

# Samuel Tilsen

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## Curriculum Vitae

### Academic appointments

2017- Associate Professor, Cornell University, Department of Linguistics  
2011-2017 Assistant Professor, Cornell University, Department of Linguistics  
2009-2011 NIH NRSA Postdoctoral Fellow, University of Southern California  
Hearing and Communication Neuroscience

### Education

2009 Ph.D. Linguistics, University of California, Berkeley  
Dissertation: Interactions between speech rhythm and gesture  
2006 M.A. Linguistics, University of California, Berkeley  
2001 B.A. Linguistics, B.A. English, Northwestern University

### Fellowships, awards, grants

2016 (Co-PI) Mario Einaudi Center for International Studies Small Grant:  
LabPhon15: Speech Dynamics and Phonological Representation  
(\$5,000).  
2016 (Co-PI) Cornell University Institute for the Social Sciences Small Grant:  
LabPhon15 - Speech Dynamics and Phonological Representation  
(\$3,500).  
2016 (Co-PI) NSF Conference Grant: LabPhon 15 - Speech Dynamics and  
Phonological Representation, Award #1551588, (\$24,845).  
2013 Cornell Center for Teaching Excellence Faculty Grant: Earmaster: a  
phonetic transcription game.  
2012 Cornell University Institute for the Social Sciences Small Grant:  
Visualizing speech: real-time MRI of the vocal tract (\$10,680).  
2009 NIH Ruth L. Kirschstein-NRSA Institutional Research Training Grant,  
University of Southern California.  
2008 NSF Doctoral Dissertation Improvement Grant, Award #0817767.

2001 Daniel Bonbright Award, Weinberg College of Arts and Sciences, Northwestern University.

## Peer-reviewed publications

- 2017 Exertive modulation of speech and articulatory phasing. Tilsen, S. *Journal of Phonetics*. dx.doi.org/10.1016/j.wocn.2017.03.001.
- 2016 Shared representations underlie metaphonological judgments and speech motor control. Tilsen, S. & Cohn, A. *Laboratory Phonology: Journal of the Association for Laboratory Phonology*, 7(1): 14, pp. 1-33, doi:10.5334/labphon.52
- 2016 Selection and coordination: the articulatory basis for the emergence of phonological structure. Tilsen, S. *Journal of Phonetics*, 55: 53-77. doi:10.1016/j.wocn.2015.11.005
- 2016 Anticipatory Posturing of the Vocal Tract Reveals Dissociation of Speech Movement Plans from Linguistic Units. Tilsen, S., Spincemaille, P., Xu, B., Doerschuk, P., Luh, W.-M., Feldman, E., Wang, Y. *PLoS ONE* doi:10.1371/journal.pone.0146813
- 2015 Real-time articulatory biofeedback with electromagnetic articulography. Tilsen, S., Das, D., & McKee, B. *Linguistics Vanguard* doi:10.1515/lingvan-2014-1006
- 2014 Selection and coordination in temporally constrained production. Tilsen, S. *Journal of Phonetics*, 44: 26-46.
- 2013 A dynamical model of hierarchical selection and coordination in speech planning. Tilsen, S. *PLoS ONE* 8(4): e62800. doi:10.1371/journal.pone.0062800
- 2013 Speech rhythm analysis with decomposition of the amplitude envelope: Characterizing rhythmic patterns within and across languages. Tilsen, S. & Arvaniti, A. *Journal of the Acoustical Society of America*, 134, 1: 628-639. doi:10.1121/1.4807565
- 2013 Inhibitory mechanisms in speech planning maintain and maximize contrast. Tilsen, S. In A. Yu (Ed.), *Origins of Sound Patterns: Approaches to Phonologization*. 112-127. Oxford: Oxford University Press.
- 2012 Articulatory gestures are individually selected in production. Tilsen, S. & Goldstein, L. *Journal of Phonetics*, 40: 764-779.
- 2012 Utterance preparation and stress clash: planning prosodic alternations. Tilsen, S. In Fuchs, S., Perrier, P., Weirich, M. & Pape, D. (Eds.) *Speech production and perception: Planning and dynamics*, pp. 119-156. Frankfurt Am Main: Peter Lang Verlag.
- 2011 Effects of syllable stress on articulatory planning observed in a stop-signal experiment. Tilsen, S. *Journal of Phonetics*, 39: 642-659.
- 2011 Metrical regularity facilitates speech planning and production. Tilsen, S. *Laboratory Phonology*, 2: 1, 185-218.

- 2010 Automated measurement of vowel formants in the Buckeye Corpus. Yao, Y., Tilsen, S., Sprouse, R., & Johnson, K. *Gengo Kenkyu* (Journal of the Linguistic Society of Japan), 138: 99-113.
- 2009 Multi-timescale dynamical interactions between speech rhythm and gesture. Tilsen, S. *Cognitive Science*, 33, 839-879.
- 2009 Subphonemic and cross-phonemic priming in vowel shadowing: evidence for the involvement of exemplars in production. Tilsen, S. *Journal of Phonetics*, 37:3, 276-296.
- 2008 Low-frequency Fourier analysis of speech rhythm. Tilsen, S. & Johnson, K. *Journal of the Acoustical Society of America*, 124:2, EL34-39.

## Conference proceedings

- 2016 A shared control parameter for F0 and intensity. Tilsen, S. *Proc. Speech Prosody 2016*, 1066-1070.
- 2016 Early Prosodic Manifestations of Disfluency. Li, J. & Tilsen, S. *Proc. Speech Prosody 2016*, 1235-1239.
- 2015 Structured nonstationarity in articulatory timing. Tilsen, S. *Proceedings of the 18th International Congress of Phonetic Sciences*.
- 2015 Relation between syllable count judgments and durations of English liquid rimes. Cohn, A. & Tilsen, S. *Proceedings of the 18th International Congress of Phonetic Sciences*.
- 2015 Phonetic evidence for two types of disfluency. Li, J. & Tilsen, S. *Proceedings of the 18th International Congress of Phonetic Sciences*.
- 2015 The articulatory tone-bearing unit: Gestural coordination of lexical tone in Thai. Karlin, R. & Tilsen, S. *POMA*, 22, 060006.
- 2015 A gestural account of mandarin tone sandhi. Yi, H. & Tilsen, S. *POMA*, 22, 060003.
- 2015 A real-time MRI investigation of anticipatory posturing in prepared responses. Tilsen, S., Spincemaille, P., Xu, B., Doerschuk, P., Karlin, R., Yi, H., Feldman, E., Luh, W., Wang, Y. *POMA*, 22, 060001.
- 2014 Some people are eager to be heard: anticipatory posturing in speech production. Tilsen, S., Spincemaille, P., Xu, B., Doerschuk, P., Karlin, R., Yi, H., Feldman, E., Luh, W., Wang, Y. *168th Meeting of the Acoustical Society of America Lay Language Papers*.
- 2013 Comparison of native and non-native consonant articulation with real-time magnetic resonance imaging of the vocal tract. Tilsen, S., Xu, B., Spincemaille, P., Srivastava, M., Doerschuk, P., Wang, Y. *POMA*, 19, 060246.
- 2013 Acoustic and articulatory evidence for the phonological status of liaison consonants. L'Esperance, M.-J. & Tilsen, S. *POMA*, 19, 060245.
- 2008 Relations between speech rhythm and segmental deletion. Tilsen, S. *Proceedings from the Annual Meeting of the Chicago Linguistic Society*, 44:1, 221-223.

## Working papers

- 2016 Correlations between speech behavior and social network structure in a constrained vocabulary game Tilsen, S. *Cornell Working Papers in Phonetics and Phonology 2016*.
- 2015 Speech and social network dynamics in a constrained vocabulary game: design and hypotheses. Tilsen, S. *Cornell Working Papers in Phonetics and Phonology 2015*.
- 2014 Syllable count judgments and durations of liquid rimes in English. Tilsen, S., Cohn, A., & Ricciardi, E. *Cornell Working Papers in Phonetics and Phonology 2014*.
- 2014 Selection-coordination theory. Tilsen, S. *Cornell Working Papers in Phonetics and Phonology 2014*.
- 2013 Imitation of intonational gestures: a preliminary report. Tilsen, S., Burgess, D., & Lantz, E. *Cornell Working Papers in Phonetics and Phonology 2013*.
- 2012 Acoustic analysis of the effects of metrical regularity on interval durations. Tilsen, S., Cibelli, E., Kang, S., Houde, J., Nagarajan, S. *Cornell Working Papers in Phonetics and Phonology 2012*.
- 2012 A cross-linguistic investigation of articulatory coordination in word-initial consonant clusters. Tilsen, S., Zec, D., Bjoerndahl, C., Butler, B., L Esperance, M. J., Fisher, A., Heimisdottir, L., Renwick, M., Sanker, C. *Cornell Working Papers in Phonetics and Phonology 2012*.
- 2009 Toward a dynamical interpretation of hierarchical linguistic structure. Tilsen, S. *UC Berkeley Phonology Lab Annual Report*, 462-512.
- 2008 Preliminary results of a stop-signal experiment. Tilsen, S. *UC Berkeley Phonology Lab Annual Report*, 686-712.
- 2007 Vowel-to-vowel coarticulation and dissimilation in response-priming. Tilsen, S. *UC Berkeley Phonology Lab Annual Report*, 416-458.
- 2007 Low-frequency Fourier analysis of speech rhythm in the VIC corpus. Tilsen, S. *UC-Berkeley Phonology Lab Annual Report*, 686-712.
- 2006 Rhythmic coordination in repetition disfluency: a harmonic timing effect. Tilsen, S. *UC Berkeley Phonology Lab Annual Report*, 73-114.

## Invited talks

- 2017 A model of the emergence of coordinative control. 7th International Conference on Speech Motor Control. Groningen, the Netherlands, July 7.
- 2017 Modeling the transition from competitive to coordinative control. Workshop on Dynamic Modeling in Phonetics and Phonology, University of Chicago, IL, May 24.
- 2017 Selection-coordination theory: phonological structure as a projection over developmental time. General Linguistics Seminar, Oxford University, UK, Apr. 24.

- 2015 Selection-coordination theory. University of Rochester Linguistics Departmental Colloquium, Nov. 20.
- 2015 Selection-coordination theory. University of Southern California Linguistics Departmental Colloquium, Oct. 12.
- 2014 Selection and coordination of articulatory gestures: implications for phonological theory. Mellon Humanities Corridor Workshop in Theoretical and Experimental Linguistics, Syracuse, NY, Dec. 7.
- 2014 Experimental and analytic methodology in speech MRI. USC Speech MRI Summit, Feb 18.
- 2013 Selection and coordination of articulatory gestures: implications for phonological theory. University of Buffalo Linguistics Departmental Colloquium, Nov. 15.
- 2013 Compression of articulatory gestures in temporally constrained production. Haskins Speech Laboratories, New Haven, CT, Mar. 28.
- 2013 The dynamics of selection and coordination in speech production. Neurobiology and Behavior Seminar series, Cornell University, Feb. 21.
- 2012 Identifying highly rhythmic stretches of speech with envelope-driven resonance analysis. The 164th Meeting of the Acoustical Society of America. Kansas City, KS, Oct. 22.
- 2011 Speech rhythm analysis with empirical mode decomposition. The 162nd Meeting of the Acoustical Society of America. San Diego, CA, Nov. 3.
- 2011 Comparing envelope- and interval-based rhythm metrics. Tilsen, S. & Arvaniti, A. The 162nd Meeting of the Acoustical Society of America. San Diego, CA, Nov. 5.

## **Presentations**

- 2017 Social distance correlates with similarity in linguistic behavior. Tilsen, S. The 53rd Annual meeting of the Chicago Linguistic Society. Chicago, IL, May 26.
- 2016 Modeling pitch gesture imitation: only targets and relative timing are controlled. Tilsen, S. Common Prosody Platform Satellite Workshop, Speech Prosody, Boston, MA, June 4.
- 2016 Early Prosodic Manifestations of Disfluency. Li, J. & Tilsen, S. Speech Prosody 8, Boston, MA, June 4.
- 2016 A shared control parameter for F0 and intensity. Tilsen, S. Speech Prosody 8, Boston, MA, June 3.
- 2016 Modeling the interaction between intonation and lexical tone: an Articulatory Phonology perspective Yi, H. & Tilsen, S. Common Prosody Platform Satellite Workshop, Speech Prosody, Boston, MA, June 4.
- 2015 Structured nonstationarity in articulatory timing. Tilsen, S. The 18th International Congress of Phonetic Sciences. Glasgow, Scotland, Aug. 12.
- 2015 Relation between syllable count judgments and durations of English liquid rimes. Cohn, A. & Tilsen, S. The 18th International Congress of Phonetic Sciences. Glasgow, Scotland, Aug. 10.

- 2014 A real-time MRI investigation of anticipatory posturing in prepared responses. Tilsen, S., Spincemaille, P., Doershuck, P., Karlin, R., Yi, H., Luh, W.. & Wang, Y. The 168th Meeting of the Acoustical Society of America. Indianapolis, IN, Oct. 28.
- 2014 The mora as a unit of speech planning. Tilsen, S. The Linguistic Society of America Annual Meeting. Minneapolis, MN, January 4.
- 2013 Comparison of native and non-native consonant articulation with real-time magnetic resonance imaging of the vocal tract. Tilsen, S., Xu, B., Spincemaille, P., Srivastava, M., Doershuck, P., & Wang, Y. The 165th Meeting of the Acoustical Society of America. Montreal, Canada, June 6.
- 2012 Articulatory gestures are individually selected in production. Tilsen, S. & Goldstein, L. The 13th Conference on Laboratory Phonology. Stuttgart, Germany, July 27-29.
- 2011 Utterance preparation and prosodic variability: a study of stress clash. Tilsen, S. The Linguistic Society of America Annual Meeting. Pittsburg, PA, January 8.
- 2011 Phase-coupling and sequential selection in Wh-questions. Tilsen, S. Parallel domains: locality in syntax/phonology and the representation of constituency. Univ. of Southern California, May 6.
- 2011 Low-level adjustments to gross-categorical mismatches in the perception of accented speech. Sumner, M. & Tilsen, S. The 162nd Meeting of the Acoustical Society of America. San Diego, CA, 2011.
- 2011 Control of duration and magnitude in speech imitation. Parrell, B. & Tilsen, S. The sixth International Conference on Speech Motor Control, Groningen, The Netherlands, June, 2011.
- 2010 Speech rhythm and brain rhythms: an MEG study. Tilsen, S. Neurobiology of Language Conference, San Diego, CA, November 12.
- 2010 Metrical regularity modulates articulatory rate. Tilsen, S. The 12th Conference on Laboratory Phonology. New Mexico, July 8-10.
- 2010 Syllable stress modulates articulatory planning: evidence from a stop-signal experiment. Tilsen, S. The Linguistic Society of America Annual Meeting. Baltimore, MD, January 9.
- 2009 Evidence for covariability of intergestural and rhythmic timing. Tilsen, S. The Linguistic Society of America Annual Meeting. San Francisco, CA, January 10.
- 2008 Evidence for interaction between speech rhythm and gesture. Tilsen, S. The 156th Meeting of the Acoustical Society of America. Miami, FL, November 13.
- 2008 Intergestural inhibition counteracts phonologization. Tilsen, S. The Symposium on Phonologization at the University of Chicago. Chicago, IL, April 25.
- 2008 Relations between speech rhythm and segmental deletion. Tilsen, S. The 44th Annual meeting of the Chicago Linguistic Society. Chicago, IL, April 24.
- 2008 Low-frequency spectral analysis as a metric of speech rhythm. Tilsen, S. & Johnson, K. The Workshop on Empirical Approaches to Speech Rhythm. Centre for Human Communication, University College London, United Kingdom, March 28.

- 2008 Experimental evidence for vowel-to-vowel dissimilation. Tilsen, S. The Linguistic Society of America Annual Meeting. Chicago, IL, January 4.
- 2007 Evidence for harmonic timing in repetition disfluency. Tilsen, S. The Linguistic Society of America Annual Meeting. Anaheim, CA, January 7.
- 2007 Low-frequency spectral analysis as a metric of speech rhythm. Tilsen, S. Sixth annual meeting of the Society for Linguistics Undergraduates. Berkeley, CA, November 17.
- 2007 The interaction of respiratory drive and linguistic structure. McGuire, G. & Tilsen, S. The 154th Meeting of the Acoustical Society of America. New Orleans, LA, November 27-30.