Robert Frank

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RESEARCH INTERESTS

Natural language syntax and grammatical theory; Mathematical and Computational linguistics; Language acquisition and processing.

EDUCATION

1990–1992	University of Pennsylvania, Department of Computer and Information Science, Ph.D., December 1992. Advisors: Aravind K. Joshi and Anthony Kroch.
1987–1990	University of Pennsylvania, Department of Computer and Information Science, M.S.E. with concentration in Computational Linguistics, May 1990. Advisor: Aravind K. Joshi.
1983–1987	Massachusetts Institute of Technology, Department of Brain and Cognitive Science, S.B., June 1987.

PROFESSIONAL EXPERIENCE

Permanent appointments

2008–	Professor, Department of Linguistics, Yale University. Secondary appointments in Department of Computer Science, Program in Cognitive Science, and Wu Tsai Institute..
	Courses taught: Cognitive Science of Language, Compositional Syntax, Computational Models in Cognitive Science, Computational Models of Syntax, Syntax II, Mathematics of Language, Computing Meanings, Language and Computation 1, Language and Computation 2, Neural Network Models of Linguistic Structure, Grammatical Architecture, Senior Seminar in Cognitive Science.
2011–2019	Chair, Department of Linguistics, Yale University.
2006–2008	Professor, Department of Cognitive Science and Member of the Center for Language and Speech Processing, Johns Hopkins University
2000–2005	Associate Professor, Department of Cognitive Science, Johns Hopkins University.
1996–2000	Assistant Professor, Department of Cognitive Science, Johns Hopkins University.
1992–1996	Assistant Professor, Departments of Linguistics and Computer and Information Science, University of Delaware.

Temporary appointments

2011	Visiting Professor, Brazilian Linguistic Association (ABRALIN) XXth Institute, Federal University of Paraná (UFPR), Curitiba, Brazil.
2009	Visiting Professor, University of Trieste, Italy.
2005	Visiting Professor, Linguistic Society of America Summer Institute, MIT and Harvard University.

2004	Visiting Professor, Ecole Doctorale Lémanique en Science du Langage, Département de linguistique générale, Université de Genève, Switzerland.
2003	Visiting Professor, Linguistic Society of America Summer Institute, Michigan State University.
2002	Visiting Professor, Vilem Mathesius Lecture Series 17, Charles University, Prague, Czech Republic.
2001	Visiting Professor, Dipartimento di linguistica, Università di Padova, Italy.
1999	Visiting Professor, Dipartimento di linguistica, Università di Padova, Italy.
1997	Visiting Professor, Linguistic Society of America Summer Institute, Cornell University.
1995	Short-Term Visitor, Institute for Research in Cognitive Science, University of Pennsylvania.
1995	Visiting Professor, Departamento de Linguistica, Instituto de Estudos da Linguagem, Universidade Estadual de Campinas, Brazil.
1994	Visiting Professor, Department of Linguistics, University of Maryland, College Park.
1985–1992	Research Associate, MIT Artificial Intelligence Lab, Cambridge, Massachusetts.
1987–1989	Consultant, Jet Propulsion Laboratory, Pasadena, California.

PUBLICATIONS

Books

2002	*Phrase Structure Composition and Syntactic Dependencies*. MIT Press, Cambridge, MA.
	Reviews: Caroline Heycock, 2006, *Language* 82(1); Arthur Stepanov, 2006, *Lingua* 116(12); Chung-Hye Han, 2006, *Journal of Linguistics* 42(1); Evangelia Vlachou, 2002, LINGUIST List 13.2750.

Refereed journal articles

to appear	Matthew Barros and Robert Frank. Attention and locality: On clause-boundedness and its exceptions in multiple sluicing. *Linguistic Inquiry*.
to appear	Dana Angluin, Robert Frank and Yiding Hao. Formal Language Recognition by Hard Attention Transformers: Perspectives from Circuit Complexity. *Transactions of the Association for Computational Linguistics*.
2021	Robert Frank and Tim Hunter. Variation in mild context-sensitivity: Derivational state and structural monotonicity. *Evolutionary Linguistic Theory* 3(2):182–215.
2021	David Chartash, Mona Sharifi, Beth Emerson, Robert Frank, Elizabeth M. Schoenfeld, Jason Tanner, Cynthia Brandt and R. Andrew Taylor. Documentation of Shared Decision Making in the Emergency Department. *Annals of Emergency Medicine* 78(5):637–649.
2020	R. Thomas McCoy, Robert Frank and Tal Linzen. Does Syntax Need to Grow on Trees? Sources of Hierarchical Inductive Bias in Sequence-to-Sequence Networks. *Transactions of the Association for Computational Linguistics* 8.
2014	Tim Hunter and Robert Frank. Eliminating Rightward Movement: Extraposition as Flexible Linearization of Adjuncts. *Linguistic Inquiry* 45(2):227–267.
2013	Robert Frank, Donald Mathis and William Badecker. The Acquisition of Anaphora by Simple Recurrent Networks. *Language Acquisition* 20(3):181–227.
2012	Christo Kirov and Robert Frank Processing of Nested and Cross-Serial Dependencies: an Automaton Perspective on SRN Behaviour. *Connection Science* 24(1):1–24.
2007	Notes on Phase Extension. *Theoretical Linguistics* 33(1):49–63.

2006   Phase Theory and Tree Adjoining Grammar. *Lingua* 116(2):145–202.

2004   Restricting Grammatical Complexity. *Cognitive Science* 28(5):669–697.

2004   Results in Linguistics: Perspectives from Computer Science. *Lingue e Linguaggio* 1:29–48.

2001   Robert Frank and K. Vijay-Shanker. Primitive C-Command. *Syntax* 4(3):164–204.

2000   Robert Frank, Seth Kulick and K. Vijay-Shanker. Monotonic C-Command: A New Perspective on Tree Adjoining Grammar. *Grammars* 3(2/3):151–173.

1998   Structural Complexity and the Time Course of Grammatical Development. *Cognition* 66(3):249–301.

1998   Robert Frank and Giorgio Satta. Optimality Theory and the Generative Complexity of Constraint Violability. *Computational Linguistics* 24(2):307–315.

1996   Robert Frank, Young-Suk Lee and Owen Rambow. Scrambling, Reconstruction and Subject Binding. *Rivista di Grammatica Generativa* 21:67–106.

1996   Robert Frank and Shyam Kapur. On the Use of Triggers in Parameter Setting. *Linguistic Inquiry* 27(4):623–660.

1995   Robert Frank and Anthony Kroch. Generalized Transformations and the Theory of Grammar. *Studia Linguistica* 49(2):103–151.

1994   Robert Frank and Anthony Kroch. Nominal Structures and Structural Recursion. *Computational Intelligence* 10(4):453–470.

Book chapters

2013   Tree Adjoining Grammar. In *The Cambridge Handbook of Generative Syntax*, Marcel den Dikken (editor), pp.226–261, Cambridge University Press.

2011   Robert Frank and Giorgio Satta. La matematica del linguaggio. In *La matematica, vol. 3: Suoni, forme, parole*, Claudio Bartocci and Piergiorgio Odifreddi (editors), pp. 651–702, Einaudi.

2011   X-bar Theory. In *The Cambridge Encyclopedia of the Language Sciences*, Patrick Colm Hogan (editor), pp. 939–940, Cambridge University Press.

2011   Phrase Structure. In *The Cambridge Encyclopedia of the Language Sciences*, Patrick Colm Hogan (editor), pp. 621–622, Cambridge University Press.

2010   Lexicalized Syntax and Phonological Merge. In *Supertagging: Using Complex Lexical Descriptions in Natural Language Processing*, Srinivas Bangalore and Aravind K. Joshi (editors), pp. 373–405 MIT Press.

2002   Robert Frank, Paul Hagstrom and K. Vijay-Shanker. Roots, Constituents and C-Command. In *Theoretical Approaches to Universals*, Artemis Alexiadou (editor), pp. 109–137. John Benjamins.

2000   From Regular to Context-Free to Mildly Context-Sensitive Tree Rewriting Systems: The Path of Child Language Acquisition. In *Tree Adjoining Grammars: Formalisms, Linguistic Analysis and Processing*, Anne Abeillé and Owen Rambow (editors), pp. 101–120. CSLI Publications.

2000   Robert Frank and K. Vijay-Shanker. Lowering Across Languages. In *Cross-linguistic Perspectives on Language Processing*, Marica De Vincenzi and Vincenzo Lombardo (editors), pp. 63–87. Kluwer.

1998   Structural Analysis. In *A Companion to Cognitive Science*, William Bechtel and George Graham (editors), pp. 450–462. Basil Blackwell.

Conference proceedings

to appear   Jackson Petty, Michael Wilson and Robert Frank. Do Language Models Learn Position-Role Mappings?. In *Proceedings of the 46th Boston University Conference on Language Development (BUCLD)*.

2022   Aaron Mueller, Robert Frank, Tal Linzen, Luheng Wang, Sebastian Schuster. Coloring the Blank Slate: Pre-training Imparts a Hierarchical Inductive Bias to Sequence-to-sequence Models. In *Findings of ACL*.

2021   Karl Mulligan, Robert Frank and Tal Linzen. Structure Here, Bias There: Hierarchical Generalization by Jointly Learning Syntactic Transformations. In *Proceedings of the Society for Computation in Linguistics*.

2021   Tim Hunter and Robert Frank. Comparing methods of tree-construction across mildly context-sensitive formalisms. In *Proceedings of the Society for Computation in Linguistics*.

2020   Robert Frank and Jackson Petty. Sequence-to-Sequence Networks Learn the Meaning of Reflexive Anaphora. In *Proceedings of the Third Workshop on Computational Models of Reference, Anaphora and Coreference (CRAC 2020)*.

2020   Yiding Hao, Simon Mendelsohn, Rachel Sterneck, Randi Martinez, and Robert Frank. Probabilistic Predictions of People Perusing: Evaluating Metrics of Language Model Performance for Psycholinguistic Modeling. In *Proceedings of the Cognitive Modeling and Computational Linguistics (CMCL) Workshop (EMNLP)*.

2020   Aarohi Srivastava, Robert Frank, Sarah Widder and David Chartash. The Role of Linguistic Features in Domain Adaptation: TAG Parsing of Questions. In *Proceedings of the Society for Computation in Linguistics*, New Orleans.

2019   William Merrill, Lenny Khazan, Noah Amsel, Yiding Hao, Simon Mendelsohn and Robert Frank. Finding Syntactic Representations in Neural Stacks. In *Proceedings of the 2nd BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP (ACL)*, Firenze.

2019   Yongjie Lin, Yi Chern Tan and Robert Frank. Open Sesame: Getting Inside BERT's Linguistic Knowledge. In *Proceedings of the 2nd BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP (ACL)*, Firenze.

2019   William Merrill, Gigi Felice Stark and Robert Frank. Detecting Syntactic Change Using a Neural Part-of-Speech Tagger. In *Proceedings of the 1st International Workshop on Computational Approaches to Historical Language Change (ACL)*, Firenze.

2019   Jungo Kasai, Daniel Friedman, Robert Frank, Dragomir Radev and Owen Rambow. Syntax-aware Neural Semantic Role Labeling with Supertags. In *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)*, Minneapolis.

2019   Jungo Kasai and Robert Frank. Jabberwocky Parsing: Dependency Parsing with Lexical Noise. In *Proceedings of the Society for Computation in Linguistics*, New York.

2018   Yiding Hao, William Merrill, Dana Angluin, Robert Frank, Noah Amsel, Andrew Benz and Simon Mendelsohn. Context-Free Transductions with Neural Stacks. In *Proceedings of the 2018 EMNLP Workshop BlackboxNLP: Analyzing and Interpreting Neural Networks for NLP*, Brussels.

2018   R. Thomas McCoy, Robert Frank and Tal Linzen. Revisiting the poverty of the stimulus: hierarchical generalization without a hierarchical bias in recurrent neural networks. In *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*, Madison, WI.

2018   Jungo Kasai, Robert Frank, Pauli Xu, William Merrill and Owen Rambow. End-to-end Graph-based TAG Parsing with Neural Networks. In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, New Orleans.

2018   R. Thomas McCoy and Robert Frank. Phonologically Informed Edit Distance Algorithms for Word Alignment with Low-Resource Languages. In *Proceedings of the Society for Computation in Linguistics*, Volume 1, Article 12.

2017   Jungo Kasai, Robert Frank, R. Thomas McCoy, Owen Rambow and Alexis Nasr. TAG Parsing with Neural Networks and Vector Representations of Supertags. In *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Copenhagen.

2017   Dan Friedman, Jungo Kasai, R. Thomas McCoy, Robert Frank, Forrest Davis and Owen Rambow. Linguistically Rich Representations of Supertags for TAG Parsing. In *Proceedings of the 13th International Workshop on Tree Adjoining Grammars and Related Frameworks*, Umeå University.

2017   Pauli Xu, Robert Frank, Jungo Kasai and Owen Rambow. TAG Parser Evaluation using Textual Entailments. In *Proceedings of the 13th International Workshop on Tree Adjoining Grammars and Related Frameworks*, Umeå University.

2016   Dennis Ryan Storoshenko and Robert Frank. Parasitic Gaps and the Heterogeneity of Dependency Formation in STAG. In *Proceedings of the 12th International Workshop on Tree Adjoining Grammars and Related Frameworks*, Heinrich Heine University.

2012   Robert Frank and Dennis Ryan Storoshenko. The Shape of Elementary Trees and Scope Possibilities in STAG. In *Proceedings of the 11th International Workshop on Tree Adjoining Grammars and Related Formalisms*, Université Paris 7.

2012   Dennis Ryan Storoshenko and Robert Frank. Deriving Syntax-Semantics Mappings: Node Linking, Type Shifting and Scope Ambiguity. In *Proceedings of the 11th International Workshop on Tree Adjoining Grammars and Related Formalisms*, Université Paris 7.

2010   Michael Freedman and Robert Frank. Restricting Inverse Scope in STAG. In *Proceedings of the 10th International Workshop on Tree Adjoining Grammars and Related Formalisms*, Yale University.

2009   Erin Fitzgerald, Frederick Jelinek, and Robert Frank. What lies beneath: Semantic and syntactic analysis of manually reconstructed spontaneous speech. In *Proceedings of the 47th Annual Meeting of the Association for Computational Linguistics*, Singapore.

2008   Esteban Buz and Robert Frank. Evaluating Systematicity in Neural Networks through Transformation Combination. In *Proceedings of the 2008 Annual Meeting of the Cognitive Science Society*, Washington, DC.

2008   Reflexives and TAG Semantics. In *Proceedings of the 9th International Workshop on Tree Adjoining Grammars and Related Formalisms*, University of Tübingen, Germany.

2007   Adam Wayment, Luigi Burzio, Donald Mathis, and Robert Frank. Harmony versus distance in phonetic enhancement. In *Proceedings of the 27th Annual Meeting of the North East Linguistic Society*, vol. 2, E. Elfner and M. Walkow (editors), pp. 253⊠-266. GLSA, University of Massachusetts, Amherst.

2007   Robert Frank and Donald Mathis. Transformational Networks. In *Proceedings of the 3rd Workshop on Psychocomputational Models of Human Language Acquisition*, Cognitive Science Society, Nashville.

2004   Virginia Savova and Robert Frank. Tree Adjoining Grammars for Optimality Theoretic Syntax. In *Proceedings of the 7th International Workshop on Tree Adjoining Grammars and Related Frameworks*, Simon Fraser University, Vancouver, Canada.

2000   Robert Frank and Fero Kuminiak. Primitive Asymmetric C-Command Derives $\overline{\text{X}}$-Theory. In *Proceedings of the 30th Annual Meeting of the North East Linguistics Society*, volume 1, M. Hirotani, A. Coetzee, N. Hall, J-Y. Kim (editors), pp. 203–217. GLSA, University of Massachusetts, Amherst.

2000   Marina Todorova, Kathleen Straub, William Badecker and Robert Frank. Aspectual Coercion and the Online Computation of Sentential Aspect. In *Proceedings of the 22nd Annual Meeting of the Cognitive Science Society*, University of Pennsylvania.

2000   TAG and Economy. *Proceedings of the 5th International Workshop on Tree Adjoining Grammars and Related Formalisms*, pp. 85–92, Université Paris 7.

1999   Robert Frank, Seth Kulick and K. Vijay-Shanker. C-Command and Extraction in Tree Adjoining Grammar. In *Proceedings of the Sixth Meeting on the Mathematics of Language*, University of Central Florida.

1998   Robert Frank and K. Vijay-Shanker. TAG Derivation as Monotonic C-Command. *Proceedings of the 4th International Workshop on Tree Adjoining Grammars and Related Formalisms*, pp. 46–49, University of Pennsylvania.

1997   Robert Frank, Marcus Hiller and Giorgio Satta. Optimality Theory and Generative Complexity. In *Proceedings of the Fifth Meeting on the Mathematics of Language*, Tilman Becker and Hans-Ulrich Krieger (editors), pp. 30–38. Deutsches Forschungszentrum für Künstliche Intelligenz, Saarbrücken, Germany.

1996   Robert Frank, K. Vijay-Shanker and John Chen. Dominance, Precedence and C-Command in Description-based Parsing. In *Proceedings of XII Congreso de Lenguajes Naturales y Lenguajes Formales*, Carlos Martin-Vide (editor), pp. 61–74. PPU, Barcelona, Spain.

1993   Grammatical Complexity and the Time Course of Language Acquisition. In *Proceedings of the 15th Annual Conference of the Cognitive Science Society*, pp. 37–48. Lawrence Erlbaum Associates.

1992   Robert Frank, Young-Suk Lee and Owen Rambow. Scrambling as Non-Operator Movement and the Special Status of Subjects. In *Proceedings of the 3rd Leiden Conference for Junior Linguists*, Sjef Barbiers, Marcel den Dikken and Claartje Levelt (editors), pp. 135–154. University of Leiden.

1992   Formal Grammar and the Acquisition of Complex Sentences. In *Proceedings of the 8th Eastern States Conference on Linguistics*, Germán Westphal, Benjamin Ao and Hee-Rahk Chae (editors), pp. 81–92. Ohio State University.

1991   Parasitic Gaps and Locality Conditions. In *Proceedings of the 27th Regional Meeting of the Chicago Linguistic Society*, Lise Dobrin, Lynn Nichols and Rosa Rodríguez (editors), pp. 167–181. University of Chicago.

1990   Licensing and Tree Adjoining Grammar in Government-Binding Parsing. In *Proceedings of 28th Annual Meeting of the Association for Computational Linguistics*, pp. 111–118. University of Pittsburgh.

Others (non-refereed)

2013   Jonathan Bobaljik, Robert Frank and Susi Wurmbrand. Guest Editors of Special Issue of *Journal of Comparative Germanic Linguistics* 16(2-3), with selected papers from the 27th Comparative Germanic Syntax Workshop.

2010   Srinivas Bangalore, Robert Frank and Maribel Romero. Editors of *Proceedings of the 10th International Workshop on Tree Adjoining Grammar and Related Formalisms*, Yale University.

2002   Editor of *Proceedings of the Sixth International Workshop on Tree Adjoining Grammar and Related Frameworks*, Università di Venezia, Italy.

2000   Seth Kulick, Robert Frank and K. Vijay-Shanker. Defective Complements in Tree Adjoining Grammar. In *Penn Working Papers in Linguistics* 6(3), Alexander Williams and Elsi Kaiser (editors), pp. 35–73. University of Pennsylvania, Department of Linguistics.

1995   Coordinating Parsing and Grammar. *GLOT International* 1(4):4–8.

REFEREED CONFERENCE PRESENTATIONS

February 2022. Michael Wilson, Jackson Petty and Robert Frank. *Probing language models' knowledge of position-role mappings with novel word learning*, Jabberwocky Words in Linguistics workshop, on-line.

January 2022. Robert Frank and Hadas Kotek. *Top-down derivations: Flipping syntax on its head*, Linguistics Society of America Annual Meeting, on-line.

November 2021. Jackson Petty and Robert Frank. *Learning Structure-Role Alignments without Linguistic Bias: A Computational Exploration*, Boston University Conference on Language Development (BUCLD) 46.

February 2021. Karl Mulligan, Robert Frank and Tal Linzen. *Structure Here, Bias There: Hierarchical Generalization by Jointly Learning Syntactic Transformations*, Society for Computation in Linguistics, on-line.

February 2021. Tim Hunter and Robert Frank. *Comparing methods of tree-construction across mildly context-sensitive formalisms*, Society for Computation in Linguistics, on-line.

December 2020. Robert Frank and Jackson Petty. *Sequence-to-Sequence Networks Learn the Meaning of Reflexive Anaphora*, Third Workshop on Computational Models of Reference, Anaphora and Coreference (CRAC 2020).

November 2020. Yiding Hao, Simon Mendelsohn, Rachel Sterneck, Randi Martinez, and Robert Frank. *Probabilistic Predictions of People Perusing: Evaluating Metrics of Language Model Performance for Psycholinguistic Modeling*, Cognitive Modeling and Computational Linguistics (CMCL) Workshop (EMNLP).

November 2020. Tim Hunter and Robert Frank. *Comparing Methods of Tree-Construction across Mildly Context-Sensitive Formalisms*, 51st Meeting of the North East Linguistics Society (NELS), Université du Québec à Montréal (UQAM).

January 2020. Aarohi Srivastava, Robert Frank, Sarah Widder and David Chartash. *The Role of Linguistic Features in Domain Adaptation:TAG Parsing of Questions*, Society for Computation in Linguistics, New Orleans.

August 2019. William Merrill, Lenny Khazan, Noah Amsel, Yiding Hao, Simon Mendelsohn and Robert Frank. *Finding Syntactic Representations in Neural Stacks*, 2nd BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP (ACL), Firenze.

August 2019. Yongjie Lin, Yi Chern Tan and Robert Frank. *Open Sesame: Getting Inside BERT's Linguistic Knowledge*, 2nd BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP (ACL), Firenze.

August 2019. William Merrill, Gigi Felice Stark and Robert Frank. *Detecting Syntactic Change Using a Neural Part-of-Speech Tagger*, 1st International Workshop on Computational Approaches to Historical Language Change (ACL), Firenze.

June 2019. Jungo Kasai, Daniel Friedman, Robert Frank, Dragomir Radev and Owen Rambow. *Syntax-aware Neural Semantic Role Labeling with Supertags*, Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT), Minneapolis.

January 2019. Jungo Kasai and Robert Frank. *Jabberwocky Parsing: Dependency Parsing with Lexical Noise.*, Society for Computation in Linguistics, New York.

October 2018. Yiding Hao, William Merrill, Dana Angluin, Robert Frank, Noah Amsel, Andrew Benz and Simon Mendelsohn. *Context-Free Transductions with Neural Stacks*. In EMNLP Workshop BlackboxNLP: Analyzing and Interpreting Neural Networks for NLP, Brussels.

July 2018. R. Thomas McCoy, Tal Linzen and Robert Frank. *Investigating hierarchical bias in the acquisition of English question formation with recurrent neural networks*, L2HM: Language Learning in Humans and Machines, Paris.

July 2018. R. Thomas McCoy, Robert Frank and Tal Linzen. *Revisiting the poverty of the stimulus: hierarchical generalization without a hierarchical bias in recurrent neural networks*, 40th Annual Meeting of the Cognitive Science Society, Madison, WI.

June 2018. Jungo Kasai, Robert Frank, Pauli Xu, William Merrill and Owen Rambow. *End-to-end Graph-based TAG Parsing with Neural Networks*, 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, New Orleans.

January 2018. R. Thomas McCoy and Robert Frank *Phonologically Informed Edit Distance Algorithms for Word Alignment with Low-Resource Languages*, 1st Annual Meeting of the Society for Computation in Linguistics (SCiL), Salt Lake City.

June 2017. Jungo Kasai, Robert Frank, R. Thomas McCoy, Owen Rambow and Alexis Nasr. *TAG Parsing with Neural Networks and Vector Representations of Supertags*, 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP), Copenhagen.

June 2017. Dan Friedman, Jungo Kasai, R. Thomas McCoy, Robert Frank, Forrest Davis and Owen Rambow. *Linguistically Rich Representations of Supertags for TAG Parsing*, 13th International Workshop on Tree Adjoining Grammars and Related Frameworks, Umeå University, Sweden.

June 2017. Pauli Xu, Robert Frank, Jungo Kasai and Owen Rambow. *TAG Parser Evaluation using Textual Entailments*, 13th International Workshop on Tree Adjoining Grammars and Related Frameworks, Umeå University, Sweden.

March 2017. Matthew Barrow and Robert Frank. *A Constraint on Long Distance Multiple Sluicing*, 40th GLOW colloquium, Leiden University, The Netherlands.

January 2017. Matthew Barros and Robert Frank. *Shifty Subjects and Clause-Mate Restrictions*, 91st Annual Meeting of the Linguistic Society of America, Austin, Texas.

July 2016. Dennis Ryan Storoshenko and Robert Frank. *Parasitic Gaps and the Heterogeneity of Dependency Formation in STAG*, 12th International Workshop on Tree Adjoining Grammars and Related Frameworks, Heinrich Heine University, Düsseldorf, Germany.

March 2016. Faruk Akkuş and Robert Frank. *Imposters: A New Piece of Evidence for the Local vs. Non-local Persons Contrast*, 40th Annual Penn Linguistics Conference, University of Pennsylvania.

March 2016. Robert Frank and Rebecca Marvin. *Reassessing the Poverty of the Stimulus in that-trace Effects*, 29th Annual CUNY Conference on Human Sentence Processing, Gainesville, Florida.

January 2015. Robert Frank and Dennis Ryan Storoshenko. *Experiencing Scope: Inverted Expectations of QR in Raising*, Annual Meeting of the Linguistic Society of America, Portland, Oregon.

May 2014. Dennis Ryan Storoshenko and Robert Frank. *Which Questions Do You Like the Movements In? A Semantic Constraint on Extraction*, Annual Conference of the Canadian Linguistic Association, Brock University, St. Catharines, Ontario.

September 2012. Dennis Ryan Storoshenko and Robert Frank. *Deriving syntax-semantics mappings: node linking, type shifting and scope ambiguity*, 11th International Workshop on Tree Adjoining Grammars and Related Frameworks, Université de Paris Diderot.

September 2012. Robert Frank and Dennis Storoshenko. *The Shape of Elementary Trees and Scope Possibilities in STAG* , 11th International Workshop on Tree Adjoining Grammars and Related Frameworks, Université de Paris Diderot.

April 2012. Tim Hunter and Robert Frank. *Eliminating rightward movement: extraposition as flexible linearization of adjuncts*, 30th West Coast Conference on Formal Linguistics (WCCFL), University of California, Santa Cruz.

March 2012. Tim Hunter and Robert Frank. *Eliminating rightward movement: extraposition as flexible linearization of adjuncts*, Workshop on "Empty Categories: are there any?" at the 35th GLOW Colloquium, University of Potsdam, Germany.

June 2010. Michael Freedman and Robert Frank. *Restricting Inverse Scope in STAG*, 10th International Workshop on Tree Adjoining Grammars and Related Frameworks, Yale University.

September 2008. William Badecker and Robert Frank. *SRNs and the Learning of Grammatical Agreement: The Effect of Target-Source Order and Class Overlap*, 14th Annual Conference on Architectures and Mechanisms for Language Processing (AMLaP), Cambridge University.

July 2008. Esteban Buz and Robert Frank *Evaluating Systematicity in Neural Networks through Transformation Combination*, Conference of the Cognitive Science Society, Washington, DC

June 2008. *Reflexives and TAG Semantics*, 9th International Workshop on Tree Adjoining Grammars and Related Frameworks, University of Tübingen, Germany.

April 2007. Adam Wayment, Luigi Burzio, Donald Mathis and Robert Frank. *Harmony clustering for phonetic enhancement and inventory formation*, Workshop on Segment Inventories at the 30th GLOW Colloquium, CASTL, University of Tromsø.

October 2006. Adam Wayment, Luigi Burzio, Donald Mathis, and Robert Frank. *Harmony versus Distance in Phonetic Enhancement*, 37th Annual Meeting of the North East Linguistic Society, University of Illinois, Urbana-Champaign.

August 2006. Robert Frank, Donald Mathis, Ebonye Gussine, John Stowe, and Manny Vindiola. *Question Formation, Neural Nets and the Poverty of the Stimulus*, 12th Annual Conference on Architectures and Mechanisms of Language Processing, University of Nijmegen, The Netherlands.

January 2006. Joan Chen-Main and Robert Frank. *Generation of Syntactic Graphs*, Linguistics Society of America 80th Annual Meeting, Albuquerque, New Mexico.

January 2006. Adam Wayment, Luigi Burzio, Donald Mathis, and Robert Frank. *Neural Nets Meet Phonetic Enhancement*, Linguistics Society of America 80th Annual Meeting, Albuquerque, New Mexico.

June 2005. *Phonological Merge*, Mediterranean Syntax Meeting, University of the Aegean, Rhodes, Greece.

May 2004. Virginia Savova and Robert Frank. *Tree Adjoining Grammars for Optimality Theoretic Syntax*, 7th International Workshop on Tree Adjoining Grammars and Related Frameworks, Simon Fraser University, Vancouver, Canada.

March 2004. Donald Mathis, Robert Frank and William Badecker. *Constraints on Variables in Neural Net Syntax*, 17th Annual CUNY Sentence Processing Conference, University of Maryland, College Park.

January 2004. *Diagnosing Unbounded Dependencies: Successive Cyclic Movement vs. Adjoining*, Linguistics Society of America 78th Annual Meeting, Boston, Massachusetts.

January 2004. Joan Chen-Main and Robert Frank. *Integrating Faithfulness in Finite State Optimality Theory*, Linguistics Society of America 78th Annual Meeting, Boston, Massachusetts.

November 2003. Robert Frank, Donald Mathis and William Badecker. *Do Simple Recurrent Networks Learn Syntactic Structure? Experiments with anaphora*, Psychonomics Society 44th Annual Meeting, Vancouver, Canada.

September 2003. Joan Chen-Main and Robert Frank. *Implementing Faithfulness Constraints in a Finite State Model of Optimality Theory*, 14th Irish Artificial Intelligence and Cognitive Science (AICS 2003) conference, Trinity College, Dublin, Ireland.

January 2003. Robert Frank and Seth Kulick. *Locality, Phases and Tree Adjoining Grammar*, Workshop on the EPP and Phases, MIT, Cambridge, Massachusetts.

March 2001. Robert Frank and William Badecker. *Modeling Syntactic Encoding with Incremental Tree-Adjoining Grammar (iTAG): How grammar constrains production and how production constrains grammar*, 14th Annual CUNY Conference on Human Sentence Processing, University of Pennsylvania, Philadelphia.

August 2000. Marina Todorova, Kathleen Straub, William Badecker and Robert Frank. *Aspectual Coercion and the Online Computation of Sentential Aspect*, 22nd Annual Meeting of the Cognitive Science Society, University of Pennsylvania, Philadelphia.

August 2000. Marina Todorova, Kathleen Straub, William Badecker and Robert Frank. *Processing Correlates of Aspectual Interpretation*, ESSLLI 2000 Workshop on Paths and Telicity in Event Structure, Birmingham, Great Britain.

May 2000. *Economy in TAG*. 5th International Workshop on Tree Adjoining Grammar and Related Formalisms, Université Paris 7, France.

November 1999. William Badecker and Robert Frank. *Modeling Sentence Planning in Lexicalized Tree-Adjoining Grammar*. USC Speech Production Conference.

October 1999. Robert Frank and Fero Kuminiak. *Primitive Asymmetric C-Command Derives $\overline{X}$-Theory*. 30th Annual Meeting of the North East Linguistics Society, Rutgers University.

July 1999. Robert Frank, Seth Kulick and K. Vijay-Shanker. *C-Command and Extraction in Tree Adjoining Grammar*. 6th Meeting on the Mathematics of Language, University of Central Florida.

March 1999. Robert Frank, Paul Hagstrom and K. Vijay-Shanker. *Roots, Constituents and C-Command*. 22nd GLOW Colloquium, Zentrum für Allgemeine Sprachwissenschaft (ZAS), Berlin, Germany.

August 1998. Robert Frank and K. Vijay-Shanker. *TAG Derivation as Monotonic C-Command*. 4th International Workshop on Tree Adjoining Grammars and Related Formalisms, University of Pennsylvania.

August 1997. Robert Frank, Markus Hiller and Giorgio Satta. *Optimality Theory and Generative Complexity*. 5th Meeting on the Mathematics of Language, Schloß Dagstuhl, Saarbrücken, Germany.

September 1996. Robert Frank and K. Vijay-Shanker. *C-Command as a Parsing Primitive*. Workshop on Architectures and Mechanisms for Language Processing, Università di Torino, Italy.

June 1995. Robert Frank and K. Vijay-Shanker. *C-Command and Grammatical Primitives*. 18th GLOW Colloquium, Universitet i Tromsø, Norway.

September 1994. *From Regular to Context-Free to Mildly Context-Sensitive Tree Rewriting Systems: The Path of Child Language Acquisition*. 3rd International Workshop on Tree Adjoining Grammar and Related Formalisms, Université Paris 7, France.

April 1993. Robert Frank and Anthony Kroch. *Generalized Transformations in Successive Cyclic and Long Dependencies*. 16th GLOW Colloquium, Universitet i Lund, Sweden.

October 1992. Robert Frank and Shyam Kapur. *On the Use of Triggers in Parameter Setting*. 17th Boston University Conference on Language Development.

June 1992. Robert Frank and Anthony Kroch. *Nominal Structures and Structural Recursion*. 2nd International Workshop on Tree Adjoining Grammar and Related Formalisms, Institute for Research in Cognitive Science, University of Pennsylvania.

December 1991. Robert Frank, Young-Suk Lee and Owen Rambow. *Scrambling as Non-Operator Movement and the Special Status of Subjects*. 3rd Leiden Conference for Junior Linguists. University of Leiden, Netherlands.

October 1991. *Formal Grammar and the Acquisition of Complex Sentences*. 8th Eastern States Conference on Linguistics. University of Maryland, Baltimore Campus.

April 1991. *Parasitic Gaps and Locality Conditions*. 27th Regional Meeting of the Chicago Linguistic Society. University of Chicago.

June 1990. *GB Parsing with Tree Adjoining Grammar and Linguistic Metatheory*. Workshop on GB Parsing. Université de Genève, Switzerland.

June 1990. *Licensing and Tree Adjoining Grammar in Government-Binding Parsing*. 28th Annual Meeting of the Association for Computational Linguistics. University of Pittsburgh.

INVITED TALKS

2022	Department of Linguistics, Northwestern University, April.
	Department of Linguistics, Stony Brook University, April.
	Department of Linguistics, UCLA, March.
2021	International Conference on Grammatical Inference, August.
	Department of Computational Linguistics, Heinrich-Heine-Universität Düsseldorf, Germany, July.

2019	Center for Neurolinguistics and Theoretical Syntax, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy, December.
	Department of Linguistics, University of Massachusetts, Amherst, October.
	Workshop on Deep Learning and Formal Languages: Building Bridges, Annual Meeting of the Association for Computational Linguistics (ACL), Firenze, August.
2018	Joint CSE/IST Colloquium in Natural Language Processing, Penn State University, December.
	Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, November.
	Workshop on Perceptrons and Syntactic Structures at Sixty, SCiL, January (with R. Thomas McCoy and Tal Linzen).
2017	Institut für Linguistik, Universität Leipzig, Germany, October.
	Department of Linguistics, Stony Brook University, May.
	Morphology and Syntax Workshop, Department of Linguistics, University of Chicago, May (with Matthew Barros).
	Workshop on Multiple Questions about Sluicing, Yale University, April (with Matthew Barros).
	Workshop on Order and Direction of Grammatical Operations, 43rd Incontro di Grammatica Generativa (IGG43), IUSS, Pavia, Italy, February.
2016	Syntax Brown Bag, Department of Linguistics, New York University, December.
2014	Haskins Laboratories, November.
	Department of Linguistics, University of Connecticut, October.
2013	Can There Be a Hilbert's List of Syntax? Center for Neurolinguistics and Theoretical Syntax, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy, November.
2012	Center for Neurolinguistics and Theoretical Syntax, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy, December.
	Cognitive Science Colloquium, University of Maryland, November.
	Symposium to Honor the Work of Aravind Joshi, Department of Computer and Information Science, University of Pennsylvania. October.
	43rd Annual Meeting of the North East Linguistic Society, City University of New York, October.
	Workshop on Input and Syntactic Acquisition, Linguistics Society of America, January.
2011	Psycholinguistics Supper, City University of New York Graduate Center, October.
	Workshop on Language, Cognition and Computation, University of Chicago, May.
	Department of Linguistics, University of Chicago, May.
	Workshop on Multidominance, University of Massachusetts, Amherst, April.
	7th International Conference of the Brazilian Linguistic Association (ABRALIN), Federal University of Paraná (UFPR), Curitiba, Brazil, February.
2010	Cornell Workshop on Grammar Induction, Cornell University, May.

2009	Department of Linguistics, University of Massachusetts, Amherst, December.
	Haskins Laboratories, November.
	Facoltà di Scienze Cognitive, Universita degli Studi di Trento, Rovereto, June.
	Dipartimento di Linguistica, Università di Padova, Italy, May.
	Facoltà di Psicologia, Università degli Studi di Milano, Bicocca, May.
	Institute for Research in Cognitive Science, University of Pennsylania, April.
2008	9th International Workshop on Tree Adjoining Grammars and Related Frameworks, University of Tübingen, Germany, June.
	Maryland Mayfest on Island Perspectives, University of Maryland, College Park, May.
2007	Department of Linguistics, Yale University, September.
	Workshop on Psychocomputational Models of Human Language Acquisition, 29th Annual Meeting of the Cognitive Science Society, Nashville, August.
	Computational Linguistics and Information Processing Lab, University of Maryland, February.
2006	Department of Linguistics, University of Delaware, November.
	Institute for Research in Cognitive Science, University of Pennsylvania, October.
	Department of Linguistics, UCLA, October.
	Dipartimento di Informatica, Università di Torino, Italy, June.
	Psycholinguistics Supper, City University of New York Graduate Center, April.
2005	Department of Linguistics, City University of New York Graduate Center, December.
	Department of Linguistics, University of Pennsylvania, December.
	Department of Linguistics, Massachusetts Institute of Technology, April.
2004	7th International Workshop on Tree Adjoining Grammars and Related Frameworks, Simon Fraser University, Vancouver, Canada, May.
2003	25th Annual Meeting of the Cognitive Science Society, Boston, August.
	Dipartimento di linguistica, Università di Padova, Italy, June.
	North American Syntax Conference, Concordia University, Montreal, Canada, May.
	Results in Linguistics, First Meeting of *Lingue e Linguaggio*, Università di Bologna, Italy, March.
2002	Department of Computer and Information Science, University of Pennsylvania, April.
	Department of Linguistics, University of Maryland, College Park, February.
2001	Institute for Formal and Applied Linguistics (ÚFAL), Charles University, Prague, Czech Republic, June.
	Maryland Mayfest on the Cognitive Neuroscience of Language, University of Maryland, College Park, May.
	Department of Computer and Information Science, University of Pennsylvania, March.
	Symposium on Many Languages – One Grammar: Optimality and the Mathematical Structure of Human Language, American Association for the Advancement of Science Annual Meeting, San Francisco, February.
	Department of Linguistics, University of California Los Angeles, February
2000	Workshop on the antisymmetry of syntax, Scuola Normale Superiore, Cortona, Italy, May.

1999	Department of Linguistics, New York University, May.
1998	Tutorial on Tree Adjoining Grammar and Generative Grammar, Institute for Research in Cognition Science, University of Pennsylvania, July.
	Dipartimento di linguistica, Università di Padova, Italy, June.
	Logic and Language Group, Georgetown University, February.
1997	Center for Language and Speech Processing, Johns Hopkins University, October.
	Centre for Cognitive Science, University of Edinburgh, Scotland, June.
	Hopkins Optimality Theory Workshop, Johns Hopkins University, May.
	Department of Linguistics, City University of New York, May.
	Architecture of Language Acquisition Lecture Series, Institute for Research in Cognitive Science, University of Pennsylvania, March.
	Department of Linguistics, University of Maryland, College Park, March.
1996	Krasnow Institute for Advanced Study, George Mason University, December.
	Department of Linguistics, University of Delaware, September.
	Departamento de Linguistica, Instituto de Estudos da Linguagem, Universidade Estadual de Campinas, Brazil, August.
	3rd Workshop on Statistical Physics, Pattern Recognition and Language Change, São Sebastião, sponsored by Instituto de Estudos Avancados, Universidade de São Paulo, Brazil, August.
	Symposium on Neural Network and Symbolic Approaches to Language, American Association for the Advancement of Science Annual Meeting, Baltimore, February.
1995	Arbeitsgruppe Strukturelle Grammatik, Max Planck Gesellschaft, Berlin, Germany, December.
	2nd Workshop on Statistical Physics, Pattern Recognition and Language Change, São Sebastião, sponsored by Instituto de Estudos Avancados, Universidade de São Paulo, Brazil, September.
	Department of Linguistics, Universidade Federal de Santa Caterina, Brazil, August.
	Department of Cognitive Science, Johns Hopkins University, April.
	Department of Linguistics, University of Pennsylvania, March.
1994	Département de linguistique générale, Université de Genève, Switzerland, June.
	Center for Cognitive Science and Department of Computer Science, Rutgers University, March.
	New Jersey Syntax Circle, Rutgers University, February.
1993	15th Annual Meeting of the Cognitive Science Society, University of Colorado, Boulder, June.
	"Minimalism Feast," Department of Linguistics, University of Maryland, College Park, May.
1992	Department of Linguistics, University of Delaware, March.
	Program in Linguistics and Cognitive Science, Brandeis University, March
	Department of Linguistics, City University of New York, March.
	Department of Cognitive Science, The Johns Hopkins University, February.
	Computational Linguistics Program, Carnegie Mellon University, January.
1991	UMIACS and Department of Linguistics, University of Maryland, College Park, October.

2019-2023	Principal Investigator, National Science Foundation grant BCS-1919321 "Inductive Biases for the Acquisition of Syntactic Transformations in Neural Networks," $327,487.
2010-2011	Principal Investigator, National Science Foundation grant IIS-1026078 "10th International Workshop on Tree Adjoining Grammars and Related Formalisms (TAG+10)," $15,000.
2009	Fulbright Distinguished Chair in Linguistics, University of Trieste.
2005-2010	Co-Principal Investigator, National Science Foundation grant SBR-0549379 "Unifying the Science of Language," $2,988,198.
2005-2008	Principal Investigator, National Science Foundation grant SBR-0446929 "Statistical discovery of linguistic structure," $299,956.
1999–2004	Co-Principal Investigator, National Science Foundation grant SBR-9972807 "Problem-centered research training: Integrating formal and empirical methods in the cognitive science of language," $2,611,399.
1997–2002	Co-Principal Investigator, National Science Foundation grant SBR-9720412 "Optimization in Language and Language Learning," $825,270.
1997–2000	Principal Investigator, National Science Foundation grant SBR-9710247, "Phrase Structure and C-Command," $69,070.
1994–1995	Principal Investigator, University of Delaware Research Foundation grant "Grammatical Complexity and the Time Course of Language Acquisition," $20,000.
1988–1991	Unisys Corporation Doctoral Fellowship.

PROFESSIONAL SERVICE

GRANT REVIEW

2014–2017	Senior Review Panel, Linguistics Program, National Science Foundation.
2006	Panel Member for HSD proposal review, National Science Foundation.
2005	Panel Member for HSD proposal review, National Science Foundation.
1999	Panel Member for KDI/LIS preproposal review, National Science Foundation.
1993–	Ad hoc proposal reviewing for the National Science Foundation, Israel Science Foundation, Organization for Scientific Research (NWO), U.S. Army Engineer Research and Development Center. U.S.-Israel Binational Science Foundation

PUBLICATION REVIEW

2012–	Review Editorial Board of *Frontiers in Language Sciences*.
2011–	Editorial Board of *Language Acquisition*.
2006–	Editorial Board of *Language and Linguistics Compass*.
2005	Scientific committee for special issue of *Traitement Automatique des Langues*.
1998–2007	Editorial Board of *Syntax: A Journal of Theoretical, Experimental and Interdisciplinary Research*.
1994–1996	Editorial board of *GLOT International*.
1992–	Ad hoc manuscript reviewing for *Behavioral and Brain Sciences, Cognition, Cognitive Science, Computational Intelligence, Computational Linguistics, Glossa, Journal of Cognitive Science, Journal of Linguistics, Journal of Logic and Computation, Journal of Logic, Language and Information, Journal of Mathematical Psychology, Journal of Slavic Linguistics, Language Acquisition, Language, Language and Speech, Lingua, Linguistic Inquiry, Linguistics and Philosophy, Machine Learning, Natural Language and Linguistic Theory, Phonology, Proceeding of the National Academy of Sciences, Syntax, Columbia University Press, North Holland, John Benjamins, MIT Press, Oxford University Press*.

CONFERENCE ORGANIZATION

2017	Co-organizer of the Workshop on Multiple Question about Sluicing, Yale University, New Haven.
2014	Organizer of the Yale Workshop on Perception and Choice, New Haven.
2012	Co-organizer for the 27th Comparative Germanic Syntax Workshop, New Haven.
2010	Local arrangements chair for the 10th Workshop on Tree Adjoining Grammars and Related Frameworks (TAG+10), New Haven.
2005	Organizer of the 3rd Hopkins Workshop on Language: Non-local Dependencies, Johns Hopkins University, Baltimore, Maryland.
2004	Organizer of the IGERT Workshop on Integrative Explanations in the Cognitive Science of Language, Johns Hopkins University, Baltimore, Maryland.
2003	Organizer of the IGERT Workshop on the Cognitive Science of Language, Johns Hopkins University, Baltimore, Maryland.
2002	Program chair for the 6th Workshop on Tree Adjoining Grammars and Related Frameworks (TAG+6), Università di Venezia, Italy.

OTHER SERVICE

2020–	Member of Advisory Board, Institute for Advanced Computational Science, Stony Brook University.
2016	Program review for Master's program in Computational Linguistics at the Department of Linguistics, Stony Brook University.
2011–	Member of Scientific Board, Center for Neurolinguistics and Theoretical Syntax, Istituto Universitario di Studi Superiori (IUSS), Pavia, Italy.
2001	External academic program review committee for the Department of Linguistics, University of Delaware.

STUDENT SUPERVISION

PhD students

Yiding Hao, 2022 (expected), Grammatical Representations in Neural Networks (co-supervised with Dana Angluin).

Emanuel Souza de Quadros, 2022 (expected), Competition and change in an exemplar-driven model of Categorial Grammar.

Natalie Schrimpf, 2018, A Global Approach to Automatic Text Summarization Using Topics, Current Position: Language Engineer, Amazon.

Sabina Matyiku, 2016, Semantic Effects of Head Movement: Evidence from Negative Auxiliary Inversion Constructions (co-supervised with Raffaella Zanuttini). Current Position: Siri TTS Machine Learning Engineer, Apple Computer..

Jason Zentz, 2016, *Wh*-Question Formation Strategies in Bantu (co-supervised with Raffaella Zanuttini), Current Position: Assistant Dean, Yale University.

Michael Freedman, 2014, Frozen Scope and Grammatical Optimization. Current position: Computational Linguist, Ntrepid Corp.

Adam Wayment, 2009, Subsymbolic Phonology: Similarity and Attraction in Assimilation (co-supervised with Luigi Burzio and Colin Wilson). Current position: Principal Program Manager, Microsoft.

Joan Chen-Main, 2006, On the Generation and Linearization of Multidominance Structures.

Virginia Savova, 2006, Structures and Strings: A constraint-based approach to linearizing dependency structures. Current position: Distinguished Scientist, Sanofi.

Member of PhD dissertation committees

Brian DuSell, 2022 (expected), *Non-deterministic Pushdown Automata and Neural Networks*, Computer Science, Notre Dame University.

Najoung Kim, 2021, *Compositional Linguistic Generalization in Artificial Neural Networks*, Cognitive Science, Johns Hopkins University.

Tao Yu, 2021, *Learning to Map Natural Language to Executable Programs Over Databases*, Computer Science, Yale University.

Alexander Fabbri, 2021, *Controllable Neural Content Selection and Generation Over Long Documents*, Computer Science, Yale University.

Matthew Tyler, 2020, *Morphology and Argument Structure in Choctaw*, Linguistics, Yale University.

Rui Zhang, 2020, *Deep Contextual Modeling for Natural Language Understanding, Generation, and Grounding*, Computer Science, Yale University.

Cristina Aggazzoti, 2019, *A Unified Account of Reflexives and Reciprocals in Synchronous Tree Adjoining Grammar*, Linguistics, Harvard University.

Andrew Murphy, 2017, *Cumulativity in Syntactic Derivations*, Linguistics, Universität Leipzig.

Nicole Palffy-Muhoray, 2016, *Hungarian temporal and aspectual reference in the absence of dedicated markers*, Linguistics, Yale University.

Constantine Lignos, 2013, *Modeling Words in the Mind*, Computer and Information Science, University of Pennsylvania.

Scott McClure, 2011, *A system for inducing the phonology and inflectional morphology of a natural language*, Linguistics, Yale University.

Jonathan Brennan, 2010, *Incrementally dissociating syntax and semantics*, Linguistics, New York University.

Erin Fitzgerald, 2009, *Reconstructing Spontaneous Speech*, Electrical and Computer Engineering, Johns Hopkins University.

Jia Cui, 2008, *Integrating Linguistic and Statistical Knowledge in Language Modeling*, Computer Science, Johns Hopkins University.

Gaja Jarosz, 2006, *Unsupervised Probabilistic Learning of Optimality Theoretic Grammars*, Cognitive Science, Johns Hopkins University.

Ray Rennard, 2003, *Narrow Content and Wide Psychology*, Philosophy, Johns Hopkins University.

John Chen, 2001, *An Investigation into Efficient Statistical Parsing Using Lexicalized Grammatical Information*, Computer and Information Science, University of Delaware.

Fero Kuminiak, 2001, *The Role of Ambiguous Word Forms in the Production of Subject-Verb Agreement*, Cognitive Science, Johns Hopkins University.

Colin Wilson, 2000, *Targeted Constraints: An Approach to Positional Neutralization in Optimality Theory*, Cognitive Science, Johns Hopkins University.

David Schneider, 1999, *Parsing and Incrementality*, Linguistics, University of Delaware.

Tonia Bleam, 1999, *On the Syntax of Clitic Doubling in Leista Spanish*, Linguistics, University of Delaware.

Eynat Gutman, 1998, *3rd Person Subject Drop in Hebrew and Standard Finnish: a Model of Syntax and Discourse*, Linguistics, University of Delaware.

Patrick Sturt, 1997, *Syntactic Reanalysis in Human Language Processing*, Cognitive Science, University of Edinburgh.

Christina Tortora, 1997, *The Syntax and Semantics of the Weak Locative*, Linguistics, University of Delaware.

Jeffrey Lidz, 1996, *Dimensions of Reflexivity*, Linguistics, University of Delaware.

James Rogers, 1994, *Studies in the Logic of Trees with Applications to Grammar Formalisms*, Computer and Information Science, University of Delaware.

Research advisor (post-doctoral)

Michael Wilson, 2021–, Inductive Biases for Language Learning in Neural Networks.

Matthew Barros, 2015-2017, Ellipsis, Syntax-Semantics Interface. Curent position: Lecturer, Washington University.

Jim Wood, 2012-2014, Theoretical Morphosyntax. Current position: Assistant Professor, Yale University.

Timothy Hunter, 2010-2012, Computational and Theoretical Syntax. Current position: Associate Professor, UCLA.

Dennis Ryan Storoshenko, 2010-2012, Formal Models of the Syntax-Semantics Interface. Current position: Associate Professor, University of Calgary.

Research advisor (graduate)

Yiding Hao, 2016-2018, *Learnability of Finite Kernel Property Languages.*

Parker Brody, 2016-2017, *(Un)supervised morphological segmentation via hierarchical Dirichlet process.*

Emanuel Quadros, 2016-2017, *Categorial morphosemantics.*

Faruk Akkuş, 2015-2016, *Imposters and grammatical agreement.*

Natalie Schrimpf, 2014, *Computational models of question answering.*

Matthew Tyler, 2014, *Parametric variation in null subjects.*

Sabina Matyiku, 2012, *The acquisition of wh-movement by Simple Recurrent Networks.*

Sabina Matyiku, 2011, *Motivating movement: The case of negative inversion in West Texas English* (co-supervised with Raffaella Zanuttini).

Jason Zentz, 2011, *Movement in adverbial clauses: Morphological evidence from Akoose wh-agreement.*

Nicole Palffy-Muhoray, 2011, *Reference to Future Time in Hungarian* (co-supervised with Ashwini Deo).

Michael Freedman, 2010, *Scope asymmetries and Tree Adjoining Grammar.*

Christo Kirov, 2008, *Forward and backward recall in Simple Recurrent Networks: Performance and representations.*

Virginia Savova, 2003, *The right kind of formal power: a mildly context sensitive formalism for optimality theory syntax.*

Joan Chen-Main, 2003, *Computational complexity of Optimality Theory.*

Gaja Jarosz, 2002, *Induction of grammatical categories and syntactic structure.*

Oren Schwartz, 2001, *Connectionist and automata-theoretic models of computation.*

Virginia Savova, 2001, *Are clitics really beyond syntax?.*

Marina Todorova, 2000, *Aspectual coercion and the online computation of sentential aspect.*

Fero Kuminiak, 1999, *Formal properties of asymmetric c-command in tree structures.*

Tonia Bleam, 1995, *Clitic climbing and the formal power of Tree Adjoining Grammar.*

Research advisor (undergraduate/other)

Jackson Petty, 2020-2022, *Alice's Adventures in Reflexiveland: Algebraic Generalization in Artificial Neural Networks* (senior essay in Linguistics).

Alan George, 2021-2022, *Semantic Priming in Neural Network Models of Language* (senior essay in Statistics and Data Science).

Aarohi Srivastava, 2020-2021, *Semantic Parsing of Comparative Structures with Tree Adjoining Grammar* (senior essay in Computer Science, co-supervised with Dana Angluin).

Sarah Widder, 2019-2020, *Syntactically Guided Paraphrases Using Supertag Sequences* (senior essay in Cognitive Science).

Yongjie Lin, 2019, *Representation of Grammatical Features in Sequence to Sequence Networks* (senior essay in Computer Science, co-supervised with Dana Angluin).

William Merrill, 2018-2019, *Recurrent Neural Networks as Counter Automata* (senior essay in Linguistics and Computer Science, co-supervised with Dana Angluin).

Hannah Knight, 2019, *Music Genre Recognition from Audio Files* (senior essay in Applied Math).

Andrew Sparkman, 2019, *Cherokee Machine Translation* (senior essay in Appled Math).

Matthew Benstock, 2018, *Topic Modeling for Current Events* (senior essay in Applied Math).

Nicholas Hathaway, 2018, *Generalizing Sentiment Analysis Techniques Across Sub-Categories of IMDB Movie Reviews* (senior essay).

Charles Soe, 2018, *Developing a Neural Network Architecture for Fashion Style Transfer* (senior essay in Statistics and Data Science).

Pauli Xu, 2016-2018, *Exploring Ambiguity Detection and Generation for Poetry using Tree Adjoining Grammar* (senior essay in Computer Science, co-supervised with Dana Angluin).

Sarah Gross, 2016-2017, *Talking about what we eat* (senior essay in Cognitive Science).

Elizabeth Coquillette, 2016-2017, *Bayesian Modeling of Language Evolution* (senior essay in Cognitive Science).

Jungo Kasai, 2016-2017, *Neural Network-based Supertagging and Parsing of Tree Adjoining Grammars* (senior essay in Statistics).

R. Thomas McCoy, 2016-2017, Pivot-based word alignment (senior essay).

Rose Sloane, 2015-2016, *Node-Based Induction of Tree Substitution Grammars* (senior essay).

Margaret Ott, 2015-2016, *Tweet Like a Girl: A Corpus Analysis of Gendered Language in Social Media* (senior essay).

Rebecca Marvin, 2014-2016, *Reassessing the Poverty of the Stimulus That-trace effect: parameter setting or distributional learning?* (senior essay in Cognitive Science).

Miles Calabresi, 2014-2015, *Testing Theories of Case in Icelandic* (senior essay, co-supervised with Jim Wood).

Maria Kounelli, 2013-2014, *Null Prepositions in Modern Greek* (senior essay, co-supervised with Jim Wood).

Phoebe Gaston, 2012-2013, *Optional Infinitives in Second Language Acquisition* (senior essay, co-supervised with Maria Piñango).

Rachel Rudinger, 2012-2013, *Computational Models of Textual Entailment* (senior essay in Computer Science, co-supervised with Dana Angluin).

Deepa Chari, 2012, *Evaluating an Aggregate Markov Model on Child-Directed Speech* (senior essay in Computer Science, co-supervised with Dana Angluin).

Tasha Torchon, 2011-2012, *Predicate and Nominal Clefts in Haitian Creole* (senior essay).

Ava Parnes, 2011, *Ang marks the what?: An analysis of noun phrase markers in Cebuano* (senior essay co-supervised with Claire Bowern).

Jarrett Lovelett, 2010-2011, *Computational models for the induction of recursive syntax* (senior essay).

Nathaniel Little, 2009-2010, *Reevaluating Gapping in CCG: Evidence from English and Chinese* (senior essay).

Esteban Buz, 2007-2008, *Connectionist modeling of grammatical transformations.*

Jeffrey Markowitz, 2007, *Tools for the analysis of connectionist networks.*

John Stowe, 2006, *Exploratory software for connectionist modeling of grammar.*

George Cooper, 2002, *Spanish-English machine translation with Synchronous Tree Adjoining Grammars*, Ingenuity Project, Baltimore City Public Schools..

UNIVERSITY AND DEPARTMENT SERVICE

Chair, Search Committee in Computational Linguistics, Department of Linguistics, 2021-22.

Search Committee in Cognitive Science, Program in Cognitive Science, 2021-22.

Chair, Wrexham Prize in the Social Sciences. 2021.

Search Committee in Linguistic Anthropology, Department of Anthropology. 2013.

Social Science Advisory Committee and Tenure and Appointments Committee. 2009-2010.

Wilbur Cross Medal Selection Committee. 2009.

Cognitive Science Executive Committee. 2008-2015.

MISCELLANEA

Date of Birth: July 24, 1965
Citizenship: U.S.
Languages spoken: English (native), Italian (fluent), German (basic)
Erdös number: 4