Jeffrey N. Heinz

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Appointments

2017-	Professor, Department of Linguistics & Institute for Advanced Computational Science Stony Brook University
2016-2017	Professor, Department of Linguistics and Cognitive Science. University of Delaware.
2012-2016	Associate Professor, Department of Linguistics and Cognitive Science. University of Delaware.
2009-2017	Joint appointment. Department of Computer and Information Sciences. University of Delaware.
2007-2012	Assistant Professor, Department of Linguistics and Cognitive Science. University of Delaware.

Visiting Positions

Summer 2010	Visiting Researcher, Department of Language and Information Sciences. The University of Tokyo, Japan.

Education

2007	Ph.D. Linguistics, UCLA Dissertation Title: Inductive Learning of Phonotactic Patterns (co-chairs: Edward Stabler and Kie Zuraw)
2005	M.A. Linguistics, UCLA

M.A. Thesis Title: CV Metathesis in Kwara'ae
(chair: Kie Zuraw)

1996 B.S. Mathematics, University of Maryland, College Park

1996 B.A. Linguistics, University of Maryland, College Park

Awards

2017 Linguistic Society of America Early Career Award
for "contributions leading to a new computational science of inference and learning as applied to language."

Funded Research Projects

2015-2018 SCH: GEAR - Grounded Early Adaptive Rehabilitation. National Institute of Health R01-HD087133. Co-PI. With Herbert G. Tanner (PI, University of Delaware), Cole Galloway, (co-PI, University of Delaware) and Rene Vidal (co-PI, Johns Hopkins University). ∼$1.2M.

2011-2015 Collaborative Research: StressTyp2: A Database for Word Accentual Patterns in the World's Languages. National Science Foundation #1123692. PI. With Harry van der Hulst (PI, University of Connecticut). ∼$415k.

2010-2015 Collaborative Research: Efficient Control Synthesis and Learning in Distributed Cyber-Physical Systems. National Science Foundation #1035577. Co-PI. With Herbert G. Tanner (PI, University of Delaware) and Calin Belta (co-PI, Boston University). ∼$1M.

2012-2014 Doctoral Dissertation Research: Features and Syllables in Phonotactic Models. National Science Foundation #1226793. PI. With Cesar Koirala (co-PI, University of Delaware). $10,341.

2011-2014 Doctoral Dissertation Research: Phonology of Betsimisaraka. National Science Foundation #1123609. PI. With Timothy O'Neill (co-PI, University of Delaware). $11,803.

2011-2013 Doctoral Dissertation Research: Domain Specificity in Learning Phonology. National Science Foundation #1123610. PI. With Regine Lai (co-PI, University of Delaware). $6,575.

Summer 2009 Research Experience for Undergraduates. University of Delaware Research Fund (UDRF) $3,500.

Summer 2009 The Contribution of Phonological Features to Language Learning. General University Research (GUR) Grant, $6,000.

2008-2009 Computational Models of Phonological Acquisition. University of Delaware Research Fund (UDRF) Grant, $25,000.

Books authored

2015 Jeffrey Heinz, Colin de la Higuera, and Menno van Zaanen. *Grammatical Inference for Computational Linguistics*. Synthesis Lectures on Human Language Technologies. Morgan and Claypool, 2015.

Books edited

2016 Jeffrey Heinz and José Sempere, editors. *Topics in Grammatical Inference*. Springer-Verlag Berlin Heidelberg, 2016. ISBN 978-3-662-48395-4.

2016 Jeffrey Heinz, Rob Goedemans, and Harry van der Hulst, editors. *Dimensions of Phonological Stress*. Cambridge University Press, November 2016.

Book proposals under contract

- Jeffrey Heinz, editor. *Doing Computational Phonology*. Oxford University Press. Approximately 300 page monograph consisting of chapters by Heinz's colleagues and students on why and how to do computational phonology.

- Rob Goedemans, Jeffrey Heinz, and Harry van der Hulst, editors. *The Study of Word Stress and Accent*. Cambridge University Press. Approximately 300 page monograph consisting of chapters by leading scholars in linguistic stress and rhythm. Expected publication in 2018.

Guest Editing for Journals

2017 Jeffrey Heinz and William Idsardi, editors. *Phonology*, Special issue on computational phonology, 34(2), August 2017. Colin Ewen and Ellen Kaisse, editors-in-chiefs.

2014 Jeffrey Heinz, Colin de la Higuera, and Tim Oates, editors. *Machine Learning*, Special issue on grammatical inference, 96(1-2), July 2014. Peter Flach, editor-in-chief.

Articles in press

forthcoming Jane Chandlee, Jeffrey Heinz, and Adam Jardine. Input strictly local opaque maps. *Phonology*, To appear.

Journal Articles

2018 Jane Chandlee and Jeffrey Heinz. Strictly locality and phonological maps. *Linguistic Inquiry*, 49(1):23–60, 2018.

2017 Jeffrey Heinz and William Idsardi. Computational phonology today. *Phonology*, 34(2):211–219, August 2017.

2016 Konstantinos Karydis, Prasanna Kannappan, Herbert G. Tanner, Adam Jardine, and Jeffrey Heinz. Resilience through learning in multi-agent cyber-physical systems. *Frontiers in Robotics and AI*, 3(36):1–12, June 2016.

2016 Adam Jardine and Jeffrey Heinz. Learning tier-based strictly 2-local languages. *Transactions of the Association for Computational Linguistics*, 4: 87–98, April 2016. ISSN 2307-387X.

2015 Jie Fu, Herbert G. Tanner, and Jeffrey Heinz. Concurrent multi-agent systems with temporal logic objectives: Game theoretic analysis and planning through negotiation. *IET Control Theory and Applications*, 9(3):465–474, February 2015.

2015 Jie Fu, Herbert G. Tanner, Jeffrey Heinz, Konstantinos Karydis, Jane Chandlee, and Cesar Koirala. Symbolic planning and control using game theory and grammatical inference. *Engineering Applications of Artificial Intelligence*, 37:378–391, January 2015.

2014 Jane Chandlee, Rémi Eyraud, and Jeffrey Heinz. Learning strictly local subsequential functions. *Transactions of the Association for Computational Linguistics*, 2:491–503, November 2014.

2014 Jeffrey Heinz, Colin de la Higuera, and Tim Oates. Introduction to the special issue on grammatical inference. *Machine Learning*, 96(1-2):1–3, July 2014.

2014 Jie Fu, Herbert G. Tanner, Jeffrey Heinz, and Jane Chandlee. Adaptive symbolic control for finite-state transition systems with grammatical inference. *IEEE Transactions on Automatic Control*, 59(2):505–511, February 2014.

2013 Jeffrey Heinz and William Idsardi. What complexity differences reveal about domains in language. *Topics in Cognitive Science*, 5(1):111–131, 2013.

2012 Darrell Larsen and Jeffrey Heinz. Neutral vowels in sound-symbolic vowel harmony in Korean. *Phonology*, 29:433–464, December 2012.

2012 Jeffrey Heinz, Anna Kasprzik, and Timo Kötzing. Learning with lattice-structured hypothesis spaces. *Theoretical Computer Science*, 457:111–127, October 2012.

2011 Jeffrey Heinz and William Idsardi. Sentence and word complexity. *Science*, 333(6040):295–297, July 2011.

2010 Jeffrey Heinz. Learning long-distance phonotactics. *Linguistic Inquiry*, 41 (4):623–661, 2010.

2010 Daniel Blanchard, Jeffrey Heinz, and Roberta Golinkoff. Modeling the contribution of phonotactic cues to the problem of word segmentation. *The Journal of Child Language*, 37(3):487–511, 2010. Special Computational Issue (Brian MacWhinney, ed.).

2009 Jeffrey Heinz. On the role of locality in learning stress patterns. *Phonology*, 26(2):303–351, 2009.

2009 Jeffrey Heinz, Gregory Kobele, and Jason Riggle. Evaluating the complexity of Optimality Theory. *Linguistic Inquiry*, 40(2):277–288, 2009.

Invited Chapters and Articles (peer-reviewed)

forthcoming Jeffrey Heinz. The computational nature of phonological generalizations. In Larry Hyman and Frans Plank, editors, *Phonological Typology*, Phonetics and Phonology. Mouton, Forthcoming. Final version submitted November 2015. Expected publication in 2018.

2017 Jane Chandlee and Jeffrey Heinz. Computational phonology. In Mark Aronoff, editor, *Oxford Research Encylcopedia of Linguistics*. Oxford University Press, 2017.

2016 Jeffrey Heinz. Computational theories of learning and developmental psycholinguistics. In Jeffrey Lidz, William Synder, and Joe Pater, editors, *The Oxford Handbook of Developmental Linguistics*, chapter 27, pages 633–663. Oxford University Press, Oxford, UK, 2016.

2016 Rémi Eyraud, Jeffrey Heinz, and Ryo Yoshinaka. Efficiency in the identification in the limit learning paradigm. In Heinz and Sempere (2016), chapter 2, pages 25–46. ISBN 978-3-662-48395-4.

2014 Jeffrey Heinz. Culminativity times harmony equals unbounded stress. In Harry van der Hulst, editor, *Word Stress: Theoretical and Typological Issues*, chapter 8. Cambridge University Press, Cambridge, UK, 2014.

2011 Jeffrey Heinz. Computational phonology part II: Grammars, learning, and the future. *Language and Linguistics Compass*, 5(4):153–168, 2011.

2011 Jeffrey Heinz. Computational phonology part I: Foundations. *Language and Linguistics Compass*, 5(4):140–152, 2011.

2011 Jeffrey Heinz and Jason Riggle. Learnability. In Marc van Oostendorp, Colin Ewen, Beth Hume, and Keren Rice, editors, *Blackwell Companion to Phonology*. Wiley-Blackwell, 2011.

Paper-reviewed Proceedings Papers

2017 Enes Avcu, Chihiro Shibata, and Jeffrey Heinz. Subregular complexity and deep learning. In Simon Dobnik and Shalom Lappin, editors, *CLASP Papers in Computational Linguistics: Proceedings of the Conference on Logic and Machine Learning in Natural Language (LaML 2017), Gothenburg, 12 –13 June*, pages 20–33, 2017.

2017 Ashkan Zehfroosh, Elena Kokkoni, Herbert G. Tanner, and Jeffrey Heinz. Learning models of human-robot interaction from small data. In *Proceedings of the 25th IEEE Mediterranean Conference on Control and Automation*, pages 223–228, 2017.

2017 Elena Kokkoni, Ashkan Zehfroosh, Prasanna Kannappan, Effrosyni Mavroudi, James C. Galloway, Jeffrey Heinz, Rene Vidal, and Herbert G. Tanner. Principles of building "smart" learning environments in pediatric early rehabilitation. In *Robotics: Science and Systems; Workshop on Perception and Interaction Dynamics in Child-Robot Interaction*, 2017.

2016 Kristina Strother-Garcia, Jeffrey Heinz, and Hyun Jin Hwangbo. Using model theory for grammatical inference: a case study from phonology. In Sicco Verwer, Menno van Zaanen, and Rick Smetsers, editors, *Proceedings of The 13th International Conference on Grammatical Inference*, volume 57 of *JMLR: Workshop and Conference Proceedings*, pages 66–78, October 2016.

2016 Chihiro Shibata and Jeffrey Heinz. Predicting sequential data with lstms augmented with strictly 2-piecewise input vectors. In Sicco Verwer, Menno

van Zaanen, and Rick Smetsers, editors, *Proceedings of The 13th International Conference on Grammatical Inference*, volume 57 of *JMLR: Workshop and Conference Proceedings*, pages 137–142, October 2016.

2016 Prasanna Kannappan, Konstantinos Karydis, Herbert G. Tanner, Adam Jardine, and Jeffrey Heinz. Incorporating learning modules improves aspects of resilience of supervisory cyber-physical systems. In *Proceedings of the 24th Mediterranean Conference on Control and Automation (MED 16)*, 2016.

2016 Kevin Leahy, Prasanna Kannappan, Adam Jardine, Herbert G. Tanner, Jeffrey Heinz, and Calin Belta. Integration of deterministic inference with formal synthesis for control under uncertainty. In *Proceedings of the 2016 American Control Conference*, 2016.

2015 Jane Chandlee, Rémi Eyraud, and Jeffrey Heinz. Output strictly local functions. In Marco Kuhlmann, Makoto Kanazawa, and Gregory M. Kobele, editors, *Proceedings of the 14th Meeting on the Mathematics of Language (MoL 2015)*, pages 112–125, Chicago, USA, July 2015.

2015 Adam Jardine and Jeffrey Heinz. A concatenation operation to derive autosegmental graphs. In *Proceedings of the 14th Meeting on the Mathematics of Language (MoL 2015)*, pages 139–151, Chicago, USA, July 2015.

2014 Adam Jardine, Jane Chandlee, Rémi Eyraud, and Jeffrey Heinz. Very efficient learning of structured classes of subsequential functions from positive data. In Alexander Clark, Makoto Kanazawa, and Ryo Yoshinaka, editors, *Proceedings of the Twelfth International Conference on Grammatical Inference (ICGI 2014)*, volume 34, pages 94–108. JMLR: Workshop and Conference Proceedings, September 2014.

2014 Manex Agirrezabal, Jeffrey Heinz, Mans Hulden, and Bertol Arrieta. Assigning stress to out-of-vocabulary words: three approaches. In *Proceedings of the International Conference of Artificial Intelligence (ICAI 2014)*, pages 105–110, Las Vegas, NV, July 2014.

2013 Jie Fu, Herbert G. Tanner, and Jeffrey Heinz. Adaptive planning in unknown environments using grammatical inference. In *Decision and Control (CDC), 2013 IEEE 52nd Annual Conference on*, pages 5357–5363, December 2013.

2013 Jeffrey Heinz and Regine Lai. Vowel harmony and subsequentiality. In Andras Kornai and Marco Kuhlmann, editors, *Proceedings of the 13th Meeting on the Mathematics of Language (MoL 13)*, pages 52–63, Sofia, Bulgaria, 2013.

2013 Jeffrey Heinz and James Rogers. Learning subregular classes of languages with factored deterministic automata. In Andras Kornai and Marco Kuhlmann, editors, *Proceedings of the 13th Meeting on the Mathematics of Language*

(MoL 13), pages 64–71, Sofia, Bulgaria, August 2013. Association for Computational Linguistics.

2013 James Rogers, Jeffrey Heinz, Margaret Fero, Jeremy Hurst, Dakotah Lambert, and Sean Wibel. Cognitive and sub-regular complexity. In Glyn Morrill and Mark-Jan Nederhof, editors, *Formal Grammar*, volume 8036 of *Lecture Notes in Computer Science*, pages 90–108. Springer, 2013.

2012 Jane Chandlee, Jie Fu, Konstantinos Karydis, Cesar Koirala, Jeffrey Heinz, and Herbert G. Tanner. Integrating grammatical inference into robotic planning. In Jeffrey Heinz, Colin de la Higuera, and Tim Oates, editors, *Proceedings of the Eleventh International Conference on Grammatical Inference (ICGI 2012)*, volume 21, pages 69–83. JMLR Workshop and Conference Proceedings, August 2012.

2012 Jane Chandlee and Jeffrey Heinz. Bounded copying is subsequential: Implications for metathesis and reduplication. In *Proceedings of the 12th Meeting of the ACL Special Interest Group on Computational Morphology and Phonology*, pages 42–51, Montreal, Canada, June 2012. Association for Computational Linguistics.

2011 Chetan Rawal, Herbert G. Tanner, and Jeffrey Heinz. (Sub)regular robotic languages. In *IEEE Mediterranean Conference on Control and Automation*, pages 321–326, 2011.

2011 Jeffrey Heinz, Chetan Rawal, and Herbert G. Tanner. Tier-based strictly local constraints for phonology. In *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics*, pages 58–64, Portland, Oregon, USA, June 2011. Association for Computational Linguistics.

2011 Jie Fu, Jeffrey Heinz, and Herbert G. Tanner. An algebraic characterization of strictly piecewise languages. In Mitsunori Ogihara and Jun Tarui, editors, *Theory and Applications of Models of Computation*, volume 6648 of *Lecture Notes in Computer Science*, pages 252–263. Springer Berlin / Heidelberg, 2011.

2010 James Rogers, Jeffrey Heinz, Gil Bailey, Matt Edlefsen, Molly Visscher, David Wellcome, and Sean Wibel. On languages piecewise testable in the strict sense. In Christian Ebert, Gerhard Jäger, and Jens Michaelis, editors, *The Mathematics of Language*, volume 6149 of *Lecture Notes in Artifical Intelligence*, pages 255–265. Springer, 2010.

2010 Jeffrey Heinz and Cesar Koirala. Maximum likelihood estimation of feature-based distributions. In *Proceedings of the 11th Meeting of the ACL Special Interest Group on Computational Morphology and Phonology*, pages 28–37, Uppsala, Sweden, July 2010. Association for Computational Linguistics.

2010 Jeffrey Heinz. String extension learning. In *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics*, pages 897–906, Uppsala, Sweden, July 2010. Association for Computational Linguistics.

2010 Jeffrey Heinz and James Rogers. Estimating strictly piecewise distributions. In *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics*, pages 886–896, Uppsala, Sweden, July 2010. Association for Computational Linguistics.

2008 Jeffrey Heinz. Left-to-right and right-to-left iterative languages. In Alexander Clark, François Coste, and Lauren Miclet, editors, *Grammatical Inference: Algorithms and Applications, 9th International Colloquium*, volume 5278 of *Lecture Notes in Computer Science*, pages 84–97. Springer, 2008.

2008 Daniel Blanchard and Jeffrey Heinz. Improving word segmentation by simultaneously learning phonotactics. In Alexander Clark and Kristina Toutanova, editors, *Proceedings of the Conference on Natural Language Learning*, pages 65–72, 2008.

2006 Jeffrey Heinz. Learning quantity insensitive stress systems via local inference. In *Proceedings of the Eighth Meeting of the ACL Special Interest Group on Computational Phonology and Morphology at HLT-NAACL 2006*, pages 21–30, New York City, USA, June 2006. Association for Computational Linguistics.

Abstract-reviewed Proceedings Papers

in press Adam Jardine and Jeffrey Heinz. Markedness constraints are negative: An autosegmental constraint definition language. In *Proceedings of the 51st meeting of the Chicago Linguistic Society*, in press. Expected publication 2018.

2016 Jane Chandlee, Adam Jardine, and Jeffrey Heinz. Learning repairs for marked structures. In Adam Albright and Michelle A. Fullwood, editors, *Proceedings of the 2014 Annual Meeting of Phonology*, Washington, DC, 2016. Linguistic Society of America.

2015 Adam Jardine and Jeffrey Heinz. Markedness constraints are negative: An autosegmental constraint definition language. In *Proceedings of the 51st meeting of the Chicago Linguistic Society*, in press. Expected publication 2018.

2012 Jane Chandlee, Angeliki Athanasopoulou, and Jeffrey Heinz. Evidence for classifying metathesis patterns as subsequential. In *The Proceedings of the*

29th West Coast Conference on Formal Linguistics, pages 303–309. Cascillida Press, 2012.

2012 Brian Gainor, Regine Lai, and Jeffrey Heinz. Computational characterizations of vowel harmony patterns and pathologies. In *The Proceedings of the 29th West Coast Conference on Formal Linguistics*, pages 63–71, 2012.

2007 Jeffrey Heinz. Learning unbounded stress systems via local inference. In Emily Elfner and Martin Walkow, editors, *Proceedings of the 37th Meeting of the Northeast Linguistics Society*, 2007. University of Illionois, Urbana-Champaign.

2006 Jeffrey Heinz. Learning phonotactic grammars from surface forms. In Donald Baumer, David Montero, and Michael Scanlon, editors, *Proceedings of the 25th West Coast Conference of Formal Linguistics*, 2006. University of Washington, Seattle.

2005 Jeffrey Heinz. Reconsidering linearity: Evidence from CV metathesis. In *Proceedings of WCCFL 24*. Cascillida Press, 2005.

2005 Jeffrey Heinz. Optional partial metathesis in Kwara'ae. In *Proceedings of AFLA 12*, pages 91–102. UCLA Working Papers, 2005.

2005 Jeffrey Heinz. Description and analysis of surface patterns in Kwara'ae. In *Working Papers in Phonology*, pages 57–92. UCLA Working Papers, 2005.

Theses

2007 Jeffrey Heinz. *Inductive Learning of Phonotactic Patterns.* PhD thesis, UCLA.

2004 Jeffrey Heinz. CV metathesis in Kwara'ae. Master's thesis, University of California, Los Angeles, 2004.

Invited Talks

Nov 2017 Jeffrey Heinz. *The computational nature of phonological generalizations.* University of Pennsylvania, PA, November 2017. Linguistics Colloquium Series.

Apr 2017 Jeffrey Heinz. *The computational nature of phonological generalizations.* Rutgers University, NJ, April 2017. Workshop on Computational Phonology.

Jan 2017 Jeffrey Heinz and William Idsardi. *Perspectives on Computational Linguistics*. University of Maryland, College Park, January 2017. Department of Linguistics, Winterstorm.

May 2016 Jeffrey Heinz. *Representation and Computation in Phonology*. Stony Brook University, Stony Brook, NY, May 2016. Linguistics Colloquium Series.

May 2015 Jeffrey Heinz. *The computational nature of phonological generalizations: transformations and representations*. University of California, Berkeley, CA, May 2015. Berkeley Linguistics Colloquium.

May 2015 Jeffrey Heinz and Adam Jardine. *Remarks on Autosegmental Representations*. University of California, Berkeley, CA, May 2015. Berkeley Phonology Phorum.

Nov 2014 Jeffrey Heinz. *Representing and Learning Regular Sets and Functions*. University of Pennsylvania, Philadelphia, PA, November 2014. PRECISE seminar (Penn Research in Embedded Computing and Integrated Systems Engineering).

Aug 2014 Rob Goedemans, Jeffrey Heinz, and Harry van der Hulst. *StressTyp2: A database for the accentual patterns in the world's languages*. Leiden, The Netherlands, August 2014. Workshop on Stress and Accent.

May 2014 Jeffrey Heinz. *Typology, Computation, and Phonology*. Stony Brook University, Stonybrook, NY, May 2014. Linguistics Colloquium Series.

Dec 2013 Jeffrey Heinz. *StressTyp2: A database for the accentual patterns in the world's languages*. National Institute for Japanese Language and Linguistics, Tachikawa, Japan, December 2013. NINJAL international conference on phonetics and phonology (ICPP 3).

Sep 2013 William Idsardi and Jeffrey Heinz. *Stress, computation, and the Chomsky hierarchy*. MIT, Boston, Massachussetts, September 2013. M@90. Presented by Bill Idsardi.

Aug 2013 Jeffrey Heinz. *The typology of phonological generalizations: A computational perspective*. Oxford University, Somerville College, Oxford, United Kingdom, August 2013. Meeting on Phonological Typology.

Mar 2013 Jeffrey Heinz. *The computational nature of phonological generalizations*. Cornell University, Ithaca, New York, March 2013.

Dec 2011 Jeffrey Heinz. *Culminativity Times Harmony Equals Unbounded Stress*. University of Connecticut, Storrs, CT, December 2011. The second UConn workshop on stress and accent.

Dec 2011 Jeffrey Heinz. *Patterns of Stress and Rhythm in Words: a Computational Perspective*. University of Connecticut, Storrs, CT, December 2011. Informal talk to the department.

Mar 2011 Jeffrey Heinz. *Subregular Languages for Robotics*. Hybrid and Networked Systems Lab, Boston University, Boston, MA, March 2011.

Jan 2011 Jeffrey Heinz. *Three Subregular Classes of Formal Languages for Phonology*. University of Pennsylvania, Philadelphia, PA, January 2011. Linguistics Speaker Series.

Oct 2010 Jeffrey Heinz. *Phonology is Subregular*. University of Massachussetts, Amherst, MA, October 2010. The 4th meeting of the Northeast Computational Phonology Circle.

Jul 2010 Darrell Larsen and Jeffrey Heinz. *A Corpus Study and Comparative Analysis of Formal Learning Proposals of Korean Sound-symbolic Vowel Harmony*. Tokyo, Japan, July 2010. Department of Language and Information Sciences, University of Tokyo.

Jun 2010 Jeffrey Heinz. *Learning the Stress Patterns in the World's Languages*. The National Institute of Japanese Languages and Linguistics, Tokyo, Japan, June 2010. The 321st Regular Meeting of the Phonetic Society of Japan.

May 2010 Jeffrey Heinz. *Phonological Learners and Phonological Patterns*. Cornell University, Ithaca, New York, May 2010. Grammar induction workshop.

May 2010 Jeffrey Heinz. *Why Phonological Learning is Modular*. University of Maryland, College Park, Maryland, May 2010. Cognitive Science Colloquium Series.

Apr 2010 Jeffrey Heinz. *Theory Neutral Representations of Stress Patterns*. University of Connecticut, Storrs, Connecticut, April 2010. StressTyp workshop.

Jun 2008 Jeffrey Heinz. *Learning Long Distance Phonotactics*. University of Chicago, Chicago, IL, June 2008. Workshop on Language and Cognitive Science.

Apr 2008 Jeffrey Heinz. *Inductive Learning of Phonotactic Patterns.* University of Maryland. College Park, MD. Phonology Seminar.

Mar 2008 Jeffrey Heinz. *Learning Long Distance Phonotactics.* University of Delaware, Newark, DE. Linguistics and Cognitive Science Department Colloquium Series.

May 2007 Jeffrey Heinz. *Learning the Stress Patterns of the World's Languages.* University of California, Los Angeles. Linguistics Department Colloquium Series. Los Angeles, CA.

Mar 2007 Jeffrey Heinz. *Learning the Stress Patterns of the World's Languages.* University of Delaware, Newark, DE. Linguistics Department Colloquium Series.

Feb 2007 Jeffrey Heinz. *Learning the Stress Patterns of the World's Languages.* Oakland University. Rochester, MI.

Conference Presentations

2017 Enes Avcu, Chihiro Shibata, and Jeffrey Heinz. *Subregular Complexity and Deep Learning.* University of Reykjavik, Iceland, June 2017. Workshop on Learning and Automata (LearnAut) at the ACM/IEEE Symposium on Logic in Computer Science (LICS 2017).

2017 Enes Avcu, Chihiro Shibata, and Jeffrey Heinz. *Subregular Complexity and Deep Learning.* University of Gothenberg, Sweden, June 2017. Conference on Logic and Machine Learning in Natural Language (LaML).

2017 Jane Chandlee, Jeffrey Heinz, Adam Jardine, and Kevin McMullin. *Modeling long-distance alternations with tier-based strictly local functions.* Austin, Texas, January 2017. The 91st Annual Meeting of the Linguistic Society of America. Presented by Jane Chandlee.

2016 Adam Jardine and Jeffrey Heinz. *Locality and learning over autosegmental representations.* Washington, D.C., January 2016. The 90th Annual Meeting of the Linguistic Society of America. Presented by Adam Jardine.

2016 Eric Bakovic, Lev Blumenfield, Jeffrey Heinz, and Jason Riggle. *Decomposing complex relations between phonological maps.* Washington, D.C., January 2016. The 90th Annual Meeting of the Linguistic Society of America. Presented by Eric Bakovic and Lev Blumenfield.

2015 Jeffrey Heinz, Hyun Jin Hwangbo, and Adam Jardine. *Some implications for representing gradual oppositions directly.* University of Delaware, Newark, DE, November 2015. The ninth Northeast Computational Phonology meeting (NECPHON).

2015 Jeffrey Heinz and William Idsardi. *The computational nature of phonological generalizations: transformations and representations.* University of Manchester, Manchester, USA, May 2015. W(h)ither OT? A workshop co-located with the 23rd Manchester Phonology Meeting.

2015 Adam Jardine and Jeffrey Heinz. *Markedness Constraints are Negative: An Autosegmental Constraint Definition Language.* University of Chicago. Chicago, IL, April 2015. Chicago Linguitics Society Annual Meeting. Presented by Adam Jardine.

2015 Jane Chandlee, Jeffrey Heinz, and Adam Jardine. *Representing and Learning Opaque Maps with Strictly Local Functions*. Paris, France, April 2015. GLOW computational phonology workshop.

2015 Jane Chandlee, Jeffrey Heinz, and Adam Jardine. *Learning Opaque Maps*. University of Maryland, College Park, MD, February 2015. GALANA. Poster presentation.

2015 Jane Chandlee and Jeffrey Heinz. *Using locality to learn long-distance processes*. Portland, Oregon, January 2015. The 89th Annual Meeting of the Linguistic Society of America. Presented by Jane Chandlee.

2014 Jane Chandlee, Adam Jardine, and Jeffrey Heinz. *Learning Repairs for Marked Structure*. MIT, Boston, MA, September 2014. The 2nd Annual Conference on Phonology.

2014 Adam Jardine, Jane Chandlee, Rémi Eyraud, and Jeffrey Heinz. *Very efficient learning of structured classes of subsequential functions from positive data*. The University of Kyoto, Japan, September 2014. The 15th International Conference of Grammatical Inference.

2014 Jie Fu, Jeffrey Heinz, Adam Jardine, and Herbert G. Tanner. *Perception-based Grammatical Inference for Adaptive Systems*. The University of Kyoto, Japan, September 2014. The 15th International Conference of Grammatical Inference.

2014 Jeffrey Heinz, Jane Chandlee, Bill Idsardi, and Jim Rogers. *The Computational and Logical Nature of Phonological Generalizations*. Concordia University, Montreal, Quebec, Canada, May 2014. The 8th North American Phonology Conference (NAPhC8).

2013 Jeffrey Heinz and William Idsardi. *Opacity between local and long distance processes in Samala*. University of Leipzig, Leipzig, Germany, October 2013. Workshop on Opacity in Grammar at the Comparative Germanic Syntax Workshop 28. Presented by Bill Idsardi.

2013 Jeffrey Heinz and James Rogers. *Learning Subregular Classes of Languages with Factored Deterministic Automata*. Sofia, Bulgaria, August 2013. The 2013 Meeting on Mathematics of Language. Presented by Jim Rogers.

2013 Jeffrey Heinz and Regine Lai. *Vowel Harmony and Subsequentiality*. Sofia, Bulgaria, August 2013. The 2013 Meeting on Mathematics of Language.

2012 Regine Lai and Jeffrey Heinz. *Evidence for a phonology-specific learning mechanism*. Sapporo, Japan, August 2012. The Annual Meeting of the Cognitive Science Society.

2012 Jane Chandlee, Jie Fu, Konstantinos Karydis, Cesar Koirala, Jeffrey Heinz, and Herbert G. Tanner. *Integrating Grammatical Inference into Robotic Planning*. University of Maryland, College Park, College Park, Maryland, September 2012. The Eleventh International Conference on Grammatical Inference. Presented by Jane Chandlee.

2011 Jeffrey Heinz. *Culminativity Times Harmony Equals Unbounded Stress*. University of Connecticut, Storrs, CT, December 2011. The second UConn workshop on stress and accent.

2011 Jeffrey Heinz. *Culminativity Times Harmony Equals Unbounded Stress*. Yale University, New Haven, CT, October 2011. The fifth Northeast Computational Phonology meeting (NECPHON).

2011 Jeffrey Heinz, Chetan Rawal, and Herbert Tanner. *Tier-based Strictly Local Languages for Phonology*. Portland, Oregon, USA, June 2011. The 49th Annual Meeting of the Association for Computational Linguistics.

2011 Jie Fu, Jeffrey Heinz, and Herbert Tanner. *An Algebraic Characterization of Strictly Piecewise Languages*. University of Electro-Communications. Tokyo, Japan, May 2011. The 8th Annual Conference on Theory and Applications of Models of Computation.

2011 Jeffrey Heinz and William Idsardi. *Why Sentences are More Complex Than Words*. University of Southern California, Los Angeles, CA, May 2011. Parallel Domains workshop in honor of work of Jean-Roger Vergnaud.

2010 Jeffrey Heinz. *String Extension Learning*. Uppsala, Sweden, July 2010. The 48th Annual Meeting of the Association for Computational Linguistics.

2010 Jeffrey Heinz and James Rogers. *Estimating Strictly Piecewise Distributions*. Uppsala, Sweden, July 2010. The 48th Annual Meeting of the Association for Computational Linguistics.

2010 Jeffrey Heinz and Cesar Koirala. *Maximum Likelihood Estimation of Feature-Based Distributions*. Uppsala, Sweden, July 2010. The 11th Meeting of the ACL Special Interest Group on Computational Morphology and Phonology. Co-located with the 48th Annual Meeting of the Association for Computational Linguistics.

2010 Darrell Larsen and Jeffrey Heinz. *Comparing Learning Models for Korean Sound-symbolic Vowel Harmony*. University of Pennsylvania, Philadelphia, PA, March 2010. The 34th Penn Linguistics Colloquium. Presented by Darrell Larsen.

2010 Jeffrey Heinz and Cesar Koirala. *Feature-based Generalization*. University of Alberta, Edmonton, Alberta, Canada, February 2010. The meeting on Computational Modelling of Sound Pattern Acquisition.

2010 Jeffrey Heinz and William Idsardi. *Learning Opaque Generalizations: The Case of Samala (Chumash)*. Baltimore, MD, January 2010. The 84th annual meeting of the Linguistic Society of America (LSA).

2008 Jeffrey Heinz. *Learning Left-to-right and Right-to-left Iterative Languages*. St. Malo, France, September 2008. The International Colloquium of Grammatical Inference (ICGI).

2007 Jeffrey Heinz. *Learning Long Distance Phonotactic Constraints*. Anaheim, CA, January 2007. The 81st annual meeting of the Linguistic Society of America (LSA).

2006 Jeffrey Heinz. *Learning Unbounded Stress Patterns via Local Inference*. University of Illinois, Urbana-Champaign, Illinois, November 2006. The 37th Annual Meeting of the Northeast Linguistics Society (NELS 37).

2006 Jeffrey Heinz. *Learning Quantity-Insensitive Stress Patterns via Local Inference*. Brooklyn, New York, June 2006. The Association for Computational Linguistics Special Interest Group in Phonology 6 (ACL-SIGPHON 06).

2006 Jeffrey Heinz. *Learning Phonotactic Patterns from Surface Forms*. University of Washington, Seattle, Washington, 2006. The 25th West Coast Conference of Formal Linguistics (WCCFL 25).

2005 Jeffrey Heinz. *Optional Partial Metathesis in Kwara'ae*. University of California, Los Angeles, CA, 2005. The 12th Annual Conference of the Austronesian Formal Linguistics Association (AFLA).

2005 Jeffrey Heinz. *CV Metathesis in Kwara'ae: Implications for a Theory of Stress*. University of Geneva, Geneva, Switzerland, 2005. The 28th Generative Linguistics in the Old World (GLOW) Colloquium.

2005 Jeffrey Heinz. *Reconsidering Linearity: evidence from Kwara'ae*. Simon Fraser University, Vancouver, Canada, 2005. The 24th West Coast Conference of Formal Linguistics (WCCFL 24).

2005 Jeffrey Heinz, Gregory Kobele, and Jason Riggle. *Exploring the Typology of Quantity-insensitive Stress Systems Without Gradient Constraints*. Oakland, CA, January 2005. The 79th annual meeting of the Linguistic Society of America (LSA).

2005 Jeffrey Heinz. *CV Metathesis as Copy and Deletion: Synchronic Evidence from Kwara'ae*. Oakland, CA, January 2005. The 79th annual meeting of the Linguistic Society of America (LSA).

2004 Jeffrey Heinz. *CV Metathesis as Syncope: Evidence from Kwara'ae*. University of Southern California, Los Angeles, California, 2004. Western Conference of Lingustics (WECOL).

Other Research Experience

2007–2015	Director, Phonology and Phonetics Lab at the University of Delaware.
Summer 2005	Conducted fieldwork on Kwara'ae (Austronesian) in Arabala, on the island of Malaita in the Solomon Islands.
2004-2005	Conducted fieldwork on Kiche (Mayan) with a native speaker as part of the 2004-2005 UCLA Field methods class, taught by Pamela Munro.
2003-2006	Aided the development of databases for Professor Russell Schuh for the Yobe Language Project.
2002-2007	Conducting fieldwork on Kwara'ae (Austronesian) with a native speaker.

Teaching

2007-2017 Instructor, Stony Brook University

- Learnability. Fall 2017.
- Learnability, part 2. Spring 2018.

2007-2017 Instructor, University of Delaware

- Acoustic Phonetics (Ling 433/633). Spring 2013, Spring 2012, Spring 2011, Spring 2009.
- Computational Linguistics (Ling 467/667, Ling 455/655) Spring 2012, Spring 2014, Spring 2017
- Introduction to Phonology (Ling 403/603) Fall 2013.
- Science of Language (Ling 202) Spring 2016.
- Graduate Phonology I (Ling 607). Fall 2014, Fall 2013, Fall 2012, Fall 2011, Fall 2008, Fall 2007.
- Graduate Phonology II (Ling 608). Spring 2017, Spring 2016, Spring 2015, Spring 2011, Spring 2008.
- Graduate Seminar: Formal Learning Theory (Ling 899). Fall 2015, Fall 2007.
- Graduate Seminar: Explanations of Typology in Phonology (Ling 861). Spring 2009, Spring 2014.
- Graduate Seminar: Likelihood and Well-formedness in Phonology (Ling 861). Fall 2009.

- Graduate Seminar: Formal Models for Phonology (Ling 861). Spring 2015, Fall 2010.
- Graduate Seminar: Harmony and Abstractness in Phonology (Ling 861). Fall 2014.
- Graduate Seminar: Advanced Topics in Phonology (Ling 861). Fall 2012.
- Mathematical Structures in Language (Ling 467/667). Fall 2015, Fall 2010, Fall 2008.

2003-2006 Teaching Assistant, UCLA Linguistics Department.

- Graduate Phonology I (Ling 200A). Professor Kie Zuraw. Fall 2005.
- Introduction to Language (Ling 1). Professor Philippe Schlenker. Spring 2003.
- Introduction to Linguistics (Ling 20). Professor Felicia Lee. Winter 2006.
- Introduction to Mathematical Linguistics (Ling C208). Professor Edward Keenan. Spring and Fall 2005.
- Teaching Assistant Technical Practicum. Instructor. Spring 2004.

2000-2001 English Teacher. English Plus. Yamanshi-ken, Japan.

1997-1999 Mathematics Teacher (Peace Corps Volunteer). Choiseul Bay Secondary School, Choiseul Province. Solomon Islands.

1997 Substitute Teacher. Howard County Public School System, Maryland, USA.

Tutorials and Courses

2015 Computational Phonology. The Lingustic Society of America (LSA) Summer Institute. Chicago, USA. July 2015. With Jason Riggle (University of Chicago).

2014 Model-theoretic Phonology. European Summer School in Logic, Language and Information (ESSLLI). Tübingen, Germany. August 2014. With James Rogers (Earlham College).

2011 Formal and Empirical Grammatical Inference. Association for Computational Linguistics-Human Language Technologies (ACL-HLT). June 2011. With Colin de la Higuera (CNRS) and Menno van Zaanen (Tilburg University).

Advising

PhD Dissertations, adviser

- Cesar Koirala, Linguistics, UD
- Hyun Jin Hwangbo, Linguistics, UD
- Kristina Strother-Garcia, Linguistics, UD

2016 Adam Jardine, Linguistics, UD

2015 Timothy O'Neill, Linguistics, UD

2014 Jane Chandlee, Linguistics, UD

2012 Regine Yeeking Lai, Linguistics, UD

PhD Dissertations, co-adviser

2017 Amanda Payne, Linguistics, UD (w/ Benjamin Bruening)

2012 Evan Bradley, Linguistics, UD (w/ Irene Vogel)

PhD Dissertations, committee member

- Salman Mahmood, Computer Science, SBU
- Ashkan Zehfroosh, Mechanical Engineering, UD
- John Miller, Computer and Information Sciences, UD
- Huan Luo, Linguistics, UD
- Mai Ha Vu, Linguistics, UD

2017 Taylor Miller, Linguistics, UD

2016 Angeliki Athanasopolou, Linguistics, UD

2016 Nadya Pincus, Linguistics, UD

2015 Kostas Karydis, Mechanical Engineering, UD

2014 Jeremy Keffer, Computer and Information Sciences, UD

2014 Darrell Larsen, Linguistics, UD

2013 Jie Fu, Mechanical Engineering, UD

2012 Jason Lilley, Linguistics, UD

2010 Timothy McKinnon, Linguistics, UD

2010 Laura Spinu, Linguistics, UD

2009 Karthik Durvasula, Linguistics, UD

Masters Thesis, committee member

2011 Chetan Rawal, Mechanical Engineering, UD

Qualifying Papers, adviser

- Jon Rawski, Linguistics, SBU

2017 Enes Avcu, Linguistics, UD

2016 Iman Albadar, Linguistics, UD

2016 Hovsep Dolatian, Linguistics, UD

2015 Hyun Jin Hwangbo, Linguistics, UD

2014 Huan Luo, Linguistics, UD

2013 Adam Jardine, Linguistics, UD

2011 Jane Chandlee, Linguistics, UD

2010 Cesar Koirala, Linguistics, UD

2009 Regine Yeeking Lai, Linguistics, UD

2009 Timothy O'Neill, Linguistics, UD

Qualifying Papers, second reader

2016 Enes Avcu, Linguistics, UD

2011 Angeliki Athanasopoulou, Linguistics, UD

2008 Nadya Pincus, Linguistics, UD

Reviewing

Editorial Boards

- Language Acquisition: A Journal of Developmental Linguistics (2011-)

Journals

- Child Development (2008-2011)
- Cognitive Science (2010-2013,2015-2016)
- Fundamenta Informaticae (2015-2016)
- Journal of Language Modelling (2014)
- Journal of Linguistics (2011)
- Journal of Machine Learning Research (2010)
- Language and Linguistics Compass (2011-2012)
- Linguistic Inquiry (2010, 2013-2015)
- Nature Communications (2017)
- Phonology (2010-2012, 2014-2016)
- Language (2011, 2013)
- Language and Cognitive Processes (2011)

- Language and Speech (2011)
- The Linguistic Review (2014, 2015)
- Topics in Cognitive Science (2012)

Books

- Cambridge University Press (2014)
- Oxford University Press (2007, 2010)
- Jones & Bartlett Learning (2011)

Grants

- National Science Foundation (2015)
- Israel Science Foundation (2014)
- Netherlands Organization for Scientific Research (NWO) Council for Humanities (2008)

Conference Abstracts

- GLOW 38 (2015)
- GALANA 6 (2015)
- Northeast Linguistics Society (2010, 2012-2014)
- The Annual Meeting of Phonology Conference (2013-2015)
- Language Society of America (2011-2013)

Conference Papers

- Mathematics of Language (2015, 2017)
- Interntational Conference on Grammatical Inference (2012, 2014, 2016)
- International Workshop on Learning, Agents and Formal Languages (2011-2012)
- Association for Computational Linguistics, Phonology and Morphology area (2012-2013)
- Association for Computational Linguistics, Workshop on Cognitive Modeling and Computational Linguistics (2011-2014)
- Association for Computational Linguistics–Human Language Technologies. Phonology/Morphology, Tagging and Chunking, Word Segmentation program (2011)
- Association for Computational Linguistics, Special Interest Group in Computational Morphology and Phonology (2008, 2010, 2012, 2014, 2016)
- Emprical Methods in Natural Language Processing, Phonology, Morphology, Tagging, Chunking, and Word Segmentation program (2009, 2014)

- European Association for Computational Linguistics, Workshop on Computational Linguistic Aspects of Grammatical Inference (2009)
- European Association for Computational Linguistics, Phonology, Morphology, Tagging, Chunking and Segmentation program (2008)
- North American Association for Computational Linguistics, Phonology and Morphology program (2009)

Events organized

2018	Workshop on Learning and Automata (LearnAut) at the Federated Logic Conference (with Rémi Eyraud, Guillaume Rabusseau, and Matteo Sammartino). Oxford, UK. July 2018.
2017	Northeast Computational Phonology Meeting (NECPHON). Stony Brook University, Stony Brook, NY. October 2017.
2017	Workshop on Learning and Automata (LearnAut) at the ACM/IEEE Symposium on Logic in Computer Science (LICS 2017) (with Rémi Eyraud and Guillaume Rabusseau). University of Reykjavik, Iceland, June 2017.
2015	Northeast Computational Phonology Meeting (NECPHON). University of Delaware, Newark, Delaware. November 2015.
2014	Workshop on Stress and Accent (with Rob Goedemans and Harry van der Hulst). August. Leiden University, The Netherlands.
2014	Joint Meeting of SIGMORPHON and SIGFSM (with Ozlem Cetinoglu, Andreas Maletti, and Jason Riggle). Co-located with the ACL. June. Baltimore, Maryland, USA.
2012	UD Workshop on Stress and Accent (with Harry van der Hulst). November 29 – December 1. University of Delaware.
2012	The 11th International Conference on Grammatical Inference (ICGI 2012, with Colin de la Higuera and Tim Oates). September 5–8. University of Maryland, College Park.
2011	The 2nd Conference on Stress and Accent (with Harry van der Hulst). University of Connecticut.
2010	ACL-SIGMORPHON (with Lynne Cahill and Richard, Wicentowski). University of Uppsala. Uppsala, Sweden.
2008	ACL-SIGMORPHON (with Jason Eisner). Ohio State University. Columbus, OH.

Department Service

2015	Search Committee, member, Psycho/Neuro-Linguistics Search, Linguistics and Cognitive Science Department, University of Delaware.
2013-2014	Search Committee Chair, Phonetics Search, Linguistics and Cognitive Science Department, University of Delaware.
2013-2017	Undergraduate Student Committee, Linguistics and Cognitive Science Department, University of Delaware.
2012-2013	Interim Graduate Program Director, Linguistics and Cognitive Science Department, University of Delaware.
2007-2017	Graduate Student Committee, Linguistics and Cognitive Science Department, University of Delaware.
2007-2010	Colloquium Committee, Linguistics and Cognitive Science Department, University of Delaware.

Service at the University of Delaware

2015-2016	Faculty Committee on Diversity and Inclusion, member.
2012, 2014-2016	Faculty Senate, senator.
2011-2012	College of Arts and Science Senate, senator.
2009-2011	Research Computing Task Force, member.

Other Professional Scholarly Service

2012-	Member, steering committee, International Conference of Grammatical Inference.
2008-2016	Member, executive committee, SIGMORPHON (Special Interest Group in Computational Morphology and Phonology)
2005	Editor (with Dimitris Ntelitheos) of UCLA Working Papers in Linguistics, no. 12, the Proceedings of the Twelfth Annual Conference of the Austronesian Formal Linguistics Association (AFLA).

2005	Editor (with Andy Martin & Katya Pertsova) of UCLA Working Papers in Linguistics, no. 11, Papers in Phonology 6.
2005	Member, organizing committee, The Twelfth Austronesian Formal Linguistic Association (AFLA 12).
2004-2007	UCLA Working Papers Committee.
2004	Member, organizing committee, The Third North American Summer School in Logic, Language and Information (NASSLI 3).

Honors

2008, 2014	Nominated for University of Delaware's Excellence in Teaching Award
2008	Nominated for University of Delaware's Excellence in Undergraduate Academic Advising Award
2006-2007	UCLA Dissertation Year Fellowship
2004-2005	UCLA Research Mentorship Fellowship (mentor: Kie Zuraw)
2004	UCLA Summer Research Mentorship Fellowship (mentor: Kie Zuraw)
2003	NSF Graduate Research Fellowship Honorable Mention
1996	Phi Beta Kappa

Other Experience

2001-2002	Student Affairs Officer I (Counselor/Administrative Assistant). Departments of Music and Ethnomusicology, UCLA.
1997	Communications Director. Nuclear Age Peace Foundation. Santa Barbara, CA.
Summer 1996	Transcontinental bicyclist. Ocean City, Maryland to Tillamook, Oregon. (5400 miles)

Languages

English (native)

Solomon Island Tok Pisin (fluent)

Japanese (intermediate)