015

Phonetics Search Committee 2012–2013

Chair, Colloquium Committee 2010–2013

Academic Senate Representative, alternate 2010–2011

Academic Senate (alternate 2007–2008; main representative 2008–2009) 2007–2009

Curriculum committee 2007–2010

External Relations committee (chair) 2007–2008, 2009–2010

Colloquium committee 2006–2007

Library committee 2006–2007

Departmental space committee 2008–2009

### **Departmental Service, Stanford Linguistics**

Colloquium committee 2004–2005

Library and computer committees 2001–2003

### **R-LANG mailing list**

2007–present

Founder (with Marco Baroni) and host of R-LANG mailing list, a forum for discussion of statistical modeling and analysis of language data, in R.

### **Corpora Initiative**

2002–2004

Co-leader with Florian Jaeger of Stanford University Linguistics Department initiative on improving departmental corpora and corpus-related tool resources.

### **Symposium Organization**

1999

Student organizer for Symposium on Molecular Anthropology: *Unraveling the Secrets of Human Genetic Variation*, Department of Anthropological Sciences, Stanford University, May 21, 1999.

### **Other academic service (MIT-local)**

Core organizing team member, MIT April 18: Day of Engagement, Day of Action 2017  
 First-year graduate advisor, MIT Brain & Cognitive Sciences 2016–  
 Graduate Affairs Committee member, MIT Brain & Cognitive Sciences 2016–

**Other academic service (UCSD-local)**

Official representative on UCSD's Interdisciplinary Ph.D. Program in Cognitive Science  
 Executive Committee for UCSD's Linguistics Department 2009–2016  
 2008 Fulbright graduate fellowship interview committee, UCSD campus 2008  
 Faculty co-advisor, *Alchemy* journal of translation (UCSD Departments of Literature &  
 Linguistics) 2012–2016  
 Interviewer, UCSD Shuttle Operations 2012  
 Invited faculty advisor, annual UCSD campus workshop for Assistant Professors ap-  
 plying to the NSF CAREER program 2012

**Other academic service (external)**

Language & Cognition Area Expert, ESSLLI Student Session 2014  
 Participant, *Beyond the Ivory Tower: A Workshop for Scholars on Writing for the Public*,  
 Northeastern University, 2–4 June 2017

LANGUAGE PROFICIENCIES

English – native

Mandarin Chinese, Japanese, and Russian – fluent

Spanish – conversational fluency

German – advanced reading knowledge

French – advanced beginner

Vietnamese, Egyptian Arabic – beginner

Research experience with Arabic, Hindi, Marathi, and Polish

Experienced in Chinese→English and Japanese→English translation.