

# Morgan Sonderegger

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## EMPLOYMENT

### McGill University

Associate Professor, Department of Linguistics (primary)	6/2018–present
Full Member, Centre for Research on Brain, Language, and Music	9/2013–present
Associate Member, School of Computer Science	5/2013–present
Assistant Professor, Department of Linguistics	1/2013–6/2018
Assistant Professor (special category), Department of Linguistics	8/2012–12/2012

## EDUCATION

### University of Chicago

Ph.D, Computer Science and Linguistics	2012
• Dissertation: <i>Phonetic and phonological dynamics on reality television</i>	
• Advisor: John Goldsmith	
• Committee: Joseph Keshet, Jason Riggle, Anne Rogers, Alan Yu	
M.S. Computer Science	2009
• Thesis: <i>Dynamical systems models of language variation and change: An application to an English stress shift</i>	
• Advisor: Partha Niyogi	

### Cambridge University

Certificate of Advanced Study in Mathematics	2007
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### Massachusetts Institute of Technology

B.S. History	2005
B.S. Physics (Mathematics minor)	2004

## OTHER ACADEMIC EXPERIENCE

<b>LSA Summer Institute</b> , Berkeley, CA	2009
<b>International School on Complexity</b> , Erice, Italy	7/2007

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## GRANTS AND AWARDS

### External grants and awards, as Primary Applicant

- **SSHRC Insight Grant**, 2017–2022: “Uncovering the structure and sources of speech variability through large-scale studies” #435-2017-0925 — \$196,720
- **Trans-Atlantic Platform Digging into Data**, 2017–2020: “SPeech Across Dialects of English (SPADE): large-scale digital analysis of a spoken language across space and time”. Total project value across Canada, UK, USA (Apr 2017): CAD 799,236. Directly responsible for:
  - **NSERC** #RGPDD 501771-16 — \$99,403
  - **SSHRC** #869-2016-0006 — \$99,833
- **Ministère des Relations internationales et de la Francophonie Coopération Québec-Israël**, 2017–2018: “Vers un outil pour l’étude de la parole humaine à grande échelle” — \$4,500
- **SSHRC Insight Development Grant**, 2014–2017: “Variability in the voicing contrast across languages and over time: corpus and simulation studies” #430-2014-00018 — \$74,160
- **FRQSC Établissement de Nouveaux professeurs-chercheurs**, 2014–2017: “Variabilité interlinguistique et temporelle dans les contrastes sonores voisés et non-voisés : une application à grande échelle” #183356 — \$39,558

- **Canada Foundation for Innovation John R. Evans Leaders Fund**, 2013–2018: “Language Modelling Laboratory” #32451 — \$229,659
- **GAAAN Fellowship**, U.S. Department of Education, 2009–2010
- **International Speech Communication Association Travel Grant**, 2010
- **Association for Computational Linguistics Travel Grant**, 2010
- **James McCawley Fellowship**, Linguistic Society of America, Summer 2009
- **Phi Beta Kappa** (USA National Academic Honor Society), inducted 2005

#### External grants and awards, as non-Primary Applicant

- *Collaborator*: **SSHRC Insight Grant**, 2014–2019: “Breaking into the Acoustic Stream: The role of allophonic patterns in processing language” #435-2014-1504 (Primary Applicant – Michael Wagner) — \$240,750
- *Collaborator*: **SSHRC Partnership Development Grant**, 2013–2016: “Developing mobile learning applications for the Mi’kmaq language: New opportunities for language research and revitalization” #890-2012-0091 (Primary Applicant – Jessica Coon) — \$200,000
- *Collaborator* (UK): **Leverhulme Trust**, 2011–2014: “Fine phonetic variation and sound change: A real-time study of Glaswegian” #RPG-142 (PI – Jane Stuart-Smith, U. Glasgow) — GBP 235,782.

#### Internal grants and awards

- **McGill Arts Research Internship Awards**, 2014, 2016, 2018 — \$2,000 each
- **Paper Presentation Grant**, 2014, 2017 — \$1,500 each
- **McGill Dean of Arts Development Fund**, 2014 — \$1,700
- *Co-applicant*: **McGill Collaborative Research and Development Fund**, 2013–2014: “Variability in Speech: New Tools for a New Era of Language Research” (Primary Applicant – Meghan Clayards) \$20,000
- **McGill University startup fund**, 2012 — \$65,500
- **U. Chicago Bryan and Catherine Daniels Endowed Fellowship**, 2012 — \$30,000
- **U. Chicago Doolittle-Harrison Travel Grant**, 2010 — \$400

## PUBLICATIONS

### Books

Sonderegger, M., Michael Wagner, and Francisco Torreira. (2018). *Quantitative Methods for Linguistic Data*. Version 1.0. Available at <http://people.linguistics.mcgill.ca/~morgan/book/index.html>. (Online textbook)

### Papers in peer-reviewed journals

Tanner, J., Sonderegger, M., & Torreira, F. (2019). Durational evidence that Tokyo Japanese vowel devoicing is not gradient reduction. *Frontiers in Psychology*, 10, article 821. doi:10.3389/fpsyg.2019.00821. (5 pages)

Schwarz, M., Sonderegger, M., & Goad, H. (2019). Realization and representation of Nepali laryngeal contrasts. *Journal of Phonetics*, 73, 113–127.

Knowles, T., Clayards, M., & Sonderegger, M. (2018). Examining factors influencing the viability of automatic acoustic analysis of child speech. *Journal of Speech, Language, and Hearing Research*, 61, 2487–2501.

Kirby, J., & Sonderegger, M. (2018). Mixed-effects design analysis for experimental phonetics. *Journal of Phonetics*, 70, 70–85.

Bang, H., Sonderegger, M., Kang, Y., Clayards, M., & Yoon, T. (2018). The emergence, progress, and impact of sound change in Seoul Korean: implications for mechanisms of tonogenesis. *Journal of Phonetics*, 66, 120–144.

Sonderegger, M., M. Bane, & P. Graff. (2017). The medium-term dynamics of accents on reality television. *Language*, 93(3), 598–640.

Tanner, J., Sonderegger, M., & Wagner, M. (2017). Production planning and coronal stop deletion in spontaneous speech. *Laboratory Phonology*, 8(1), 15. <http://doi.org/10.5334/labphon.96>. (37 pages)

Kilbourn-Ceron, O., & Sonderegger, M. (2017). Boundary phenomena and variability in Japanese high vowel devoicing. *Natural Language and Linguistic Theory*, 36(1), 175–217.

Stuart-Smith, J., Sonderegger, M., Macdonald, R., & Rathke, T. (2015). The private life of stops: VOT in a real-time corpus of spontaneous Glaswegian. *Laboratory Phonology*, 6(3-4), 505–549.

Carlson, M., Sonderegger, M., & Bane, M. (2014). How children explore the phonological network in child-directed speech: A survival analysis of children’s first word productions. *Journal of Memory and Language*, 75, 159–180.

Yu, A.C.L., Abrego-Collier, C., & Sonderegger, M. (2013). Phonetic imitation from an individual-difference perspective: subjective attitude, personality and “autistic” traits. *PLOS ONE*, 8(9), e74746. <https://doi.org/10.1371/journal.pone.0074746>. (13 pages)

Sonderegger, M., & Keshet, J. (2012). Automatic measurement of voice onset time using discriminative structured prediction. *Journal of the Acoustical Society of America*, 132(6), 3965–3979.

Sonderegger, M. (2011). Applications of graph theory to an English rhyming corpus. *Computer Speech and Language*, 25, 655–678.

Bane, M., Riggall, J., & Sonderegger, M. (2010). The VC dimension of constraint based grammars. *Lingua*, 120, 1194–1208.

Chi, X., & Sonderegger, M. (2007). Subglottal coupling and its influence on vowel formants. *Journal of the Acoustical Society of America*, 122(3), 1735–1745.

#### **Papers in peer-reviewed edited volumes**

Kirby, J., & Sonderegger, M. (2018). Model selection and phonological argumentation. In D. Brentari & J.S. Lee (Eds.), *Shaping Phonology: A festschrift for John Goldsmith* (pp. 234–252). Chicago: University of Chicago Press.

Stuart-Smith, J., Rathcke, T., Sonderegger, M., & Macdonald, R. (2015). A real-time study of plosives in Glaswegian using an automatic measurement algorithm: change or age-grading? In E.N. Torgersen, S. Hårstad, B. Mæhlum, & U. Røyneland (Eds.), *Language Variation – European Perspectives V* (pp. 225–237). Amsterdam: John Benjamins.

Sonderegger, M. & Niyogi, P. (2013). Variation and change in English noun/verb pair stress: Data, dynamical systems models, and their interaction. In A.C.L. Yu (Ed.), *Origins of Sound Patterns: Approaches to Phonologization* (pp. 262–284). Oxford: Oxford University Press.

#### **Papers in conference proceedings**

Tanner, J., Sonderegger, M., Stuart-Smith, J., & The Spade Consortium. (2019). Vowel duration and the voicing effect across English dialects. To appear in *Toronto Working Papers in Linguistics*, Volume 41 (13 pages).

Tanner, J., Sonderegger, M., Stuart-Smith, J. (2019). Structured speaker variability in spontaneous Japanese stop contrast production. In *Proceedings of the 19th International Congress of Phonetic Sciences* (5 pages).

Mielke, J., Thomas, E., Fruehwald, J., Stuart-Smith, J., Sonderegger, M., Dodsworth, R., McAuliffe, M. (2019). Age vectors vs. axes of intraspeaker variation in vowel formants measured automatically from several English speech corpora. In *Proceedings of the 19th International Congress of Phonetic Sciences* (5 pages).

Stuart-Smith, J., Sonderegger, M., Macdonald, R., Mielke, J., McAuliffe, M., and Thomas, E. (2019).

- Large-scale acoustic analysis of dialectal and social factors in English /s/-retraction. In *Proceedings of the 19th International Congress of Phonetic Sciences* (5 pages).
- McAuliffe, M., Coles, A., Goodale, M., Mihuc, S., Wagner, M., Stuart-Smith, J., & Sonderegger, M. (2019). ISCAN: a system for integrated phonetic analyses across speech corpora. In *Proceedings of the 19th International Congress of Phonetic Sciences* (5 pages).
- McAuliffe, M., Socolof, M., Mihuc, S., Wagner, M., & Sonderegger, M. (2017). Montreal Forced Aligner: trainable text-speech alignment using Kaldi. In *Proceedings of Interspeech 2017* (pp. 498–502). <http://dx.doi.org/10.21437/Interspeech.2017-1386>.
- McAuliffe, M., Stengel-Eskin, E., Socolof, M., & Sonderegger, M. (2017). Polyglot and Speech Corpus Tools: a system for representing, integrating, and querying speech corpora. In *Proceedings of Interspeech 2017* (pp. 3887–3891). <http://dx.doi.org/10.21437/Interspeech.2017-1390>.
- Sonderegger, M. (2016/2010). Testing for frequency and structural effects in an English stress shift. In N. Rolle, J. Steffman, J. Sylak-Glassman (Eds.), *Proceedings of the 36th Annual Meeting of the Berkeley Linguistics Society* (pp. 411–425).
- Knowles, T., Clayards, M., Sonderegger, M., Wagner, M., Nadig, A., & Onishi, K. (2015). Automatic Forced Alignment on Child Speech: Directions for Improvement. *Proceedings of Meetings on Acoustics*, 25, 060001. <http://dx.doi.org/10.1121/2.0000125>. (6 pages)
- Sonderegger, M. (2015). Trajectories of voice onset time in spontaneous speech on reality TV. In Scottish Consortium for ICPhS 2015 (eds.), *Proceedings of the 18th International Congress of Phonetic Sciences* (Paper 903). (5 pages)
- Tanner, J., Sonderegger, M., & Wagner, M. (2015). Production planning and coronal stop deletion in spontaneous speech. In Scottish Consortium for ICPhS 2015 (eds.), *Proceedings of the 18th International Congress of Phonetic Sciences* (Paper 933). (5 pages)
- Bang, H., Sonderegger, M., Kang, Y., Clayards, M., & Yoon, T. (2015). The effect of word frequency on the timecourse of tonogenesis in Seoul Korean. In Scottish Consortium for ICPhS 2015 (eds.), *Proceedings of the 18th International Congress of Phonetic Sciences* (Paper 843). (5 pages)
- Ciot, M., Sonderegger, M., & Ruths, D. (2013). Gender inference of Twitter users in non-English contexts. In *Proceedings of the 2013 Conference on Empirical Methods in Natural Language Processing* (pp. 1136–1145).
- Kirby, J. & Sonderegger, M. (2013). A model of population dynamics applied to phonetic change. In *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 776–781). Austin, TX: Cognitive Science Society.
- Bane, M., Graff, P. & Sonderegger, M. (2013/2010). Longitudinal phonetic variation in a closed system. In A. Baker, et al. (Eds.), *Proceedings of the 46th Annual Meeting of the Chicago Linguistics Society* (pp. 43–58).
- Henry, K., Sonderegger, M., & Keshet, J. (2012). Automatic measurement of positive and negative voice onset time. In *Proceedings of Interspeech 2012*. (4 pages)
- Abrego-Collier, C., Grove, J., Sonderegger, M., & Yu, A.C.L. (2011). Effects of speaker evaluation on phonetic convergence. In W. Lee & E. Zee (Eds.), *Proceedings of the 17th International Congress of Phonetic Sciences* (pp. 192–195).
- Yu, A.C.L., Martinović, M., Grove, J., & Sonderegger, M. (2011). Effects of working memory capacity and “autistic traits” on phonotactic effects in speech perception. In W. Lee & E. Zee (Eds.), *Proceedings of the 17th International Congress of Phonetic Sciences* (pp. 2236–2239).
- Carlson, M., Bane, M., & Sonderegger, M. (2011). Global properties of the phonological network in child-directed speech. In N. Danis, K. Mesh, & H. Sung (Eds.), *BUCLD 35: Proceedings of the 35th Annual Boston University Conference on Language Development* (pp. 97–109).
- Sonderegger, M. & Niyogi, P. (2010). Combining data and mathematical models of language change.

In *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics* (pp. 1019–1029).

Sonderegger, M. & Keshet, J. (2010). Automatic discriminative measurement of voice onset time. In *Proceedings of Interspeech 2010* (pp. 2242–2245).

Sonderegger, M. & Yu, A.C.L. (2010). A rational account of perceptual compensation for coarticulation. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 375–380). Austin, TX: Cognitive Science Society.

### Other writings

Sonderegger, M., Stuart-Smith, J., McAuliffe, M., Macdonald, R., & Kendall, T. (submitted). Managing data for integrated speech corpus analysis in SPeech Across Dialects of English (SPADE). For *Open Handbook of Linguistic Data Management*. MIT Press.

Sonderegger, M., Stuart-Smith, J., Macdonald, R., Knowles, T., & Rathcke, T. (submitted). Structured heterogeneity in Scottish stops. Ms., McGill University, Glasgow University, University of Western Ontario, University of Kent.

Jiang, B., Sonderegger, M., & Clayards, M. (submitted). Individual and dialect differences in perceiving secondary cues: A tonal register contrast in two Chinese Wu dialects. Ms., McGill University.

Bang, H., Clayards, M., & Sonderegger, M. (submitted). The structure of multiple cues to stop voicing categorization and its implications for sound change. Ms., Hanyang University and McGill University.

Kirby, J. & Sonderegger, M. (2015). Bias and population dynamics in the actuation of sound change. arXiv 1507.04420 [cs.CL]. Available at <https://arxiv.org/abs/1507.04420>. (30 pages)

Sonderegger, M. (2002) Transitions between nonequilibrium steady states. In Technical Report 02-5599, Los Alamos National Laboratory. (6 pages)

### PRESENTATIONS & WORKSHOPS

#### Invited presentations

‘The SPADE project: large-scale analysis of a spoken language across space and time’.

- Language Variation and Change Group, University of Edinburgh, 7/2019.
- Glasgow University Laboratory of Phonetics, Glasgow University, 5/2019.
- Laboratoire de Sciences Cognitives et Psycholinguistique, École Normale Supérieure, 3/2019.

‘ISCAN and Polyglot: software for integrated storage and phonetic analyses of speech datasets’. Cognitive Machine Learning Group, École Normale Supérieure, 4/2019.

‘Accent dynamics on reality television’. Colloquium talk, Département d’études cognitives, École Normale Supérieure, 4/2019.

‘Topics in fitting and using mixed-effects regression models’. Workshop at University of Oregon, 10/2018.

‘Towards larger-scale cross-linguistic and cross-variety studies of speech’. Colloquium talk, University of Oregon, 10/2018.

‘Integrated Speech Corpus ANalysis – ISCAN: A new tool for large-scale, cross-corpus, sociolinguistic analysis’. Workshop at *New Ways of Analysing Variation 47*. New York University, 10/2018. (with J. Stuart-Smith, J. Tanner, V. Willerton, M. McAuliffe)

‘Towards large(r)-scale cross-linguistic study of speech: prosodic case studies’. Colloquium talk, Northwestern University, 6/2018.

‘Exploiting individual differences in speech research: methods and examples’. *Workshop on Approaches and Issues in the Study of Variability in Language Processing*. Northwestern University, 5/2018. (Keynote)

‘Towards large(r) scale cross-linguistic study of speech: case studies of segmental influences on pitch and duration compression effects’. Colloquium talk, Boston University, 3/2018.

‘Large(r) scale cross-linguistic study of speech sounds: case studies of laryngeal stop contrasts and segmental influences on pitch’. *Séminaires de Recherches en Phonétique et Phonologie*. Laboratoire de Phonologie et Phonetique, Paris III, 9/2017.

‘Speech Corpus Tools: an application for easier analysis of large speech corpora’. *Workshop on Tools for Big Data in Laboratory Phonology*. Cornell University, 7/2016. (with M. McAuliffe)

‘The medium-term dynamics of accents on reality television’. Glasgow University Laboratory of Phonetics, Glasgow University, 5/2016.

‘Population dynamics in the actuation of sound change’. Centre for Language Evolution, University of Edinburgh, 5/2016. (with J. Kirby)

‘Easier speech corpus analysis: A practical introduction to Montreal Corpus Tools’. One-day workshop, sponsored by the Scottish Graduate School of Social Science. University of Glasgow, 4/2016. (with M. McAuliffe)

‘The medium-term dynamics of accents on reality television’. *The 13th Annual Martin Luther King Day Linguistics Symposium*. The Ohio State University, 1/2016. (Keynote)

‘The role of prosodic variability in explaining segmental variability: Two corpus studies’. *Third Conference on Experimental and Theoretical Advances in Prosody (ETAP III)*. University of Illinois at Urbana-Champaign, 5/2015. (Keynote)

‘Population dynamics in the actuation of sound change’. Cornell Phonetics Laboratory, Cornell University, 5/2015.

‘The dynamics of sounds and contrasts on reality television’. Colloquium talk, Cornell University, 5/2015.

‘The structure of variability in spontaneous speech: evidence from voice onset time’. Colloquium talk, Carleton University, 4/2015.

‘Actuation without production bias’. *3rd Biennial Workshop on Sound Change*, Berkeley, CA, 5/2014. (with J. Kirby)

‘Automatic discriminative measurement of voice onset time’. Séminaires R-D, Centre de recherche informatique de Montréal, 12/2013.

‘Phonetic and phonological variation on reality television: dynamics and interspeaker variation’. Phonology Circle, Massachusetts Institute of Technology, 12/2013.

‘The dynamics of sounds on reality television’. Colloquium talk, University of Toronto, 11/2013.

‘Voice onset time: automatic measurement and corpus studies’. Phonetics/Phonology Group and Psycholinguistics Group, University of Toronto, 11/2013.

‘Commentary: Computational models of sound change actuation’. *Workshop on Sound Change Actuation*, Chicago, 4/2013. (with J. Kirby)

‘Longitudinal phonetic and phonological dynamics on reality television’

- *McGill Canadian Conference of Linguistics Undergraduates* (McCCLU), McGill University, 3/2013
- Colloquium talk, University of British Columbia, 12/2012
- Cognitive Psychology Brown Bag Seminar, McGill University, 12/2012
- Colloquium talk, University of Ottawa, 10/2012
- Language Evolution Workshop, University of Edinburgh, 5/2012
- Colloquium talk, McGill University, 2/2012
- Colloquium talk, University of Michigan, 2/2012
- Speech Research Group, Indiana University, 1/2012

‘The impact of phonological network structure in child-directed speech on children’s word learning: A survival analysis’. *Language and Network Science 2012*, Evanston (Illinois), 6/2012. (with M. Carlson & M. Bane)

‘Combining longitudinal data and mathematical models of sound change’. *Second Workshop on Sound Change*, Kloster Seeon, Germany, 5/2012.

‘Rhyme graphs’. Phonology Seminar, University of California at Los Angeles, 5/2011.

‘Longitudinal phonetic variation in a closed system’. University of Minnesota, 3/2011.

‘The diachronic dynamics of English noun/verb pair stress’

- Language Universals Workshop, Harvard University, 11/2012
- Colloquium talk, Indiana University, 2/2012
- University of Pennsylvania, 1/2011

‘Automatic discriminative measurement of voice onset time’

- *Illinois Speech Day 2010*, TTI-Chicago, 5/2010. (with J. Keshet)
- Center for Speech and Language Research, University of Edinburgh, 5/2012

‘Orwellian Linguistics: Longitudinal phonetic variation in a closed system’. Phonetics Group, Northwestern University, 3/2010. (with M. Bane)

‘Mathematical models of variation and change: An application to an English stress shift’. Language Dynamics Group, Northwestern University, 12/2008. (with P. Niyogi)

‘Subglottal coupling as a quantal basis for the feature [back]’. *156th meeting of the Acoustical Society of America*, Miami, 11/2008. (with X. Chi)

‘Subglottal coupling and vowel space’. Speech Communication Group, MIT, 3/2004. (with X. Chi)

### Conference and Workshop Presentations

Tanner, J., Sonderegger, M., Stuart-Smith, J., & The Spade Consortium. Vowel duration and the ‘voicing effect’ across English dialects and speakers. *Montreal-Ontario-Toronto Phonology/Phonetics Workshop 2019*, Toronto, 3/2019.

Stuart-Smith, J., M. Sonderegger, M. McAuliffe, R. Macdonald, J. Mielke, E. Thomas and R. Dodsworth. Dialectal and social factors affect the phonetic bases of English /s/-retraction.

- (Poster) *Laboratory Phonology 16*, Lisbon, 6/2018.
- *New Ways of Analyzing Variation 47*, New York, 10/2018.

Thomas, E., Mielke, J., Fruehwald, Holley, J., McAuliffe, M., Sonderegger, M., Stuart-Smith, J., Dodsworth, R., & Kendall, T. Age vectors vs. axes of intraspeaker variation for vowel formants in North American and Scottish English.

- (Poster) *Laboratory Phonology 16*, Lisbon, 6/2018.
- *New Ways of Analyzing Variation 47*, New York, 10/2018.

Kellison-Linn, E., & Sonderegger, M. A large-scale study of consonant voicing effects on F0 in spontaneous English speech. (Poster) *Laboratory Phonology 16*, Lisbon, 6/2018.

Jiang, B., Clayards, M., & Sonderegger, M. Perception and Individual Variability of Tonal Register Contrast in Chinese Wu Dialects. (Poster) *Laboratory Phonology 16*, Lisbon, 6/2018.

Stuart-Smith, J., M. Sonderegger, R. Macdonald, & M. McAuliffe. Cross-dialectal variation in /s/-retraction in English. *British Association of Academic Phoneticians*, Canterbury, 4/2018.

Schwarz, M., Sonderegger, M., & Goad, H. Representing a four-way contrast: Nepali, voiced aspirates and laryngeal realism. *Annual Meeting on Phonology 2017*, New York, 9/2017.

Lamontagne, J., Goad, H. & Sonderegger, M. Variability in French prominence: Evidence for weight sensitivity. (Poster) *Annual Meeting on Phonology 2017*, New York, 9/2017.

Sonderegger, M., McAuliffe, M., & Bang, H. Segmental influences on F0: a large-scale study of cross-linguistic and interspeaker variability. *Phonetics and Phonology in Europe 2017*, Cologne, Germany, 6/2017.

Kirby, J. & Sonderegger, M. Model selection and statistical argumentation. *Statistical Methods in Phonetic Sciences*, Cologne, Germany, 6/2017.

Schwarz, M., Goad, H., & Sonderegger, M. Laryngeal realism and voiced aspirates: the case of Nepali. *Manchester Phonology Meeting 25*, Manchester, England, 5/2017.

Lamontagne, J., Goad, H., & Sonderegger, M. Evidence of weight sensitivity in Laurentian French prominence assignment. *Annual meeting of the Canadian Linguistics Association*, Toronto, 5/2017.

Sonderegger, M., McAuliffe, M., & Bang, H. Segmental influences on F0: cross-linguistic and interspeaker variability of phonetic precursors. *Fourth Workshop on Sound Change*, Edinburgh, Scotland, 4/2017.

Bang, H., Sonderegger, M., & Clayards, M. Speaker variability in cue weighting of laryngeal contrasts: the relationship to sound change. (Poster) *Fourth Workshop on Sound Change*, Edinburgh, Scotland, 4/2017.

Sonderegger, M., McAuliffe, M., Bozic, J., Bruno, C., Cowley, S., Lamontagne, J., Jiang, B., Schwarz, M., & Su, J. Laryngeal timing across seven languages: phonetic data and their relationship to phonological features.

- *91st Annual Meeting of the Linguistic Society of America*, Austin, Texas, 1/2017.
- *Montreal-Ottawa-Toronto Phonology Workshop 2017*, Université du Québec à Montréal, 3/2017.

Lamontagne, J., Goad, H., & Sonderegger, M. (Poster) The continuation contour in French: Realisation and representation. *2nd Intonation Workshop*, Toronto, 2/2017.

McAuliffe, M., Socolof, M., Mihuc, S., Wagner, M., & Sonderegger, M. Montreal Forced Aligner: an accurate and trainable forced aligner using Kaldi. (Poster) *91st Annual Meeting of the Linguistic Society of America*, Austin, TX, 1/2017.

Lamontagne, J., Goad, H., & Sonderegger, M. Penultimate prominence in Québec French: Internal motivations or English influence? *2017 Annual Meeting of the American Dialect Society*, Austin, Texas, 1/2017.

Bang, H., Sonderegger, M., & Clayards, M.. The relationship of VOT and F0 contrasts across speakers and words in the German voicing contrast. (Poster) *5th Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan*, Honolulu, 12/2016.

McAuliffe, M., Sonderegger, M., & Wagner, M. A system for unified corpus analysis, applied to polysyllabic shortening across 12 languages.

- (Poster) *15th Conference on Laboratory Phonology*, Ithaca (New York), 7/2016.
- *Montreal-Ottawa-Laval-Toronto Phonology Workshop 2016*, Ottawa, 3/2016.

Bassford, L., Milne, P., & Sonderegger, M.. Attentive speech and clear speech in Quebec French diphthongization. *New Ways of Analyzing Variation 44*, Toronto, 10/2015.

Sonderegger, M., Stuart-Smith, J., Macdonald, R., Knowles, T., & Rathcke, T. Stability and change in Scottish stops: a real-time study of three acoustic cues in Glaswegian vernacular. *New Ways of Analyzing Variation 44*, Toronto, 10/2015.

Bang, H., Sonderegger, M., Kang, Y., Clayards, M., & Yoon, T. The Time Course of Tonogenesis; Evidence from Seoul Korean. *Joint meeting of the International Circle of Korean Linguistics and the International Symposium on Korean Linguistics*, Chicago, 7/2015. USA.

Sonderegger, M.. Trajectories of phonetic variability in spontaneous speech on reality TV. (Poster/Oral presentation alternate) *14th Conference on Laboratory Phonology*, Tokyo, Japan, 7/2014.

Stuart-Smith, J., Sonderegger, M., Macdonald, R., Knowles, T., & Rathcke, T. The private life of stops:



- VOT in a real-time corpus of spontaneous Glaswegian. *14th Conference on Laboratory Phonology*, Tokyo, Japan, 7/2014.
- Kirby, J. & Sonderegger, M. Actuation without production bias. *Montreal-Ottawa-Laval-Toronto Phonology Workshop 2014*, Montreal, 3/2014.
- Buccola, B., & Sonderegger, M. On the expressivity of Optimality Theory versus rules: An application to opaque patterns.
- (Poster) *Phonology 2013*, Amherst, MA, 11/2013.
  - *88th Annual Meeting of the Linguistic Society of America*, Minneapolis, 1/2014.
- Stuart-Smith, J., Rathke, T., Sonderegger, M., & Knowles, T. A real-time study of plosives in Glaswegian using an automatic measurement algorithm. *New Ways of Analyzing Variation 42*, Pittsburgh, 10/2013.
- Rathke, T., Stuart-Smith, J., & Sonderegger, M. A real-time study of plosives in Glaswegian: change or age-grading? *7th International Conference on Language Variation in Europe (ICLaVE)*, Trondheim, 6/2013.
- Kirby, J. & Sonderegger, M. A model of population dynamics applied to phonetic change.
- (Poster) *Variation in the Acquisition of Sound Systems*, Ann Arbor, MI, 6/2013.
  - (Poster) *Workshop on Sound Change Actuation*, Chicago, 4/2013.
  - *Montreal-Ottawa-Toronto Phonology Workshop 2013*, 3/2013.
- Carlson, M., Sonderegger, M., & Bane, M. The impact of phonological network structure in child-directed speech on children’s word learning: A survival analysis. *87th Annual Meeting of the Linguistic Society of America*, Boston, 1/2013.
- Yu, A.C.L., Abrego-Collier, C., & Sonderegger, M. Individual differences in phonetic convergence. (Poster) *International Symposium on Imitation and Convergence in Speech*, Aix-en-Provence, 9/2012.
- Yu, A.C.L. & Sonderegger, M. Frequency and longitudinal effects on perceptual compensation for coarticulation. *13th Conference on Laboratory Phonology*, Stuttgart, 7/2012. (**Best paper award**)
- Yu, A.C.L. & Sonderegger, M.. Frequency effects on perceptual compensation for coarticulation. *86th Annual Meeting of the Linguistic Society of America*, Portland, 1/2012.
- Yu, A.C.L., Abrego-Collier, C., & Sonderegger, M. Effects of speaker evaluation on phonetic convergence.
- *86th Annual Meeting of the Linguistic Society of America*, Portland, 1/2012.
  - *New Ways of Analyzing Variation 40*, Washington, D.C., 10/2011.
- Sonderegger, M. et al. (13 others). Coronal stop deletion on reality TV.
- *86th Annual Meeting of the Linguistic Society of America*, Portland, 1/2012.
  - *New Ways of Analyzing Variation 40*, Washington, D.C., 10/2011.
- Yu, A.C.L., Martinović, M., & Sonderegger, M. (2011) Effects of working memory capacity and “autistic traits” on phonotactic effects in speech perception. *Architectures and Mechanisms for Language Processing 2011*. Paris, 10/2011.
- Bane, M., Graff, P., & Sonderegger, M.. A corpus study of socially-mediated language change in voice onset time. *24th Annual CUNY Conference on Human Sentence Processing*. Stanford, 3/2011.
- Sonderegger, M., Paterson, N., Goldrick, M., & Keshet, J. (2011) A new tool for automatic VOT measurement . *Workshop on New Tools and Methods for Very-Large-Scale Phonetics Research*, Philadelphia, 1/2011.
- Keshet, J. & Sonderegger, M. (2011) Automatic keyword spotting for continuous speech. *Workshop on New Tools and Methods for Very-Large-Scale Phonetics Research*, Philadelphia, 1/2011.

Bane, M., Graff, P., & Sonderegger, M. Phonetic convergence among reality television contestants. *85th Annual Meeting of the Linguistic Society of America*, Pittsburgh, 1/2011.

Carlson, M., Bane, M., & Sonderegger, M. Global properties of the phonological network in child-directed speech. *McWOP 16: The 16th Mid-Continental Workshop on Phonology*, Evanston, IL, 10/2010.

Bane, M., Graff, P., & Sonderegger, M. Longitudinal phonetic variation in a closed system. *46th Annual Meeting of the Chicago Linguistics Society*, 4/2010.

Sonderegger, M. Testing for frequency and structural effects in an English stress shift. *36th Annual Meeting of the Berkeley Linguistics Society*, 2/2010.

Sonderegger, M. & Niyogi, P. Combining data and mathematical models to study change: An application to an English stress shift. *84th Annual Meeting of the Linguistic Society of America*, Baltimore, 1/2010.

Sonderegger, M. Rhyme graphs, sound change, and perceptual similarity. *83rd Annual Meeting of the Linguistic Society of America*, San Francisco, 1/2009.

Sonderegger, M. & Yu, A.C.L. A rational account of perceptual compensation for coarticulation. *83rd Annual Meeting of the Linguistic Society of America*, San Francisco, 1/2009.

Niyogi, P. & Sonderegger, M. When does variation lead to change? A dynamical systems model of a stress shift in English.

- (Poster) *11th Conference on Laboratory Phonology*, Wellington, New Zealand, 7/2008.
- *Symposium on Phonologization*, Chicago, 4/2008.

Chi, X. & Sonderegger, M. Subglottal coupling and vowel space. (Poster) *147th meeting of the Acoustical Society of America*, New York, 5/2004.

## SOFTWARE

McAuliffe, M., Coles, A., Goodale, M., and Sonderegger, M. (2018–2019). *Integrated Speech Corpus Analysis (ISCAN)* [Computer program]. Version 0.2. Available at <https://github.com/MontrealCorpusTools/iscan/>.

McAuliffe, M., Stengel-Eskin, E., Socolof, M., Coles, A., Mihuc, S., & Sonderegger, M. (2017–2019). *PolyglotDB: Language data store and linguistic query API* [Computer program]. Version 1.0 Available at <https://github.com/MontrealCorpusTools/PolyglotDB/>.

McAuliffe, M., Stengel-Eskin, E., Socolof, M., & Sonderegger, M. (2016). *Speech Corpus Tools: an application for easier analysis of large speech corpora* [Computer program]. Version 0.5. Available at <https://github.com/MontrealCorpusTools/speechcorpustools>.

McAuliffe, M., Socolof, M., Mihuc, S., Wagner, M., & Sonderegger, M. (2016–2019). *Montreal Forced Aligner* [Computer program]. Version 1.0.1. Available at <https://github.com/MontrealCorpusTools/Montreal-Forced-Aligner>.

Keshet, J., Sonderegger, M., and Knowles, T. (2014). *AutoVOT: A tool for automatic measurement of voice onset time using discriminative structured prediction* [Computer program]. Version 0.9. Available at <https://github.com/mlml/autovot/>.

## TEACHING (AS INSTRUCTOR)

### McGill University

#### *Undergraduate*

Introduction to Linguistics (LING 201)

Winter 2017 (with M. Noonan)

Phonetics (LING 330)

Winter 2013, 2014, 2018

#### *Undergraduate/Graduate*

Computational Linguistics (LING 550)

Winter 2015, Fall 2016

Field Methods (LING 415/610)

Winter 2016, 2017 (with J. Coon)

*Graduate*

Experimental Linguistics: Methods (LING 620) Fall 2013 (with M. Wagner), 2014, 2015,  
2016 (with F. Torreira), 2017 (with M. Wagner)  
Phonology 4/Seminar in Phonology (LING 635/735) Winter 2013, 2014, 2015, 2016  
Phonology 3 (LING 631) Fall 2015 (with M. Wagner)

**LSA Summer Institute**

Computational Models of Sounds Change (with James Kirby) Summer 2013, Summer 2015

**University of Chicago**

Formal Methods and Statistics in Linguistics (with James Kirby) Spring 2009

TEACHING (AS  
TA)

**University of Chicago**

*Linguistics*: Phonology II  
*Computer Science*: Honors Intro. to Comp. Sci. II (2x), Foundations of Computing (2x), Introduction  
to Formal Languages, Computational Models of Speech, Artificial Intelligence

ADVISING AND  
SUPERVISION

**Academic advising**

(All students are McGill Linguistics unless otherwise indicated)

**PhD: Dissertations**

Bing'er Jiang, PhD thesis co-supervisor. Title TBA. In progress.

James Tanner, PhD thesis co-supervisor. Title TBA. In progress.

Hye-Young Bang, PhD thesis co-supervisor. *The structure of multiple cues to phonetic categorization  
and its implications for sound change*. Defended 12/2017.

Oriana Kilbourn-Ceron, PhD thesis co-supervisor. *Speech production planning affects variation in  
external sandhi*. Defended 7/2017.

**PhD: Evaluation papers**

James Tanner, PhD evaluation paper co-supervisor. *Phonological and phonetic mechanisms of Tokyo  
Japanese vowel devoicing*. Defended 4/2017.

Jeffrey Lamontagne, PhD evaluation paper co-supervisor. *The realisation of prominence in Laurentian  
French*. Defended 6/2016.

Hye-Young Bang, PhD evaluation paper supervisor. *The lexical and contextual path of tonogenesis:  
evidence from Seoul Korean*. Defended 1/2015.

Oriana Kilbourn-Ceron, PhD evaluation paper supervisor. *Categorical and variable allophony? The  
case of Japanese high vowel devoicing in spontaneous speech*. Defended 6/2014.

Guilherme Garcia, PhD evaluation paper co-supervisor. *Stress and gradient weight in Portuguese*.  
Defended 6/2014.

Brian Buccola, PhD evaluation paper supervisor. *Two proofs that classic Optimality Theory is ex-  
pressively weaker than ordered rewrite rules*. Defended 1/2013.

**MA**

Martha Schwarz, MA paper co-supervisor. *Realization and Representation of Nepali Laryngeal Con-  
trasts: Voiced aspirates and laryngeal realism*. Defended 5/2017.

Betty Leung, MA paper co-supervisor. *Tone 4 and Tone 6 merger in heritage Cantonese speakers*.  
Completed 5/2016.

**BA**

Michael Goodale (CogSci), BA Honours project supervisor. *Probabilistically Reconstructing the Allo-  
phonic Rules of English Stop Allophones*. Completed 4/2019.

Arlie Coles (CogSci), BA Honours project supervisor. *Forced phonetic alignment using deep neural networks*. Completed 4/2018.

Hannah Cohen, BA Honors thesis co-supervisor. *Looking for /l/: A light in the dark*. Completed 9/2016.

Liam Bassford, BA Honour's thesis co-supervisor. *Multidimensional stylistic variability of diphthongization in Québec French: a corpus study*. Completed 4/2015.

### **Thesis committees**

Fiona Campbell, PhD thesis committee member. Title TBA. In progress.

Donghyun Kim, PhD thesis committee member and oral defense committee member. *Individual differences in plasticity in speech perception*. Defended 8/2018.

Amélie Bernard (Psychology, McGill), PhD thesis committee member and oral defense committee member. *Learning statistical regularities in speech sounds: syllable position vs. co-occurrence information*. Defended 7/2018.

Guilherme Garcia, PhD thesis committee member and oral defense committee member. *Weight effects on stress: lexicon and grammar*. Defended 8/2017.

Bing'er Jiang, MA paper committee member. *The perception of tonal register contrast and individual variability in Chinese Wu dialects*. Defended 5/2017.

Donghyun Kim, PhD evaluation paper committee member. *Individual differences in the relation between perception and production and mechanisms of phonetic imitation*. Defended 5/2016.

Guilherme Garcia, PhD evaluation paper committee member. *Weight effects on stress in second language acquisition*. Defended 5/2015.

### **Thesis examination**

Donghyun Kim, PhD defense internal examiner. *Individual differences in plasticity in speech perception*. Defended 8/2018.

Amélie Bernard (Psychology, McGill), PhD defense internal examiner. *Learning statistical regularities in speech sounds: syllable position vs. co-occurrence information*. Defended 7/2018.

Peter Milne (Linguistics, U. Ottawa), PhD defense external examiner. *The Variable Pronunciations of Word-final Consonant Clusters in a Force Aligned Corpus of Spoken French*. Defended 4/2014.

Chen Qu, PhD defense internal examiner. *Representation and acquisition of the tonal system of Mandarin Chinese*. Defended 5/2013.

### **Postdoctoral fellows**

Michael McAuliffe (co-supervised with Michael Wagner). 2015–present.

### **Research supervision**

Vanna Willerton (MA) – RA on Speech Across Dialects of English project. Summer 2018–present.

Michael Goodale (BHon, CogSci) – RA on software development, corpus phonology/phonetics. Summer 2018, Summer 2019.

Arlie Coles (BHon, CogSci) – RA on software development, corpus phonology/phonetics. Summer 2017–Summer 2018.

David Fleischer (MA, Statistics) – RA on quantitative methods for language research. Summer 2017.

Sarah Mihuc (post-bac) – RA on software development, machine learning, phonetics. May–October 2017.

Elias Stengel-Eskin (BHon, CogSci) – Independent research project and RA software development, corpus phonetics/phonology. Summer 2016–Fall 2017.

Michaela Socolof (BHon) – RA on software development, corpus phonetics/phonology. Summer 2016.

James Tanner (as MA alumnus) – Collaborative research on speech variability, leading to article submission. Spring 2015–Summer 2016.

Jeffrey Lamontagne (PhD) – RA on Voicing contrast grants, corpus acquisition. Winter 2015–present.

Henrison Hsieh (PhD) – RA on software development for corpus research. Summer 2015.

Hye-Young Bang (PhD) – RA on Voicing contrast grants, corpus acquisition. Winter 2015.

Hannah Cohen (BHon) – RA on corpus phonetics/phonology, software development. Summer 2014–Spring 2015.

Liam Bassford (BHon) – RA on corpus phonetics/phonology. Winter 2014–Winter 2015.

Marion Coumel (BA) – RA on corpus phonetics/phonology. Winter 2014.

Louisa Bielig (BA) – Directed reading on speech production (Co-supervised with M. Clayards), RA on phonological dynamics. Summer–Fall 2013.

Thea Knowles (post-bac) – RA on automatic phonetic measurement, corpus phonetics and phonology; lab manager. Summer 2013–Fall 2014.

Misha Schwartz (BA) – RA on corpus phonetics/phonology, software development; independent study on speech technology. Summer 2013–Fall 2014.

Marjorie Labelle (BA) – RA on corpus phonetics/phonology. Winter 2013–Spring 2015.

Victoria Ly (BA) – independent study on corpus phonetics. Winter 2013. (Co-supervised with Meghan Clayards)

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ACADEMIC  
SERVICE

**Reviewing**

- Positions held:
  - Advisory board, *Phonological Data and Analysis*, 2017–present
- Grant proposals:
  - *National Science and Engineering Research Council* (Canada): 2018 (1)
  - *National Science Foundation* (US): 2016 (1)
  - *Mitacs* (Canada): 2014 (1)
- Journal articles:
  - *Language*: 2016 (1)
  - *Journal of Phonetics*: 2016 (1)
  - *Behavioral Research Methods*: 2015 (1)
  - *Cognition*: 2015 (1)
  - *PLOS ONE*: 2015 (1)
  - *Phonology*: 2014 (1)
  - *Cognitive Science*: 2010 (1), 2013 (1)
  - *Developmental Science*: 2012 (1)
  - *Journal of the Acoustical Society of America*: 2012 (1), 2013 (1), 2014 (1), 2017 (2), 2018 (1)
  - *Stochastic Models*: 2012 (1)
  - *Lingua*: 2010 (1), 2014 (2)
  - *Speech Communication*: 2010 (1)
- Book chapters:
  - *MIT Press*: 2019 (1)
  - *University of Chicago Press*: 2016 (1)

- *Cambridge University Press*: 2012 (1)
- *Oxford University Press*: 2010 (1)
- Conference papers:
  - *The 27th International Conference on Computational Linguistics*: 2018
  - *North American Association of Computational Linguistics-Human Language Technologies*: 2012
  - *Cognitive Science Society*: 2011, 2012
- Conference abstracts:
  - *Society for Computation in Linguistics*: 2017
  - *LSA Annual Meeting*: 2016, 2017
  - *Laboratory Phonology*: 2016
  - *New Ways of Analyzing Variation*: 2016
  - *Sociolinguistic Variation and Language Processing*: 2015
  - *North Eastern Linguistics Society*: 2015
  - *Generative Linguistics in the Old World*: 2015
  - *Tonal Aspect of Language*: 2014
  - *West Coast Conference on Formal Linguistics*: 2013, 2015, 2017
  - *Formal Approaches to Mayan Linguistics*: 2012
  - *Chicago Linguistic Society*: 2011

### **Conference and workshop organization**

- Co-organizer of Scaling up phonetic analysis for the 21st century - Tools, opportunities, and challenges, Special session of ICPhS 2019, Melbourne, August 2019.
- Co-organizer of BigPhon (Tools for Big Data in Laboratory Phonology), Satellite workshop of LabPhon 15, Ithaca (New York), July 2016.
- Lead organizer of MOLT 2014 (Montreal-Ottawa-Laval-Toronto Phonology Workshop), McGill University, March 2014.

### **Committee Membership**

- Member of evaluation committee:
  - Institut de valorisation des données (IVADO), Doctoral excellence scholarships, 2019.
  - Fonds de recherche du Québec - Société et culture (FRQSC), Programme Soutien à la recherche pour la relève professorale, 2017–18.
- Jury member for PhD comprehensive exam for Anderson Avila (Institut National de la Recherche Scientifique), 8/2016.
- Secondary field supervisor for Examen général de synthèse for Hugues Lacroix (Université de Montréal), 2/2018.

### **Service to McGill Linguistics Department**

- Graduate Admissions and Funding Director: 2017–2018
- Subcommittee on introductory linguistics courses: 2017
- Subcommittee on departmental retreat: 2016–17
- Ad-hoc member of search committee for Assistant Professor in syntax/semantics: 2015–2016
- Chair of search committee for Assistant Professor in phonetics or related experimental areas: 2014–2015
- Member of search committee for phonetics/phonology faculty lecturer: 2014
- Colloquium series co-organizer: 2013–2017
- Subcommittee on merit evaluation: 2014
- Subcommittees on departmental promotion: 2013, 2014

- Co-editor of departmental blog *McLing*: 2012–present
- Subcommittee on student awards: 2013
- Admissions committee: 2012–2017

#### **Service to McGill University**

- Member of Vanier SSHRC/VCGS Fellowship Evaluation Committee: 2017
  - Pro-Dean for Francesco Tordini (Electrical and Computer Engineering) PhD defence, 6/2017.
  - Pro-Dean for Alejandro Sepulveda (Integrated Studies in Education) PhD defence, 8/2016.
  - Pro-Dean for Andrew Abela (Psychology) PhD defence, 6/2015.
  - Pro-Dean for Nathalie Magnus (Experimental Medicine) PhD defence, 5/2014.
  - Member of Research Ethics Board II, 2013–2014
  - Speaker at SLUM’s “Future Week” career panel, 2013
  - Member of SSHRC doctoral scholarship pre-selection committee: 2012, 2013
- 

#### LANGUAGES

- Native: English
- Fluent: French
- Intermediate: German, Spanish
- Elementary: Latin, Russian
- Coursework: Japanese, Old English
- Field Methods: Kabyle (Berber), Bobangi/Lingala (Bantu)

TECHNICAL SKILLS Python, R, C, Perl, Scheme, Latex, Matlab, Praat.