

Research associate / Lab manager  
McGill Neurolinguistics Laboratory,  
School of Communication Sciences and Disorders

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## Education

- 2014 – 2018 Postdoctoral researcher in speech communication,  
Neurolinguistics laboratory,  
School of communication sciences and disorders, McGill University
- 2012 – 2014 Postdoctoral Fellowship in psychology of language,  
Language and Memory Laboratory, McGill University.
- 2006 – 2012 PhD in linguistics, specialized in neuro-phonetics,  
Laboratoire de Sciences Phonétiques & Laboratoire de Neurosciences et  
Électrophysiologie Cognitive, Université de Montréal.
- 2007 Speech therapy research internship,  
Université de Montréal.
- 2003 – 2006 MA in linguistics, specialized in phonetics,  
Laboratoire de Sciences Phonétiques, Université de Montréal.
- 2000 – 2003 BA in linguistics,  
Université de Montréal.

## Awards and distinctions

- 2010 *Prix 2010 d'Excellence en Enseignement ('Excellence in teaching award')*,  
Université de Montréal.
- 2006 *Dean's honour roll - master's*, Université de Montréal.
- 2003 *Bachelor's with mention of excellence*, Université de Montréal.
- 2000 – 2003 *Dean's honour roll - bachelor's*, Université de Montréal.

## Funding and Scholarships (*selection*)

- 2016 – 2018 *Insight Development Grants*  
Social Sciences and Humanities Research Council of Canada (SSHRC).  
*"The role of phrase final lengthening in speech parsing and its interaction with stress-  
timed, syllable-timed, and mora-timed language structure."*
- 2012 – 2014 *Bourse postdoctorale ('Postdoctoral award')*.  
Fonds Québécois de Recherche sur la Société et la Culture (FQRSC).
- 2011 *Fernand-Séguin scholarship*.  
Centre de recherche Fernand-Séguin, Montréal.
- 2008 *Arsène David. scholarship*.  
Faculté des études supérieures et postdoctorales, Université de Montréal.
- 2007 – 2010 *Canada Graduate Scholarship Program: Doctoral Scholarship*.  
Social Sciences and Humanities Research Council of Canada (SSHRC).
- 2006 – 2008 *Bourse de doctorat en recherche*.  
Fonds Québécois de Recherche sur la Société et la Culture (FQRSC).

- 2006 *Admission Scholarship – Doctorate*  
Département de linguistique et de traduction, Université de Montréal.
- 2004 *Canada Graduate Scholarship Program: Master’s Scholarship.*  
Social Sciences and Humanities Research Council of Canada (SSHRC).

## Publications and communications

### Peer reviewed papers

- Gilbert, A. C.**, Cousineau-Perrusse, M., & Titone, D. (Under revision). L2 exposure modulates bilingual speech planning.
- Gilbert, A. C.**, Wolpert, M., Saito, H., Kousaie, S., Itzhak, I., & Baum, S. R. (Submitted). Adaptive and selective use of syllable duration and fundamental frequency as word segmentation cues in the production of French-English bilinguals.
- Coulter, K., **Gilbert, A. C.**, Kousaie, S., Baum, S. R., Gracco, V. L., Klein, D., Titone, D., & Phillips, N. A. (Submitted). Bilinguals benefit from semantic context while perceiving speech in noise in both of their languages: Electrophysiological evidence from the N400 ERP.
- Musiliyu, O., **Gilbert, A. C.**, Baum, S. R., Oliveira, M. (Submitted). Electrophysiological correlates of prosodic boundaries at different levels in Brazilian Portuguese.
- Boucher, V. J., **Gilbert, A. C.**, Jemel, B. (2019). The role of low-frequency neural oscillations in speech processing: Revisiting delta entrainment. *Journal of Cognitive Neuroscience*, 31 (8), 1205-1215. doi:10.1162/jocn\_a\_01410
- Boucher, V. J., **Gilbert, A. C.**, & Rossier-Bisaillon, A. (2018). The structural effects of modality on the rise of symbolic language: A rebuttal of evolutionary accounts and a laboratory demonstration. *Frontiers in Psychology*, 9 (2300). doi:10.3389/fpsyg.2018.02300
- Gilbert, A. C.**, Boucher, V. J. & Jemel, B. (2015). The perceptual chunking of speech: a demonstration using ERPs. *Brain Research*, 1603, 101-113.
- Gilbert, A. C.**, Boucher, V. J. & Jemel, B. (2014). Perceptual chunking and its effect on memory in speech processing: ERP and behavioral evidence. *Frontiers in Psychology*, 5(220), 1-9.

### Peer reviewed proceedings

- Musiliyu, O., **Gilbert, A. C.**, Baum, S. R., & Oliveira, M. (2019). Electrophysiological correlates of prosodic boundaries at different levels in Brazilian Portuguese. In Sasha Calhoun, Paola Escudero, Marija Tabain & Paul Warren (eds.) *Proceedings of the 19th International Congress of Phonetic Sciences*, Melbourne, Australia 2019 (pp. 2951-2955). Canberra, Australia: Australasian Speech Science and Technology Association Inc.
- Gilbert, A. C.**, Wolpert, M., Kousaie, S., & Baum, S. R. (2017). Producing appropriate prosodic cues in a non-dominant language: preliminary results from French-English bilinguals. In Botinis, A. (Ed.) *Proceedings of 8th Tutorial and Research Workshop on Experimental Linguistics*. Heraklion, Greece: University of Athens.
- Boucher, V. J., **Gilbert, A. C.**, & Jemel, B. (2017). The entrainment of EEG delta oscillations in speech listening. In Botinis, A. (Ed.) *Proceedings of 8th Tutorial and Research Workshop on Experimental Linguistics*. Heraklion, Greece: University of Athens.
- Gilbert, A. C.**, Itzhak, I., & Baum, S. (2016). A cross-language investigation of word segmentation by bilinguals with varying degrees of proficiency: Preliminary results. *Proceedings of Speech Prosody 2016*.
- Gilbert, A. C.**, Boucher, V. J., & Jemel, B. (2015). Individual differences in working memory capacity and their effect on speech processing. In The Scottish Consortium for ICPHS 2015 (Ed.), *Proceedings of the 18th International Congress of Phonetic Sciences*. University of Glasgow : Glasgow, United Kingdom.
- Gilbert, A. C.**, Boucher, V. J., & Jemel, B. (2012). Effects of temporal chunking on speech recall. In Q. Ma, H. Ding, & D. Hirst (Eds.), *Proceedings of the 6th International Conference on Speech Prosody* (Vol. 2, pp. 524-527). Shanghai, China : Tongji University Press.

**Gilbert, A. C.**, Boucher, V. J., & Jemel, B. (2011). The role of rhythmic chunking in speech: Synthesis of findings and evidence from statistical learning. In W.-S. Lee & E. Zee (Eds.), *Proceeding of The 17<sup>th</sup> International Congress of Phonetic Sciences* (pp.747-750). Hong Kong, Chine : City University of Hong Kong.

**Gilbert, A. C.**, Boucher, V. J., & Jemel, B. (2010). Exploring the rhythmic segmentation of heard speech using evoked potentials. *Speech Prosody 2010*, 100 334, 1-3.

Boucher, V. J., & **Gilbert, A. C.** (2009). The physiology and acoustics of vocal fatigue I: New findings of criterion-based signs for the prevention of acquired voice disorders. In J. I. Godino-Llorente & P. Gomez-Vilda (Eds.), *3rd Advanced Voice Function Assessment International Workshop* (pp. 97-100). Madrid, Spain: Universidad Politécnica de Madrid.

Boucher, V. J., & **Gilbert, A. C.** (2009). The physiology and acoustics of vocal fatigue II: What software designers need to know about signs of potential vocal fold lesions. In J. I. Godino-Llorente & P. Gomez-Vilda (Eds.), *3rd Advanced Voice Function Assessment International Workshop* (pp. 101-104). Madrid, Spain: Universidad Politécnica de Madrid.

**Gilbert, A. C.**, Boucher, V. J., & Jemel, B. (2008). Size of rhythm-groups affects the memory trace of heard words in utterances: Results from a pilot study using evoked potentials. In P. A. Barbosa, S. Madureira & C. Reis (Eds.), *Proceedings of the Speech Prosody 2008 Conference* (pp. 379-382). Campinas, Brazil: Editora RG/CNPq.

Boucher, V. J. & **Gilbert, A. C.** (2008). Investigations of speech segmentation : Addressing the writing bias in language research. In A. Botinis (Eds.) *Proceedings of the ISCA Tutorial and Research Workshop on Experimental Linguistics 2008* (pp.45-48), Athens, Greece: University of Athens.

**Gilbert, A. C.**, & Boucher, V. J. (2007). What do listeners attend to in hearing prosodic structures? Investigating the human speech-parser using short-term recall. In H. van Hamme & R. van Son (Eds.), *Proceedings of the Eighth Annual Conference of the International Speech Communication Association (InterSpeech2007)* (pp. 430-433), Antwerp, Belgium: ISCA.

**Gilbert, A. C.**, & Boucher, V. J. (2006). Syntax and syllable count as predictors of French tonal groups: Drawing links to memory for prosody. In R. Hoffmann & H. Mixdorff (Eds.), *Proceedings of the 3rd International Conference on Speech Prosody* (pp. 289-292). Dresden, Germany: TUD press.

**Gilbert, A. C.**, & Boucher, V. J. (2005). Size-constraints on intonation groups in speech: Evidence of an independent syllable-count principle. *Journal of the Acoustical Society of America*, 117, 2458. (Abstract)

Boucher, V. J., & **Gilbert, A. C.** (2005). Constraints on immediate memory for prosody: Evidence of a correspondence with the prosodic organization of speech. In B. G. Bara, L. Barsalou & M. Bucciarelli (Eds.), *Proceedings of the XXVII Annual Conference of the Cognitive Science Society* (pp. 328-330). Mahwah, NJ: Erlbaum.

### **Presentations (selection of talks and posters, not mentioned in Proceedings section)**

**Gilbert, A. C.**, Gullifer, J., Wolpert, M., Saito, H., Kousaie, S., Itzhak, I., Gracco, V. L., Klein, D., Phillips, N. A., Titone, D., & Baum, S. R. (Accepted 2019). *Language dominance and entropy as predictors of word segmentation cue production in bilinguals*. 60th Annual Meeting of the Psychonomic Society, Montréal, Qc.

Grant, A., Kousaie, S., Coulter, K., **Gilbert, A. C.**, Baum, S. R., Gracco, V., Klein, D., Titone, D., Phillips, N. (Accepted 2019). *From structure to function: A multimodal analysis of bilingual speech in noise processing*. Eleventh Annual Meeting of the Society for the Neurobiology of Language, Helsinki, Finland.

**Gilbert, A. C.**, Itzhak, I., Wolpert, M., Lee, J., & Baum, S. R. (Accepted 2019). *Phrase-Final Lengthening as a Word Segmentation Cue in French: A Bilingual ERP Investigation*. *Eleventh Annual Meeting of the Society for the Neurobiology of Language*, Helsinki, Finland.

Gullifer, J., Kousaie, S., **Gilbert, A. C.**, Giroud, N., Grant, A., Coulter, K., Klein, D., Baum, S. R., Phillips, N., & Titone, D. (Accepted 2019). *Language entropy: A novel quantification of language experience among bilinguals*. *Eleventh Annual Meeting of the Society for the Neurobiology of Language*, Helsinki, Finland.

Morin-Lessard, E., **Gilbert, A. C.**, Titone, D. & Byers-Heinlein, K. (2019). *Production of speech disfluencies in English-French bilingual adults*. Présenté à 12th International Symposium on Bilingualism, Edmonton, Canada.

- Gilbert, A. C.**, Lee, J., Wolpert, M., & Baum, S. R. (2018) Perceptual processing of pre-boundary lengthening during phrase segmentation in English: Preliminary ERP evidence. Présenté à *Tenth Annual Meeting of the Society for the Neurobiology of Language*, du 16 au 18 août 2018, Québec, QC.
- Gilbert, A. C.**, & Titone, D. (2018). Second-Language Exposure Impacts the Scope of Speech Planning During First- and Second-Language Picture Naming. Présenté à *59<sup>th</sup> annual meeting of the psychonomic society*, du 15 au 18 novembre 2018, Nouvelle-Orléans, LA.
- Gilbert, A. C.**, Kousaie, S., Wolpert, M., Klein, D. & Baum, S. R. (2017). *How experience with different prosodies shapes the bilingual brain: preliminary connectivity analyses from English-French bilinguals*. 9th Annual Meeting of the Society for the Neurobiology of Language, Baltimore, MD.
- Morningstar, M., **Gilbert, A. C.**, Burdo, J., Leis, M., & Dirks, M. A. (2017). *Recognition of vocal socio-emotional expressions at varying levels of emotional intensity*. Association for Psychological Science Conference, Boston, MA.
- Gilbert, A. C.**, Cousineau-Perusse, M., & Titone, D. (2016). *Are Bilinguals More "Risk-Averse" in their Scope of Planning During Second vs. First Language Production?* Mental Lexicon 2016, Ottawa, Canada.
- Gilbert, A. C.**, Itzhak, I., & Baum, S. (2016). *Bilingual word segmentation: A cross-language ERP investigation*. 23rd Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Gilbert, A. C.**, Itzhak, I., Koussaie, S., Baum, S. R. (2016). *Localisation des frontières lexicales chez les locuteurs bilingues : résultats préliminaires*. Impacts cognitifs et neurophysiologiques du bilinguisme, 84<sup>e</sup> Congrès de l'ACFAS, Montréal, Qc
- Boucher, V. J., **Gilbert, A. C.**, & Jemel, B. (2016). *The impact of eurhythmic structures on speech processing: ERPs attest to effects on sensory memory*. 23rd Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Gonzalez, E., Itzhak, I., **Gilbert, A. C.**, & Titone, D. (2016). *How does Word Concreteness and Cognate Status Independently Affect Bilingual Semantic Processing?* Mental Lexicon 2016, Ottawa, Canada.
- Gilbert, A. C.**, Pivneva, I., & Titone, D. (2015). *Individual Differences in Executive Control and Second Language Exposure Modulate the Acoustic Realization of Phonological Cues in Highly Proficient Bilingual Speakers*. 56<sup>th</sup> Annual Meeting of the Psychonomic Society, Chicago, É.U.
- Gilbert, A. C.**, Pivneva, I., & Titone, D. (2014). *Lexical quality and the acoustic-phonetic realization of bilingual speech*. 9<sup>th</sup> International Conference on the Mental Lexicon, Niagara on the Lake, On.
- Gilbert, A. C.** (2013). *How do L2 ability and Cognitive Capacity Modulate L1 vs. Acoustic-Phonetic Realization*. CRBLM/McGill Psychology DataStorm 2013, Montréal, Canada.
- Gilbert, A. C.**, Boucher, V. J. & Jemel, B. (2013). *Input chunking and its effect on speech processing*. 11th Symposium of Psycholinguistics, Tenerife, Spain.
- Gilbert, A. C.**, Pivneva, I. & Titone, D. (2013). *Individual Differences in Second Language Ability and Executive Control Modulate Voice Onset Time During Bilingual Speech*. 2013 Psychonomic Society Annual Meeting, Toronto, Canada.
- Gilbert, A. C.**, Pivneva, I. & Titone, D. (2013). *Individual Differences in Executive Control and Second Language Ability Modulate Voice Onset Time During Bilingual Speech*. Intl. Conference on Multilingualism, Montréal, Canada.
- Khawajkie, Y., **Gilbert, A. C.**, Pivneva, I. & Titone, D. (2013). *Cross-Language VOT Differences in Spontaneous Speech, L2 Proficiency, and Cognitive Control*. 2013 Auditory Cognitive Neuroscience Workshop, Hamilton, Canada.
- Gilbert, A. C.**, Boucher, V. J. & Jemel, B. (2012). *The on-line "perceptual chunking" of speech: ERP evidence*. CRBLM Workshop on Rhythm Perception and Production, Montréal, Canada.
- Gilbert, A. C.**, Boucher, V. J. & Jemel, B. (2011). *The role of rhythmic chunking in speech: synthesis of findings and evidence from statistical learning*. Experimental and theoretical advances in prosody 2, Montréal, Canada.
- Gilbert, A. C.**, Jemel, B. & Boucher, V. J. (2010). *Closure Positive Shifts (CPS) : evoked by prosodic rhythm-groups in meaningful and meaningless speech*. 17<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Montréal, Canada.
- Gilbert, A. C.**, Boucher, V. J., Jemel, B. & Lalonde, B. (2010). *Segmentation de la parole : des groupes rythmiques et des énoncés, pas des mots et des phrases*. 78<sup>e</sup> Congrès de l'ACFAS, Montréal, Canada.

**Gilbert, A. C.,** Jemel, B. & Boucher, V. J. (2009). *Closure Positive Shifts (CPS) as reflecting on-line segmentation of prosodic rhythm-groups in speech*. First Neurobiology of Language Conference, Chicago, USA.

### Invited talks (selection)

**Gilbert, A. C.** (2018). *Bilingual speech production*. Presented in PSYC341 : Psychology of bilingualism, Université McGill.

**Gilbert, A. C.,** Koussaie, S., Wolpert, M., Klein, D. & Baum, S. R. (2017). *Exploration du lien entre la production d'indices prosodiques chez les bilingues français-anglais et la connectivité fonctionnelle cérébrale : résultats préliminaires*. Présenté à VocUM, Montréal.

**Gilbert, A. C.** (2016). *La prosodie comme outil de segmentation de la parole : Du chunking perceptif à la détection des frontières lexicales*. Conférence linguistique de l'UQÀM, Montréal, Canada.

Boucher, V. J. & **Gilbert, A. C.** (2013). Brain waves and prosodic structure: Recent results and perspectives. Université Paris 7, France.

**Gilbert, A. C.,** Boucher, V. J. & Jemel, B. (2012). Le chunking perceptif de la parole. Presented in *ORT6030 : Méthodes de recherche en orthophonie*, Université de Montréal, Montréal, Canada.

**Gilbert, A. C.** (2012). How language works, according to Pinker's *The language instinct*. Presented in *PSYC537: Advanced topics in psychology of language*, McGill University, Montréal, Canada.

**Gilbert, A. C.** & Columbus, G. (2012). On Croft & Cruse : Radical construction grammar, Presented in *PSYC537: Advanced topics in psychology of language*, McGill University, Montréal, Canada.

**Gilbert, A. C.,** Boucher, V. J. & Jemel, B. (2011). The role of rhythmic chunking in speech: synthesis of findings. *Center for Research on Language Mind and Brain*, McGill University, Montréal, Canada.

## Research and technical training

### Training (selection)

TMS workshop with Kate Watkins, Montréal, Qc.

2019. *Center for Research on Brain, Language, and Music (CRBLM)*.

Meta-Analytic Methods for Cognitive Scientists, Montréal, Qc.

2018. *Center for Research on Brain, Language, and Music (CRBLM)*.

Educational Workshop on Basic and Advanced Brain Connectivity, Montréal, Qc.

2018. *Sixth Biennial Conference on Resting State and Brain Connectivity*.

Workshop on Transcranial Direct Current Stimulation (tDCS), Montréal, Qc.

2017. *Centre for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR) and Center for Research on Brain, Language, and Music (CRBLM)*.

Introduction to Bayesian inference and its application through Hierarchical Linear Modelling, Montréal, Qc.

2017. *Graduate Association of Students of Psychology (GASP) Psychology Methods Workshops, McGill University*.

Course on Research Ethics, on applying the *Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans, 2nd edition (TCPS 2; web tutorial)*.

2016. *Panel on Research Ethics, Canada*.

Introduction to Knowledge Translation Planning, Montréal, Qc.

2016. *Center for Research on Brain, Language, and Music (CRBLM)*.

MEG@McGill Comprehensive Training: Full-day MEG/EEG imaging crash course, Montréal, Qc.

2015. *McConnell Brain Imaging Centre, Montreal Neurological Institute*.

Introductory Workshop on Mixed-Effects Modelling, Montréal, Qc.

2015. *NSERC-CREATE: Training in Auditory Cognitive Neuroscience*.

BrainVision Analyzer 2 Workshop, Montréal, Qc.  
2015. *Brain Vision LLC, University McGill.*

Residue Iteration Decomposition (RIDE) workshop (toolbox pour Matlab), Montréal, Qc.  
2015. *Center for research on brain, language, and music.*

Linear mixed models workshop, Montréal, Qc.  
2014. *Center for research on brain, language, and music.*

R for programmers, Montréal, Qc.  
2014. *Software Carpentry/Mozilla Science Lab.*

Praat workshop, Montréal, Qc.  
2012. *McGill University.*

Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Allemagne.  
2010. *International Summer School on Multimodal Approaches in Neuroscience*

Université du Québec à Montréal, Montréal, Qc.  
2010. *Institut d'été en sciences cognitives 2010 : l'évolution du langage*

City University of New York, New York, É.U.  
2010. *Tutorial in Neurolinguistic Methods*

## Technical Skills

### Softwares

- Acoustical analysis :  
*KayLab suite (CSL, Multi-Speech, ASL, MDVP.), Praat, Wavesurfer, WinPitch.*
- Electrophysiological signal analysis :  
*BrainVision Analyzer, Matlab (EEGLab, FieldTrip, RIDE), BioProc, EEProbe, Cognitrace.*
- Stimuli design and presentation :  
*Goldwave, E-Prime, Inquisi, KayLab ASL.*
- Statistics :  
*SPSS, R.*
- Graphics :  
*Photoshop, Illustrator, Grapher*

### Lab techniques

- Electroencephalography (EEG), Event-Related Potential (ERP).
- Monopolar and bipolar electromyography (EMG).
- Studio recording and audiometric screening.

## Teaching

### Courses

2015; 2018. Lecturer *LSV716 : Phonétique et phonologie*, Département des lettres et communications, Faculté des lettres et des sciences humaines, Université de Sherbrooke.  
(Course evaluation available upon request.)

2006 – 2011. Lecturer *LNG1400 : Notions de phonétique et de phonologie*, Département de linguistique et de traduction, Université de Montréal.  
(Course evaluation available upon request.)

2011. Lecturer *LNG2400 : Phonétique instrumentale du français*,

Département de linguistique et de traduction, Université de Montréal.  
(Course evaluation available upon request.)

### Teaching material developed

2006. (With major revisions in 2007 et 2008). Codex for LNG1400 : *Notions de phonétique et de phonologie*.  
Département de linguistique et de traduction, Université de Montréal. 190 pages.  
Including supplementary information and autodidact exercises,  
*In collaboration with Charles A. Lamoureux et Victor J. Boucher*

### Student supervision

Assisted supervision of 6 students (2012-2016) under the primary supervision of Dr. Debra Titone, McGill Language and Memory Laboratory, Psychology department.

Assisted supervision of 3 students (2015-ongoing) under the primary supervision of Dr. Shari Baum, McGill Neurolinguistics Laboratory, School of communication sciences and disorders.

### Laboratory supervision

2007 – 2012. Laboratory supervisor, *LNG3560 : Phonétique : théorie et description*, Département de linguistique et de traduction, Université de Montréal.

### Teaching training (Available upon request)

## Services

### Event organization

2016-2017. *Plasticité, musique et langage*, held during the 85<sup>e</sup> congrès de l'ACFAS, McGill University.

2016. Third Annual Postdoctoral Research Day (McGill representative).

2015 – 2016. Impacts cognitifs et neurophysiologiques du bilinguisme, held during the 84<sup>e</sup> Congrès de l'ACFAS, Université du Québec à Montréal.

2012 – 2013. Student coordinator of the Cognitive Area Brownbag, Department of Psychology, McGill University.

### Reviews

Paper reviews : *Applied Linguistics*  
*Bilingualism, Language, and Cognition*  
*Clinical Linguistics and Phonetics*  
*Cognitive Processing*  
*Frontiers in Neuroscience*  
*Journal of Applied Linguistics*  
*Journal of Phonetics*  
*Journal of Psycholinguistic Research.*  
*PLoSOne*

Book review: *Cognitive Neuroscience of Language*, Routledge Psychology | Taylor & Francis.

## Languages

Native : French.

Fluent : English (written, spoken)

Basic comprehension of Spanish and German (written and spoken).