# Kristine M. Yu

CONTACT INFORMATION Assistant Professor
Department of Linguistics

University of Massachusetts Amherst

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RESEARCH INTERESTS

**Prosody, from the speech signal on up:** tone, intonation, phonetics, phonology, mathematical modeling of speech, language learning and variation, human language processing

ACADEMIC APPOINTMENTS

#### **Assistant Professor**

September 2011 – present

Department of Linguistics, University of Massachusetts

- Affiliations:
  - o Institute for Computational and Experimental Study of Language
  - o UMass Phonetics Lab

## **Postdoctoral Researcher**

September 2011 – June 2012

Department of Linguistics, University of Maryland College Park

# **EDUCATION**

# University of California Los Angeles, Los Angeles, CA

Ph.D., Linguistics, September 2011

- Thesis Topic: The learnability of tones from the speech signal
- Advisers: Professor Edward Stabler, Professor Megha Sundara

M.A., Linguistics, December 2008

- Thesis Topic: The prosody of second position clitics and focus in Zagreb Croatian
- Adviser: Professor Sun-Ah Jun

# Otto-von-Guericke-Universität Magdeburg, Magdeburg, Germany

Fulbright scholar, Abteilung Biophysik, September 2004 – August 2005

• Synchronization of glycolytic oscillations in yeast cell populations

# Stanford University, Stanford, CA

B.S. Chemistry, June 2004

- With distinction
- Minor in physics

# University of Southern California, Los Angeles, CA

August 2000 - May 2001

- Trustee Scholar
- Resident Honors Program

### Honors

# University of Massachusetts Institute for Social Science Research

• Social Science Research Scholar, 2014 – 2015

#### **National Science Foundation**

• Graduate Research Fellowship, 2008 – 2011

# **Ohio State University Research Foundation**

Machine Learning Summer School/Workshop 2009 Travel Grant

## **University of California Los Angeles**

- Department of Linguistics Ladefoged Scholarship Award, 2010
- Graduate Research Mentorship Program Fellowship, 2007 2008
- Summer Graduate Research Mentorship Program Fellowhip, 2007, 2008
- Linguistic Society of America Linguistic Institute Fellowship, 2007
- Humanities Dean's Fellowship, 2006 2007

# **Institute of International Education Fulbright Program**

- Fulbright Scholarship, Germany, 2004 2005
- Fulbright Enterprise Scholarship, Germany (4/107 grantees selected), 2004 2005

# **Deutscher Akademischer Austausch Dienst**

DAAD study scholarship, 2004 (Declined)

# **Barry Goldwater Scholarship and Excellence in Education Program**

• Barry Goldwater scholarship, 2003

#### **GRANTS**

Andrew Mellon Foundation / Center for Teaching & Faculty Development at the University of Massachusetts Amherst, "Five Colleges Prosody Community", \$10,000, 2013 – 2014.

- Mentoring network small group lunches
- Winter prosody bootcamp: January 17-18, 2014
- UMass Tone Workshop: June 2-3, 2014

Consultant, "Effects of Syntactic Constituency on Phonology and Phonetics of Tone" (PI: Lisa Selkirk), NSF, Behavioral and Cognitive Sciences, Award 1147083, \$361,283.00, July 1, 2012 – December 31, 2015.

# REFEREED JOURNAL PUBLICATIONS

- [1] Yu, Kristine M. and Hiu Wai Lam. (2014). The role of creaky voice in Cantonese tone perception. *The Journal of the Acoustical Society of America*, 136(3), 1320-1333. [web, pdf, supplementary materials]
- [2] Yu, Kristine M. (To appear). The experimental state of mind in elicitation: illustrations from tonal fieldwork. *Language Documentation & Conservation*. [manuscript, supplementary materials]
- [3] Zuraw, Kie, Yu, Kristine M., and Robyn Orfitelli. (2014). The word-level prosody of Samoan. *Phonology*, 31(2), 271–327. [web, pdf]
- [4] J. Liu, S. Louie, W. Hsu, **K. M. Yu**, H. B. Nicholas, and G. L. Rosenquist. (2008). Tyrosine sulfation is prevalent in human chemokine receptors important in lung disease. *American Journal of Respiratory Cell and Molecular Biology*, 38: 738–743. doi:10.1165/rcmb.2007-0118OC
- [5] Y. R. Thorstenson, A. Roxas, R. Kroiss, M. A. Jenkins, K. M. Yu, T. Bachrich, D. Muhr, T. L. Wayne, G. Chu, R. W. Davis, T. M. U. Wagner, and P. J. Oefner. (2003). Contributions of *ATM* mutations to familial breast and ovarian cancer. *Cancer Research*, 63: 3325–3333. http://cancerres.aacrjournals.org/cgi/content/abstract/63/12/3325
- [6] A. S. Torralba, K. Yu, P. Shen, P. J. Oefner, and J. Ross. (2003). Experimental test of a method for determining causal connectivities of species in reactions. *Proc. Natl. Acad. Sci. USA*, 100: 1494–1498. doi:10.1073/pnas.262790699
- [7] **K. M. Yu**, J. Liu, R. Moy, H. C. Lin, H. B. Nicholas, and G. L Rosenquist. (2002). Prediction of tyrosine sulfation in seven-transmembrane peptide receptors. *Endocrine*, 19: 333–337. doi:10.1385/ENDO:19:3:333
- [8] S. Šale, R. Sung, P. Shen, **K. Yu**, Y. Wang, G. Duran, J. Kim, T. Fojo, P. J. Oefner, and B. I. Sikic. (2002). Conservation of the class I  $\beta$ -tubulin gene in human populations and

lack of mutations in lung cancers and paclitaxel-resistant ovarian cancers. *Molecular Cancer Therapeutics*, 1: 215–225. http://mct.aacrjournals.org/content/1/3/215.short

#### **BOOK CHAPTERS**

[1] Kuo, Grace C.-H. and Kristine M. Yu. (2012). Taiwan Mandarin quantifiers. In *Handbook* of *Quantifiers in Natural Language*, ed. Edward Keenan and Denis Paperno, pp. 647 – 698. doi:10.1007/978-94-007-2681-9 12 [pdf]

# CONFERENCE PROCEEDINGS

- [1] Yu, Kristine M., Khan, Sameer ud Dowla, and Sundara, Megha. (2014). Intonational phonology in Bengali and English infant-directed speech. Speech Prosody 2014.
- [2] Yu, Kristine M. (2011). The sound of ergativity: morphosyntax-prosody mapping in Samoan. In: Suzi Lima, Kevin Mullin, Brian Smith, eds., *Proceedings of the 39th Annual Meeting of the North East Linguistic Society*, Vol. 2, Graduate Linguistic Student Association, Amherst, MA, pps. 825 838. [pdf]
- [3] Yu, Kristine M. (2011). Temporal resolution in Cantonese tone perception. In: *Proceedings of The Psycholinguistic Representation of Tone*.
- [4] Yu, Kristine M. and Hiu Wai Lam. (2011). The role of creaky voice in Cantonese tonal perception. In: *Proceedings of the 17th International Congress of Phonetic Sciences*, 2240 2243. [pdf]
- [5] Shue, Yen-Liang, Keating, Patricia, Vicenik, Chad, and Kristine Yu. (2011). VoiceSauce: a program for voice analysis. In: *Proceedings of the 17th International Congress of Phonetic Sciences* 1846 1849. [pdf]
- [6] Yu, Kristine M. Laryngealization and features for Chinese tonal recognition. (2010). In: *Proceedings of Interspeech* 2010, 1529 1532. [web, pdf]
- [7] Yu, Kristine M. (2009). The prosody of second position clitics and focus in Zagreb Croatian. In: Maria Babyonyshev, Daria Kavitskaya, Jodi Reich, eds., *Formal Approaches to Slavic Linguistics #17: The Yale Meeting 2008.*, Michigan Slavic Publications, Ann Arbor, MI, pps. 253 270. [pdf]

# TECHNICAL REPORTS

[1] Yu, Kristine M. (2010). Representational maps from the speech signal to phonological categories: a case study with lexical tones. In: Thomas Graf, ed., UCLA Working Papers in Linguistics, Papers in Mathematical Linguistics 1, Volume 15, Article 5: 1 – 30. [pdf]

# POPULAR ARTICLES

[1] Kristine M. Yu, Sameer ud Dowla Khan, Alejandrina Cristia, Huei-Mei Liu, Megha Sundara (2011). The joint purpose of pitch patterns in "motherese": drawing attention and conveying language structure. ASA Lay Language Papers 162nd Acoustical Society of America Meeting.

# INVITED TALKS

- [1] Yu, Kristine M. (2014). The sound of ergativity: tonal marking of absolutive case in Samoan. McGill University Workshop on Syntax-Prosody Mapping in Verb-Initial Languages. May 2014.
- [2] Yu, Kristine M. (2013). Phonological structure in infant directed speech. Stonybrook University Linguistics Colloquium. September 2013.
- [3] Yu, Kristine M. (2012). The learnability of tones from the speech signal. New York University Linguistics Colloquium. November 30, 2012.
- [4] Yu, Kristine M. (2012). Samoan morphosyntax-prosody mapping. University of Maryland Linguistics Colloquium. February 3, 2012.
- [5] Yu, Kristine M. (2011). The learnability of tones from the speech signal. Macquarie University Linguistics Colloquium. November 30, 2011.

- [6] Yu, Kristine M. (2011). Speech rhythm and acquisition. Macquarie University Child Language Lab. November 29, 2011.
- [7] Yu, Kristine M. (2011). The learnability of tones from the speech signal. Harvard University Linguistics Colloquium. November 15, 2011.
- [8] Yu, Kristine M. (2011). The learnability of tones from the speech signal. University of California San Diego Linguistics Colloquium. November 7, 2011.
- [9] Yu, Kristine M. (2011) The learnability of language-specific f0-based rhythmic patterns. 162nd meeting of the Acoustical Society of America. November 4, 2011.
- [10] Yu, Kristine M. (2011). The learnability of tones from the speech signal. Northeast Computational Phonology Circle. Yale University. October 15, 2011.
- [11] Yu, Kristine M. (2011). The learnability of tones from the speech signal. University of Delaware Linguistics and Cognitive Science Colloquium. October 7, 2011.
- [12] Yu, Kristine M. (2011). Studying language learning from the speech signal. Institute for Computational and Experimental Study of Language Launch, University of Massachusetts, Amherst, April 1, 2011.
- [13] Yu, Kristine M. (2011). How to study how tones are learned. Workshop on how to study a tone language: from the first elicitation to the latest software. University of California, Berkeley, February 21, 2011.
- [14] Yu, Kristine M. (2011). Inductive biases for learning phonological categories. University of Massachusetts, Amherst, February 15, 2011.
- [15] Yu, Kristine M. (2011). Discovering the intonational phonology of Samoan: a fieldwork tutorial. University of Massachusetts, Amherst, February 14, 2011.
- [16] Yu, Kristine M. (2009). The sound of ergativity: morphosyntax-prosody mapping in Samoan. University of Chicago Workshop on Language, Cognition, and Computation, June 5, 2009.

# REFEREED CONFERENCE AND WORKSHOP PRESENTATIONS

- [1] Yu, Kristine M., Sameer ud Dowla Khan and Megha Sundara. (2014). Intonational phonology in Bengali and English infant-directed speech. Speech Prosody 7, Dublin, 2014.
- [2] Yu, Kristine M., and Hiu Wai Lam. (2011). The role of creaky voice in Cantonese tonal perception. International Congress of Phonetic Sciences XVII, Hong Kong, 2011.
- [3] Yu, Kristine M. (2011). Representations for learning phonological categories. Linguistics Society of America, Pittsburgh, PA, January 7, 2011.
- [4] Yu, Kristine M. (2011). Coarse representations for phonemic categories. North Eastern Linguistic Society 41, Philadelphia, PA, October 23, 2010.
- [5] Yu, Kristine M. (2009). The sound of ergativity: morphosyntax-prosody mapping in Samoan. Austronesian Formal Linguistics Association XVI, UC Santa Cruz, CA.
- [6] Yu, Kristine M. (2009). The sound of ergativity: morphosyntax-prosody mapping in Samoan. Linguistics Society of America, San Francisco, CA.
- [7] Yu, Kristine M. (2008). The sound of ergativity: morphosyntax-prosody mapping in Samoan. North East Linguistic Society 39, Ithaca, NY.
- [8] Zuraw, Kie, Orfitelli, Robyn, and Kristine Yu. (2008). Word-level prosody of Samoan. Austronesian Formal Linguistics Association XV, Sydney, Australia.
- [9] Yu, Kristine. (2008). The prosody of second position clitics and focus in Zagreb Croatian. Formal Approaches to Slavic Linguistics 17, New Haven, CT, May 11, 2011.

## CONFERENCE POSTERS

- [1] Khan, Sameer ud Dowla and Kristine M. Yu. (2014). Intonational phonology in infant-directed speech. Linguistics Society of America, Minneapolis, MN.
- [2] Silverstein, Kate and Kristine M. Yu. (2013). Investigating tonal spaces using an extension of VoiceSauce voice analysis software. Acoustical Society of America, San Francisco, CA, December 2013.
- [3] Yu, Kristine M., Khan, Sameer ud Dowla and Megha Sundara. (2011). A cross-linguistic investigation of information structure in infant-directed speech. Experimental and Theoretical Approaches to Prosody, September 23, 2011.
- [4] Khan, Sameer, Yu, Kristine M., and Jaime Roemer. (2011). Speech rhythm and f0 patterns in Bengali: implications for prosodic acquisition. Acoustical Society of America, Seattle, WA, May 27, 2011.
- [5] Yu, Kristine M. (2011). Acoustic representations for tonal phonological categories. Acoustical Society of America, Seattle, WA, May 23, 2011.
- [6] Yu, Kristine M. (2010). Laryngealization and features for Chinese tonal recognition. Interspeech 2010, Makuhari, Japan, September 14, 2010.
- [7] Yu, Kristine. (2010). Linear separability and feature selection in the acquisition of tone. LabPhon 12, Albuquerque, NM, July 8, 2010.
- [8] Lam, Hiu Wai and Kristine M. Yu. (2010). The role of creaky voice quality in Cantonese tonal perception. Acoustical Society of America, Baltimore, MD, April 23, 2010.
- [9] Yu, Kristine M., Lam, Hiu Wai, and Shing-Yin Li. (2010). An acoustic and electroglotto-graphic study of Cantonese tone. Acoustical Society of America, Baltimore, MD, April 23, 2010.
- [10] Yu, Kristine M. (2010). Linear separability and feature selection in the acquisition of tone. Computational Modelling of Sound Pattern Acquisition, University of Alberta, Feb. 14, 2010.
- [11] Yu, Kristine M. (2009). Contextual tonal variation in level tone languages. Acoustical Society of America, Portland, OR.
- [12] Orfitelli, Robyn and Kristine Yu. (2009). The intonational phonology of Samoan. Austronesian Formal Linguistics Association XVI, UC Santa Cruz, CA.
- [13] Yu, Kristine. (2008). The prosody of second position clitic placement and focus in Zagreb Croatian. Acoustics'08, Acoustical Society of America, Paris, France.

# STUDENT ADVISING

# **Doctoral dissertation committees**

- Mullin, Kevin (in progress).
- Pizzo, Presley (in progress).

# Generals paper committees

- Conner, Tracy (in progress).
- Fainleib, Yelena (in progress).
- Nazarov, Aleksei (2013). Generalization in phonological representations: a learning-based argument for grammars with multiple levels of representation.
- Fainleib, Yelena (2013). Relative scaling of prosodic boundaries size in sentence production
- Elsman, Minta (2013). Vowel devoicing and syllable position in Uzbek.
- Moore-Cantwell, Claire (2012). Syntactic probability influences duration.

## TEACHING EXPERIENCE

# University of Massachusetts Amherst, Amherst, MA

#### Instructor

September 2012 – present

- LINGUIST 592B: Speech processing (Graduate)
  - o Spring 2014 (with Kate Silverstein)
- LINGUIST 751: Topics in Phonology (Graduate)
  - o Spring 2014 (co-taught with Brian Dillon; *Prosodic parsing*)
- LINGUIST 716: Topics in Phonetics (Graduate)
  - o Fall 2013 (co-taught with John Kingston; Categories)
- LINGUIST 606: Phonological Theory (Graduate)
  - Spring 2013
- LINGUIST 748: Structure of a non Indo-European Language (Graduate)
  - o Spring 2013 (co-taught with Alice Harris; Language: Dzongkha)
- LINGUIST 730: Proseminar Phonological Theory (Graduate)
  - Fall 2012 (*Prosodic theory*)

# University of California Los Angeles, Los Angeles, CA

Instructor / course designer

**January 2009 – June 2010** 

- LING 254A/B: Quantitative methods in linguistics (Graduate)
  - o Winter 2010
  - o Winter 2009 (with Megha Sundara and Kie Zuraw; Statistics and R practicum)

# Teaching Assistant

March 2009 - December 2010

- LING 104: Experimental phonetics (Undergraduate)
  - o Fall 2010 (with Sun-Ah Jun)
- Honors Collegium 56: Language as a window to the mind (Undergraduate)
  - o Spring 2009 (with Susie Curtiss)

# PROFESSIONAL SERVICE

# Ad-hoc reviewing

# Journals

- Lingua, 2013 2014
- Journal of the International Phonetic Association, 2013 2014
- Language Documentation & Conservation, 2013
- Journal of the Acoustical Society of America, 2011 2013
- Journal of Phonetics, 2011

# Conferences

- 2014 Joint Meeting of SIGMORPHON and SIGFSM,
- Exploring the Interfaces 3, 2014
- Tonal Aspects of Language, 2014
- Annual Meetings on Phonology, 2013 2014
- Linguistic Society of America Annual Meeting, 2012 2014
- West Coast Conference on Formal Linguistics, 2012 2014

# PROFESSIONAL MEMBERSHIPS

- Linguistic Society of America (2007 present)
- Acoustical Society of America (2008 present)
- International Speech Communication Association (2008 present)
- Cognitive Science Society (2010 present)

# DEPARTMENTAL SERVICE

- Library liaison, 2013 2014
- Admissions Committee, 2012 2013