

Charlie O'Hara

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he/him

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PROFESSIONAL HISTORY

Winter 2021- Lecturer in Linguistics, University of Michigan

EDUCATION

2013-2021 Ph.D. in Linguistics, University of Southern California
Thesis: [Soft Biases in Phonology: Learnability meets grammar](#)
Advisors: Karen Jesney (Co-chair), Rachel Walker (Co-chair)

2013-2015 M.A. in Linguistics, University of Southern California
Thesis: *How abstract is too abstract?*
Committee: Karen Jesney (Chair), Rachel Walker, Khalil Iskarous

2009- 2012 B.A., Oberlin College

Major in Mathematics

AWARDS

2018 USC Graduate School Summer Grant

2017-2018 Morkovin Endowed Fellowship

2013-2019 USC Graduate School Fellowship

PUBLICATIONS

Journal Articles

2017 [How abstract is too abstract: Learning abstract underlying representations.](#)
Phonology 34.2, 325-345 [[preprint](#)]

Manuscripts

In review. [Emergent learning bias and the underattestation of simple patterns.](#) Resubmitted for
Natural Language and Linguistic Theory

- In revision. [Caitlin Smith](#) and **Charlie O'Hara**. [Learnability of derivationally opaque processes in the Gestural Harmony Model](#). In revision for *Phonology*.
- In Prep. The sweet spot effect: rare phonotactic patterns are learnable with rare lexical frequency distributions. Ms.
- In Prep. Lexical Frequency and Channel Bias in the learning of Contour Tone Licensing. Ms.

Conference Proceedings

- in press **Charlie O'Hara**. [MaxEnt Learners are Biased Against Giving Probability to Harmonically Bounded Candidates](#). In the *Proceedings of the Society for Computation in Linguistics*. 5pp [Extended Abstract]
- 2021 [Caitlin Smith](#), **Charlie O'Hara**, Eric Rosen, and [Paul Smolensky](#). [Emergent Gestural Scores in a Recurrent Neural Network Model of Vowel Harmony](#). In the *Proceedings of the Society for Computation in Linguistics*. 10pp [refereed]
- 2021 [Caitlin Smith](#), **Charlie O'Hara**. [Learnability of derivationally opaque processes in the Gestural Harmony Model](#). In the *Proceedings of the Society for Computation in Linguistics*. 5pp [Extended Abstract]
- 2020 [Language-Specific Factors Influence Learnability: Case Study from Contour Tone Licensing](#). In Mariam Asatryan, Yixiao Song, and Ayana Whitmal (eds.) *Proceedings of the 50th Meeting of the North East Linguistics Society. Vol. 2* 235-245
- 2020 [Frequency Matching Behavior in On-Line MaxEnt Learners](#). In the *Proceedings of the Society for Computation in Linguistics: Vol. 3, Article 51*. 463-465 [Extended Abstract]
- 2019 [Andrew Lamont](#), **Charlie O'Hara** and [Caitlin Smith](#). [Weakly deterministic transformations are subregular](#). In *SIGMORPHON 2019: Proceedings of the 16th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*. 10 pp. [refereed]
- 2019 **Charlie O'Hara** and Caitlin Smith [Computational Complexity of Sour-Grapes-Like Patterns](#). In the *Proceedings of the Annual Meeting on Phonology 2018*. 11 pp.
- 2019 [Place and Position Are Computationally Different](#). In the *Proceedings of the Society for Computation in Linguistics: Vol. 2, Article 42* 342-345. [Extended Abstract]
- 2019 Caitlin Smith and **Charlie O'Hara** [Formal Characterizations of True and False Sour Grapes](#). In the *Proceedings of the Society for Computation in Linguistics: Vol. 2, Article 41*. 338-341 [Extended Abstract]
- 2018 [Hillary Clinton is not Mitt Romney rich: Nouns modifying the degree and dimensions of adjectives](#). In Robert Truswell, Chris Cummins, Caroline Heycock,

Brian Rabern, and Hannah Rohde (eds.) *Proceedings of Sinn und Bedeutung 21*. 915-932.

- 2017 [Sonority based stress in Harmonic Grammar: Nontransitive conflation in phonological hierarchies](#). In Jessica Kantarovich, Tran Truong, and Orest Xherija (eds.) *Proceedings of the Fifty-Second Annual Meeting of the Chicago Linguistic Society*. 375-390
- 2017 [Nouns attributively modifying adjectives in English](#). In Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel, and Edward J. Rubin (eds.) *The Proceedings of the West Coast Conference on Formal Linguistics 34*, 404-412. Somerville, MA: Cascadilla Proceedings Project.
- 2016 [Harmony in Harmonic Grammar by reevaluating faithfulness](#). In Christopher Hammerly and Brandon Pickett (eds.), *NELS 46: The Proceedings of the 46th Meeting of the North East Linguistics Society*. Vol. 3. 71-84. Amherst, MA: GLSA.
- 2016 [Positionally abstract underlying representations in Klamath](#). In *The Proceedings of the Chicago Linguistics Society 51 (2015)*, 397-411. Chicago: Chicago Linguistic Society
- 2016 [Pathological effects of Local Disjunction](#). In Albright, Adam and Michelle A. Fullwood (eds.), *Supplemental Proceedings of the 2014 Annual Meeting on Phonology*. Washington, DC: Linguistic Society of America. 10 pps. <http://dx.doi.org/10.3765/amp.v2i0.3755>

Edited Volumes

- 2017 *Proceedings of the 2016 Annual Meeting on Phonology*. Eds. Karen Jesney, Charlie O'Hara, Caitlin Smith, and Rachel Walker. Linguistics Society of America.
- 2016 *Proceedings of the 32nd West Coast Conference on Formal Linguistics*. Eds. Thomas Borer, Huilin Fang, Alfredo García Pardo, Peter Guekguezian, Brian Hsu, Charlie O'Hara, Iris Chuoying Ouyang, Ulrike Steindl. Somerville, MA: Cascadilla Proceedings Project.

MATERIALS

- 2021 [Word Edge Consonant Database](#).
- 2017- [Soft Typology Tool v. 0.3. Software package](#).
- 2014 [Searchable Klamath Dictionary: Adapted from Barker \(1963, 1964\)](#)

PRESENTATIONS

Refereed Presentations

- Upcoming MaxEnt Learners are Biased Against Giving Probability to Harmonically Bounded Candidates. To be presented at the *Society for Computation in Linguistics (2022)*. Online. Feb 2022.

- 2021 (with Caitlin Smith, Eric Rosen, and Paul Smolensky) Emergent Gestural Scores in a Recurrent Neural Network Model of Vowel Harmony, Talk at the *Society for Computation in Linguistics (2021)*. Online. Feb 17, 2021.
- 2021 (with Caitlin Smith) Learnability of derivationally opaque processes in the Gestural Harmony Model, Poster presentation at the *Society for Computation in Linguistics (2021)*. Online. Feb 16, 2021.
- 2020 (with Caitlin Smith) Learnability of derivationally opaque processes in the Gestural Harmony Model, Poster at the *Annual Meeting on Phonology 2020 (AMP 2020)*. Online via University of California Santa Cruz, Santa Cruz. Sep 20, 2020.
- 2020 Frequency Matching Behavior in On-line MaxEnt Learners, Poster at the *Society for Computation in Linguistics (SCiL 2020)*. New Orleans, LA. Jan 2-5, 2020.
- 2020 The Effect of Learnability on Constraint Weighting: Case Study from Contour Tone Licensing, Poster at the *Annual Meeting of the Linguistics Society of America 2020*. New Orleans, LA. Jan 2-5, 2020.
- 2019 Language-Specific Factors Influence Learnability: Case Study from Contour Tone Licensing, Poster at the *50th Annual Meeting of the North East Linguistic Society*. Massachusetts Institute of Technology. Boston, Mass. Oct 25-27, 2019.
- 2019 Learning Prevents MaxEnt from Giving Probability to Harmonically Bounded Candidates, Talk at the *Annual Meeting on Phonology 2019*. Stony Brook University. Stony Brook, NY. Oct 13, 2019.
- 2019 Place and Position Are Computationally Different, Poster at the *Society for Computation in Linguistics (SCiL 2019)*. New York City. Jan 5, 2019.
- 2019 (with Caitlin Smith) Formal Characterizations of True and False Sour Grapes, Talk at the *Society for Computation in Linguistics (SCiL 2019)*. New York City. Jan 4, 2019.
- 2018 The Sweet Spot Effect: Rare Phonotactic Patterns Require Specific Lexical Frequencies, Poster at *Annual Meeting on Phonology 2018*. University of California San Diego. La Jolla, CA. Oct. 7, 2018.
- 2018 (with Caitlin Smith) Computational Complexity and Sour-Grapes-Like Patterns. Poster at *Annual Meeting on Phonology 2018*. University of California San Diego. La Jolla, CA. Oct. 6, 2018.
- 2018 Rare Hard-To-Learn Patterns Stably Learned Due To Language-Specific Lexical Frequencies, Talk at *Analyzing Typological Structure: From Categorical to Probabilistic Phonology*. Stanford University. Palo Alto, CA. Sep. 22, 2018.
- 2018 Learnability captures soft typology of coda stop inventories, Talk at *Linguistics Society of America 2018*. Salt Lake City, UT. Jan 6, 2018.

- 2017 Soft typology arises from learning bias even with markedness hierarchies. Poster presented at the *Annual Meeting on Phonology 2017*. New York University. New York City, NY. Sep 15, 2017.
- 2016 *Hillary Clinton is rich but not Mitt Romney rich: Nouns modifying degree and dimension of adjectives*. Talk presented at *Sinn und Bedeutung 21*. Edinburgh, UK. Sep 4, 2016.
- 2016 Nouns attributively modifying adjectives in English. Poster presented at the *West Coast Conference on Formal Linguistics 34*. Salt Lake City, UT. April 30, 2016.
- 2016 Sonority based stress in Harmonic Grammar: Nontransitive conflation in phonological hierarchies. Talk presented at the *52nd meeting of the Chicago Linguistics Society*. University of Chicago. Chicago, IL. April 22, 2016.
- 2016 Harmony in Harmonic Grammar by reevaluating faithfulness. Talk presented at the *Linguistics Society of America 2016*. Washington DC. January 9, 2016.
- 2015 Harmony in Harmonic Grammar by reevaluating faithfulness. Talk presented at the *46th meeting of the North East Linguistics Society*. Concordia University. Montréal, Québec. October 17, 2015.
- 2015 Never surfacing underlying representations in Klamath. Talk presented at the *51st meeting of the Chicago Linguistics Society*. University of Chicago. Chicago, IL. April 25, 2015.
- 2015 Vowel raising and positional privilege in Klamath. Poster presented at the *12th meeting of the Old-World Conference on Phonology*. Barcelona, Spain. January 29, 2015.
- 2015 Vowel raising and positional privilege in Klamath. Talk presented at the *Society for the Study of the Indigenous Languages of the Americas 2015*. Portland, OR. January 11, 2015.
- 2014 Pathological effects of Local Disjunction. Poster presented at the *Annual Meeting on Phonology 2014*. Cambridge, MA. September 20, 2014.

Invited Presentations

- Upcoming What Statistical Learning Can Tell Us About the Sound Pattern of the World's Languages, Invited Talk at Florida State University. Jan 21, 2022.
- 2020 Inter-Generational Learning Affects Phonotactic Typology, Invited Talk at University of California, Berkeley. Feb 21, 2020.
- 2020 How Statistical Learning Impacts the Sound Pattern of the World's Languages, Invited Talk at Miami University. Feb 5, 2020.
- 2018 Substantively Biased Constraints Capture Typology of Coda Stop Inventories, Invited Talk at University of Massachusetts Amherst. April 10, 2018.

Workshops

- 2019 Learnability Prevents MaxEnt From Overgenerating, Talk at the *Southern California Annual Meeting on Phonology*. California State University, Long Beach. April 27, 2019.
- 2018 (with Caitlin Smith) Weakly Deterministic Characterizations of Unbounded Tonal and Featural Spreading, Talk at the *Southern California Annual Meeting on Phonology*. University of Southern California. April 7, 2018.
- 2018 Soft Typology of Coda Place of Articulation Distributions Requires Synchronic Constraints, Talk at *Workshop on the Emergence of Universals*. Ohio State University. Columbus, OH. Feb 19, 2018.
- 2017 Interactions of learnability and phonological grammar drive the typology of coda stop inventories, Talk at the *Southern California Annual Meeting on Phonology*. University of California, Los Angeles. May 6, 2017

TEACHING

(as lecturer)

- 2022 Winter LING 111 Introduction to Language. University of Michigan.
- LING 111 is a large introductory course, focusing on contextualizing language and linguistics as a cognitive science, as a social tool that connects groups of people, and as an important way to promote social justice.
 - 200-300 students, supervising 4 graduate student instructors.
 - As part of U of M's Foundational Courses Initiative, I am working with faculty in the Linguistics department and the Center for Research on Learning and Teaching to make this course more inclusive, equitable, and make better use of evidence-based 21st-century teaching techniques and technologies.
- 2022 Winter LING 394 Linguistics of Automated Speech Recognition. University of Michigan.
- LING 394 is a course focused on how phonetics and phonology inform automated speech recognition technology, intended to introduce students to Python coding and address issues of systemic bias in speech recognition technology.
 - I am teaching 30 students mostly advanced undergraduates majoring in linguistics, computer science, or cognitive science.
- 2021 Fall LING 193 Human Language and Computers. University of Michigan.
- LING 193 is an introductory computational linguistics course, introducing students to linguistic theory, Python coding, and ethical issues in Natural Language Processing.
 - I taught 30 students, mostly freshman and sophomores with a wide range of coding and previous linguistics experience.

- 2021 Fall LING 192 Sounds in our Changing World. University of Michigan.
- LING 192 is a freshman seminar for a general audience covering phonetics, phonology, and sociolinguistics.
 - I taught 30 students, mostly freshmen.
- 2021 Winter LING 313 Sound Patterns. University of Michigan.
- LING 313 is an introductory phonetics and phonology course for linguistics majors.
 - I taught 40 students, mostly linguistics majors.
- 2021 Winter LING 192 The Sounds of the World's Languages. University of Michigan.
- LING 192 is a freshman seminar for a general audience covering phonetics, phonology, and sociolinguistics.
 - I taught 30 students.
- (as teaching assistant)**
- 2021 Spring LING 301 Introduction to Phonetics and Phonology. USC. (Instructor of record: Stephanie Shih)
- LING 301 is the introductory undergraduate phonetics and phonology course at USC.
 - I helped design and grade assignments and assessments, and helped organize and develop content for lectures.
- 2021 Spring LING 415 Phonetics. USC. (Instructor of record: Louis Goldstein)
- LING 415 is the upper level undergraduate phonetics course at USC.
 - I helped design and grade assignments and assessments, and helped organize and develop content for lectures.
- 2020 Fall LING 110 In a Word. USC. (Instructor of record: Hajime Hoji)
- LING 110 is a general education course covering phonology, morphology, semantics, and psycholinguistics, focused on teaching students to gain a scientific understanding of human language as a system of complex mental computation.
 - I taught two weekly discussion sessions of twenty students over Zoom, worked with students outside of class time, and helped develop assignments and assessments.
- 2020 Spring LING 301 Introduction to Phonetics and Phonology. USC. (Instructor of record: Brian Smith)
- 2020 Spring LING 303 Logic and Meaning in Language. USC. (Instructor of record: Deniz Rudin)

- LING 303 is the introductory undergraduate semantics course at USC.
- I helped design and grade assignments and assessments, and helped organize and develop content for lectures.

2019 Fall LING 275 Language and Mind. USC. (Instructors of record: Toben Mintz and Barry Schein)

- LING 275 is a general education course covering phonetics, phonology, and psycholinguistics, focused on teaching students to gain a scientific understanding of human language as a system of complex mental computation.
- Each time I TAed for this course, I taught three weekly discussion sessions of up to twenty-five students, worked with students outside of class time, and helped develop and grade assignments and assessments.

2017 Spring LING 275 Language and Mind. USC. (Instructors of record: Sandra Disner and Toben Mintz)

2016 Fall LING 275 Language and Mind. USC. (Instructors of record: Elsi Kaiser and Rachel Walker)

2016 Spring PSYC 326 Behavioral Neuroscience. USC. (Instructor of record: David Lavond)

- Graded quizzes and exams.

2016 Spring PSYC 305 Learning and Memory. USC. (Instructor of record: David Lavond)

- Graded quizzes and exams.

2015 Fall LING 275 Language and Mind. USC. (Instructors of record: Toben Mintz and Barry Schein)

2015 Spring LING 285 Human Language and Technology. USC. (Instructor of record: Khalil Iskarous)

- LING 285 is a general education course covering phonetics, and computational linguistics, serving as an introductory course in coding and covering topics such as speech synthesis, speech recognition, and dynamic programming.
- I taught three weekly labs of up to twenty students, developed activities to help students learn how to code simple speech synthesis and speech recognition programs, worked with students outside of class time, and helped develop and grade assignments and assessments.

2014 Fall LING 275 Language and Mind. USC. (Instructors of record: Toben Mintz and Barry Schein)

Other Teaching Experience

2021, Spring Member, USC Linguistics Teaching Assistants Support Group

2020, Fall USC Center for Excellence in Teaching Future Faculty Teaching Institute, USC

- 2018, Spring Organizer of Computational Phonology Reading Group, USC
- 2017 Hard to learn languages are hard to find: A finer look at factorial typology, Invited lecture in Linguistics 401: Undergraduate Advanced Phonology, USC. Oct 16, 2017. (Instructor of Record, Rachel Walker)
- 2016, Spring Tutor for LING 301 Introduction to Phonetics and Phonology
- 2016, Winter Course development assistant: Language and Number. USC with Roumyana Pancheva.
- 2012-2013 Freelance High School Tutor in Math and Physics
- 2012 Spring Instructor: Advanced English as a Second Language. Oberlin College.
- 2010-2012 Math Tutor at Oberlin College

RESEARCH ASSISTANTSHIPS

- 2014 Summer Research assistant to Prof. Khalil Iskarous, USC
- Development of computational models, analysis of stress typology

INSTITUTES AND SUMMER SCHOOLS

- 2015, Summer Linguistic Society of America Summer Institute

ACADEMIC SERVICE

- 2019-2020 Technology Coordinator, USC Graduate Students in Linguistics.
- 2018 Organizer, Southern California April Meeting on Phonology (SCAMP) 2018, USC.
- 2016 Organizer, 2016 Annual Meeting on Phonology, USC.
- 2014-2015 Technology Director, USC Graduate Students in Linguistics.

REVIEWING

Journal Articles: *Glossa* (2018-), *Phonology* (2018-)

Abstracts: Society for Computation in Linguistics (SCIL) (2021-), 3rd Workshop on Turkish, Turkic and the Languages of Turkey (2017)

PROGRAMMING LANGUAGES

Code Python, R, Java, MatLAB

SOCIETIES

Linguistic Society of America, SSILA

Updated 1/7/22