# James P. Kirby

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#### **Research** interests

Phonetics & phonology, computational and statistical modelling, unsupervised learning, sound change, tone and phonation, languages of mainland Southeast Asia

## Employment

University of Edinburgh Edinburgh, UK Lecturer in Phonetics 2011-

### **Additional Research and Teaching Positions**

Faculty, LSA Summer Institute, University of Michigan, 2013 Invited Lecturer, Vietnam National University of Social Sciences and Humanities, 2012 Instructor, European Summer School on Logic, Language and Information, 2012 Center for Khmer Studies Senior Research Fellow, Phnom Penh, 2011 Invited Researcher, MICA Center, Hanoi University of Technology, 2008 Invited Contributor, SEALANG Library (http://sealang.net/library)

### Education

PhD Linguistics, University of Chicago, 2010 with distinction
MA Linguistics, University of Chicago, 2007
MA Linguistics, University of California-San Diego, 2005
BA Linguistics & Germanic Linguistics, University of Wisconsin-Madison, 2000, with distinction

### Summer Schools and Additional Study

LSA Summer Institute, University of California–Berkeley, 2009 European Summer School on Corpus Phonology, University of Augsburg, 2008 Southeast Asian Summer Studies Institute, University of Wisconsin–Madison, 2004–2005

### Publications

Submitted. Southeast Asian tone in areal perspective (with M. Brunelle). In R. Hickey (ed.), *The Cambridge Handbook of Areal Linguistics*. Cambridge: Cambridge University Press.

To appear a. Re-assessing tonal diversity and geographical convergence in mainland Southeast Asia (with M. Brunelle). In N. Enfield and B. Comrie (eds.), *Southeast Asian Languages: The State Of The Art.* Berlin: Mouton de Gruyter.

To appear b. Incipient tonogenesis in Phnom Penh Khmer: Acoustic and perceptual studies. *Journal of Phonetics.* 

In press. Assessing incomplete neutralization of final devoicing in German (with T. B. Röttger, B. Winter, S. Grawunder, and M. Grice). *Journal of Phonetics.* 

2014. Incipient tonogenesis in Phnom Penh Khmer: Computational studies. *Laboratory Phonology* **5**(1):195–230.

2013a. The role of probabilistic enhancement in phonologization. In A. Yu (ed.), Origins of Sound Change: Approaches to Phonologization (pp. 228–246). Oxford: Oxford University Press.

2013b. A model of population dynamics applied to phonetic change (with M. Sonderegger). In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 776–781). Austin, TX: Cognitive Science Society.

2011a. Modeling the acquisition of covert contrast. In Wai-Sum Lee and Eric Zee (eds.), *Proceedings* of the XVII International Congress of Phonetic Sciences, 1090–1093.

2011b. Vietnamese (Hanoi Vietnamese). Journal of the International Phonetic Association 41(3): 381–392.

2011c. Multilingual learning with parameter co-occurrence clustering (with J. Riggle, M. Bane, and J. Sylak). In S. Lima, K. Mullin, and B. Smith (eds.), *Proceedings of the 39th Annual Meeting of the North East Linguistic Society* **2**:67–82.

2010a. Dialect experience in Vietnamese tone perception. *Journal of the Acoustical Society of America* **127**(6):3749-3757.

2010b. Cue selection and category restructuring in sound change. University of Chicago PhD thesis.

2010c [in press]. Acquisition of covert contrast: An unsupervised learning approach. In A. Baker, R. Baglini, T. Grinsell, J. Keane, and J. Thomas (eds.), *Proceedings from the Annual Meeting of the Chicago Linguistic Society* 46, Volume 2.

2007. Erculator: A Web application for constraint-based phonology (with J. Riggle, M. Bane, E. King, H. Rivers, E. Rosas, and J. Sylak). In M. Becker (ed.), University of Massachusetts Occasional Papers in Linguistics 36: Papers in Theoretical and Computational Phonology.

2007. Lexical and phonotactic effects on wordlikeness judgments in Cantonese (with A. Yu). In J. Trouvain and W. J. Barry (eds.), *Proceedings of the XVI International Congress of the Phonetic Sciences*, 1389–1392.

### Manuscripts

2008. Morphological paradigm effects on phonetic realization (with Alan Yu). U. Chicago ms.

2006. Vietnamese and the structure of NP. U. Chicago ms.

#### **Book reviews**

2012. John Haiman, Cambodian. LINGUIST List.

2010. Kenneth Gregerson (ed.), Mon-Khmer Studies 36. LINGUIST List.

### **Edited volumes**

2007. Proceedings from the Annual Meeting of the Chicago Linguistic Society (43:1–2) (with M. Elliott, O. Sawada, E. Staraki, and S. Yoon). Chicago: Chicago Linguistic Society.

### Scientific Software

2008. vPhon: a Vietnamese phonetizer. http://www.lel.ed.ac.uk/~jkirby/vphon.html.

2007. Erculator: an application to create OT candidate tableaux, check their consistency, make inferences and other analyses, and format them for direct inclusion in a Word or LaTeX document (with J. Riggle & M. Bane). Erculator has since been reborn as PyPhon. http://code.google.com/p/clml/

#### Invited presentations

"Tone typology and contact-driven change in Mainland Southeast Asia" (with M. Brunelle), 2nd International Conference on Asian Geolinguistics, Bangkok, 24-25 May 2014.

"Voicing, tone, and phonological enhancement" (with D. Robert Ladd), Glasgow University Laboratory of Phonetics, 17 November 2013.

"Tonogenesis in Khmer: A cross-dialect comparison", Systèmes linguistiques et dialectologie, GIPSA-Lab, Grenoble, 16 May 2013.

"Computational modelling of sound change actuation", Workshop on Sound Change Actuation, University of Chicago, 17–18 April 2013.

"Dialect variation and phonetic change: Incipient tonogenesis in Khmer", University of Manchester Linguistic colloquium, 19 March 2013.

"Divergence and stability in phonetic change", University of California-San Diego, 4 March 2013.

"Modelling dialect variation and change", MoDyCo semináire «Mathématiques pour la linguistique de corpus», Université Paris Ouest Nanterre, 28 February 2013.

"Divergence and stability in phonetic change", University of Pennsylvania, 14 February 2013.

"Tone typology and contact-driven change in Mainland Southeast Asia" (in collaboration with Marc Brunelle), Berkeley Linguistic Society plenary, 17 February 2013.

"Experimental and statistical methods for the study of Southeast Asian Languages", Chulalongkorn University, Bangkok, 1 February 2013.

"Experimental and computational approaches to sound change", LEL Postgraduate Conference plenary, University of Edinburgh, 14 May 2012.

"Sound change in Khmer: Experimental and computational studies", 2nd Workshop on Sound Change, Kloster Seeon, 2 May 2012.

"Sound change in Khmer: Acoustic and perceptual studies", Institut für Linguistik, Köln, 9 January 2012.

"Vietnamese tone and the phonetics-phonology interface", University of Edinburgh, June 2010.

"A phonetics-phonology mismatch in Vietnamese", Workshop on Language, Cognition, & Computation, University of Chicago, June 2010.

"A phonetics-phonology mismatch in Vietnamese", UMass-Amherst, March 2010.

"The role of probabilistic enhancement in phonologization", UMass-Amherst, March 2010.

"Phonologization through adaptive subphonemic enhancement", joint meeting of the Workshops on Language, Cognition, and Computation and Language Variation and Change, Chicago, Feb 2010.

"Dialect influence on tone perception", Workshop on Language, Cognition, & Computation, University of Chicago, April 2009.

"Spectral cues to non-modal phonation", Hanoi University of Technology, October 2008.

"Morphological paradigm effects on vowel realization" (with A. Yu), Workshop on Language, Cognition, & Computation, University of Chicago, May 2008.

#### **Refereed** presentations

"Actuation without production bias" (with M. Sonderegger), Sound Change In Interacting Human Systems, Berkeley, 28-31 May 2014.

"On the mechanics of tonogenesis: evidence from prevoicing" (with D. R. Ladd), Sound Change In Interacting Human Systems, Berkeley, 28-31 May 2014.

"Gestural timing in Khmer word-initial clusters", ISSP 2014, Cologne, 5-8 May 2014.

"Gestural timing in Khmer word-initial clusters", BAAP 2014, Oxford, 9 April 2014.

"Tonogenesis in Khmer: A cross-dialect comparison", SEALS 23, Bangkok, 29 May 2013.

"Tonogenesis in Khmer: A cross-dialect comparison", LSA Annual Meeting, Boston, 5 January 2013.

"Tonogenesis in Khmer: A cross-dialect comparison", Workshop "Tone: Theory and Practice", Max Planck Institute for Evolutionary Anthropology, Leipzig, 28 September 2012.

"Tracking the acquisition of L2 phonetic contrast" (with A. Yu), LabPhon 13, Stuttgart, July 2012.

"Incomplete neutralization - a cognitive artifact of lexical co-activation?" (with T. Röttger, B. Winter & M. Grice), LabPhon 13, Stuttgart, 29 July 2012.

"Sound change in Khmer: Acoustic and perceptual studies", SEALS 22, Agay, France, 1 June 2012.

"Transphonologization as probabilistic contrast maintenance", Linguistic Society of Great Britain Annual Meeting, Manchester, 8 September 2011.

"Modeling the acquisition of covert contrast", XVII International Congress of Phonetic Sciences, Hong Kong, 18 August 2011.

"Modeling the acquisition of covert contrast", 19th Manchester Phonology Meeting, 21 May 2011.

"A tone split in Taoping Qiang", SEALS 21, Kasetsart University, Bangkok, 11 May 2011.

"Mixture models of phonologization", poster presented at the Workshop on Sound Change, Barcelona, October 2010.

"A probabilistic model of phonetic cue restructuring", poster presented at the 10th International Conference on Cognitive Modeling, Philadelphia, August 2010.

"Acquisition of suspended contrasts: an unsupervised learning approach", CLS 46, April 2010.

"The role of probabilistic enhancement in phonologization", LSA Annual Meeting, Baltimore, Jan 2010.

"Tonal similarity and tone perception in Vietnamese", SEALS 19, Saigon, May 2009.

"Linguistic experience in tone perception", poster presented at the 2nd ASA Special Workshop on Speech, 157th Meeting of the Acoustical Society of America, Portland, May 2009.

"Spectral cues to voice quality in Vietnamese", UCLA - UC Berkeley Conference on Languages of Southeast Asia, UCLA, February 2009.

"Comparative-induced event measure relations", LSA Annual Meeting, San Francisco, January 2009.

"Morphological paradigm effects on vowel realization" (with A. Yu), LSA Annual Meeting, San Francisco, January 2009.

"Multilingual learning with parameter co-occurrence clustering" (with J. Riggle, M. Bane, & J. Sylak), NELS 39, Cornell, November 2008.

"Morphological paradigm effects on vowel realization in the German weak verb", 14th Germanic Linguistics Annual Conference, Madison, May 2008.

"Distinguishing grammars in multilingual learning using parameter cooccurrence" (with J. Riggle, M. Bane, & J. Sylak), LSA Annual Meeting, Chicago, January 2008.

"Lexical and phonotactic effects on wordlikeness judgments in Cantonese" (with A. Yu), poster presented at the XVI International Congress of the Phonetic Sciences, Saarbrücken, August 2007.

"Gradient and categorical constraints: evidence from Cantonese" (with A. Yu), poster presented at the Workshop on Variation, Gradience and Frequency in Phonology, Stanford, July 2007.

"Hidden knowledge of syllable gap wellformedness" (with A. Yu), Experimental Approaches to Optimality Theory, Ann Arbor, May 2007.

"Efficiently computing OT typologies" (with J. Riggle, M. Bane, & J. O'Brien), LSA Annual Meeting, Anaheim, January 2007.

"Intrusive vowels in Cruceño Spanish" (with C. Kilpatrick & K. McGee), poster presented at the 4th Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu, December 2006.

"Information content and implicational structure in Czech nominal morphology", 12th International Morphology Meeting, Budapest, May 2006.

"Implicational structure in Czech nominal morphology", 17th International Conference on Historical Linguistics, Madison, August 2005.

### Teaching

University of Edinburgh

- LEL2B: Phonetic Analysis and Empirical Methods (Course Organizer 2012-)
- LEL2D: Cross-linguistic Variation: Limits and Theories (lectures on tonal phonology)
- Introduction to Phonetics and Phonology (MSc-level introductory course; CO 2011-)
- Honours Foundation: Phonology and Phonetics
- Prosody (Honours) (production and perception of tone and voice quality)
- Formal and Computational Approaches to Phonology (ILW 2013, with Julian Bradfield)

- Computational Phonology (from 2013)

Linguistic Institute (Summer 2013):

- Computational Modeling of Sound Change (with Morgan Sonderegger)

Vietnam National University, Hanoi (Summer 2012):

- Cơ sở âm vị học và ngữ âm học (Foundations of Phonology and Phonetics)

24th European Summer School in Logic, Language and Information (August 2012):

- Formal and Computational Approaches to Phonology (with Julian Bradfield)

University of Chicago

- Instructor, Introduction to Linguistics (Spring 2010)
- Instructor, Formal Methods & Statistics in Linguistics (Spring 2009, with Morgan Sonderegger)
- Instructor, Introduction to Linguistics (Winter 2010)
- Teaching Assistant, *Phonology 2* (Spring 2009)
- Teaching Assistant, *Phonetics* (Fall 2007)

University of California–San Diego

- Instructor, German Conversation 1C (3 sections, Spring 2004 & 2005)
- Instructor, German Conversation 1B (3 sections, Winter 2004)
- Instructor, German Conversation 1A (3 sections, Fall 2004)
- Teaching Assistant, Language as a Cognitive System (Winter 2005)
- Teaching Assistant, Introduction to Human Development (2 sections, Fall 2005)

#### Service

Member, Editoral Board, Mon-Khmer Studies, 2013-

Research Advisor, Linguistics and English Language, 2013-

Programme Director, MSc Speech and Language Processing, University of Edinburgh, 2013-4

Coördinator of Adjustments, School of Philosophy, Psychology and Language Sciences, University of Edinburgh, 2011–

Co-coördinator, Linguistic Circle colloquia series, Department of Linguistics and English Language, University of Edinburgh, 2011- (http://www.ppls.ed.ac.uk/lel/groups/linguistic-circle)

Co-organizer, Special Session "Phonetic Fieldwork", 17th International Congress of Phonetic Sciences, Hong Kong, August 17-21, 2011 (http://www.icphs2011.hk/ICPHS\_SpecialSessions.htm)

Student coördinator, University of Chicago Council on Advanced Studies Workshop on Language, Cognition, and Computation, 2009-2010 (http://cas.uchicago.edu/workshops/language/)

Invited referee: Language, Phonology, Journal of Phonetics, Phonetica, Journal of Linguistics, Journal of the Southeast Asian Linguistic Society, Journal of the Acoustical Society of America, Journal of the International Phonetic Association, Mon-Khmer Studies, Lingua, Cognitive Science, Language and Cognitive Processes Abstract/paper reviewer: Association for Computational Linguistics/International Joint Conference on Natural Language Processing (2009), Western Conference on Linguistics (2009), Chicago Linguistic Society (2006-2010), EVOLANG: International Conference on the Evolution of Language (2011–), Linguistic Society of America (2011), Linguistic Association of Great Britian (2012–), International Conference on Asian Language Processing (2012), Southeast Asian Linguistic Society (2013–), Phonology (2013–), Tonal Aspects of Language (2014)

Volunteer, Linguistic Society of America Annual Meeting (local committee), 2008

Organizer, 43rd Meeting of the Chicago Linguistic Society, 2007

President, Chicago Linguistic Society, 2006–2007

# Supervision

PhD students:

- Misnadin (lead)
- Marton Soskuthy (co-supervisor)

MSc dissertations supervised (2013):

- Miu, E. A model of phonetic change in a population setting
- Silva, J.

MSc dissertations supervised (2012):

- Maftei, D. Proto-phoneme reconstruction as naive Bayes inference
- Warren, M. Modeling allophonic rule learning with distributional and phonetic factors
- Williams, P. The evolution of dispersion in the sibilants of the Scandinavian languages

MA (Hons) dissertations supervised (2013):

- Shoemark, P. Cross-linguistic network structure effects on non-word acceptability judgements

PhD vivas (internal examiner, 2012–2013):

- Ishikawa, K. Phonemic categorization and phonotactic repair as parallel sublexical processes: Evidence from coarticulation sensitivity (A. Turk, lead)
- MacDonald, R. Counteracting age related effects in L2 acquisition: Training to distinguish between French vowels (M. Ota, lead)
- Maiteq, T. B. Prosodic constituent structure and anticipatory pharyngealisation in Libyan Arabic (A. Turk, lead)
- McKendry, I. Tonal association, prominence and prosodic structure in South-eastern Nochixtlan Mixtec (D. R. Ladd, lead)

#### **Professional Memberships**

Linguistic Society of America, 2003-

International Phonetic Association, 2009-

Cognitive Science Society, 2013–2014

Acoustical Society of America, 2009–2011

### Grants and Awards

Moray Endowment Fund award for 'Voicing, pitch, and phonological enhancement', 2013 Carnegie Trust research grant for 'Contrast and identity in Khmer speech', 2012 University of Edinburgh Hayter Committee fieldwork grant for 'Contrast and identity in Khmer speech', 2012 British Academy Overseas Conference Grant, 2011 Center for Khmer Studies Senior Research Fellowship, 2011 University of Chicago Doolittle-Harrison Travel Fellowship, 2009 Acoustical Society of America Special Workshop Travel Support Award, 2009 LSA Institute Fellowship, 2009 LSA Institute McCawley Fellowship Alternate, 2009 Andrew W. Mellon Hanna Holborn Gray Advanced Graduate Fellowship, 2008-2011 University of Chicago Century Fellowship, 2005-2010 FLAS Fellowship, Southeast Asian Studies Summer Institute, 2004–2005

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