

CLAUDE ALAIN, Ph.D.

Rotman Research Institute, Baycrest Centre for Geriatric Care and
Department of Psychology, University of Toronto, Ontario, Canada
Date of birth: May 22, 1963

EDUCATION

Ph. D., Psychology, University of Quebec at Montreal, Canada, 1991.
M. A., Psychology, University of Quebec at Montreal, Canada, 1988.
B. A., Psychology, Laval University, Quebec, Canada, 1986.

CURRENT POSITION

Assistant Director, Rotman Research Institute at Baycrest Centre, 2010-present.
Professor, Department of Psychology, University of Toronto, 2006-present.
Senior Scientist, Rotman Research Institute at Baycrest Centre, 2001-present.
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PREVIOUS POSITIONS

Scientist, Rotman Research Institute at Baycrest Centre and Associate Professor, Department of Psychology, University of Toronto, 2001-2006.
Junior Scientist, Rotman Research Institute at Baycrest Centre and Assistant Professor, Department of Psychology, University of Toronto, 1997-2001.
Postdoctoral Fellow, VA Medical Center & University of California, Davis, 1991-1996.

RESEARCH ENDEAVOURS

Auditory cognitive neuroscience.
Psychophysiological and neural mechanisms of audition perception, attention, and cognition.
Perceptual learning, rehabilitation, memory.
Human brain electrophysiology.
Functional neuroimaging (EEG, MEG, fMRI)

HONOURS & AWARDS (Total amount for the award period)

The Premier Research Excellence Award, \$150,000, 2002-2006.
Canadian Institutes of Health Research Scholarship, \$250,000, 2000-2005.
Quebec Government Junior Fellowship (FRSQ), \$40,000, 1996.
Quebec Government Postdoctoral Fellowship (FCAR and FRSQ), \$100,000, 1991-1995.
McDonnell Foundation Summer Institute in Cognitive Neuroscience, 1992.
Medical Research Council of Canada Doctoral Scholarship, \$45,000, 1988-1991.
University of Quebec at Montreal Scholarship, \$12,000, 1986-1988.
Summer Scholarship provided by the Diabetes Association of Quebec, \$3000, 1986.

PROFESSIONAL AFFILIATIONS

Society for Neuroscience.
Society for Cognitive Neuroscience.
Society for Psychophysiological Research.

CONSULTING REVIEWER

Journals. Biological Psychology; Cerebral Cortex; Child Development; Cognition; Brain Research; Ear and Hearing; Electroencephalography and Clinical Neurophysiology; Journal of Abnormal Psychology; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: Human Perception and Performance; Journal of Neuroscience; Nature; Neuroimage; Neuropsychologia; Perception and Psychophysics; Public Library of Science;

Psychological Review; Psychology and Aging; Psychophysiology; Trends in Cognitive Science; Trends in Neuroscience.

Granting agencies. Canadian Institutes of Health Research; Estonian Research Council; Fonds Québécois de la Recherche sur la Société et la Culture; Centre National de la Recherche Scientifique; Israel Science Foundation; Medical Research Council United Kingdom; National Science Foundation (United States); Natural Sciences and Engineering Research Council of Canada; Netherlands Organization for Scientific Research; The Portuguese Foundation for Science and Technology; Welcome Trust (United Kingdom).

SCHOLARLY AND PROFESSIONAL ACTIVITIES

Current:

- 2013- Editorial board, Brain Topography.
- 2011- Board of Reviewing Editors for the journal *Public Library of Sciences: One*.
- 2010- Chair of the imaging oversight committee at the Rotman Research Institute.
- 2010- Board of Reviewing Editors for the journal *Frontiers in Psychology: Auditory Cognitive Neurosciences*.
- 2008- Board of Reviewing Editors for the journal *Frontiers in Neuroscience*

Past:

- 2014, Site visit, Centre de recherche Fernand-Seguin de l'Hôpital Louis-H. Lafontaine, Montréal, Québec, Fonds Québécois de la Recherche sur la Société et la Culture.
- 2014, Review committee, Centre of Interdisciplinary Research in Music Media and Technology (CIRMMT), McGill University, Montréal, Québec, Canada, Strategic Clusters from the Canadian Foundation for Innovation & Fonds Québécois de la Recherche sur la Société et la Culture.
- 2013, Expert review panel to review the effectiveness of the Vanier Doctoral Research Awards Program.
- 2011, Chair of site visit review committee, Centre of Interdisciplinary Research in Music Media and Technology (CIRMMT), McGill University, Montréal, Québec, Canada, Strategic Clusters from the Canadian Foundation for Innovation & Fonds Québécois de la Recherche sur la Société et la Culture.
- 2010-2011, Promotion committee, Rotman Research Institute at Baycrest, University of Toronto.
- 2010-2011 Members of the review committee for Regroupement Stratégiques, Fonds Nature et Technologies, Quebec.
- 2010, Site visit, Centre de recherche Fernand-Seguin de l'Hôpital Louis-H. Lafontaine, Montréal, Québec, Fonds Québécois de la Recherche sur la Société et la Culture.
- 2010, Chair, search committee for a scientist with expertise in functional magnetic resonance imaging, Rotman Research Institute at Baycrest, Toronto.
- 2009-2012 Vanier Doctoral Research Awards Committee.
- 2009-2010, Search committee for Director/VP research at Baycrest.
- 2009-2010, Promotion committee, Department of Psychology, University of Toronto.
- 2008-2012, Research Ethics Board (REB) at Baycrest.
- 2008, Canadian Foundation for Innovation & Fonds Québécois de la Recherche sur la Société et la Culture.
- 2007-2010, member of Imaging oversight committee at the Rotman Research Institute.
- 2006-2009, CIHR Doctoral Research Awards Committee.
- 2006-2009, Board of Reviewing Editors for the journal *Brain Research*.

- 2006, Canadian Foundation for Innovation & Fonds Québécois de la Recherche sur la Société et la Culture.
- 2006, Site visit, Centre of Interdisciplinary Research in Music Media and Technology (CIRMMT), McGill University, Montréal, Québec, Canada, Strategic Clusters from the Canadian Foundation for Innovation & Fonds Québécois de la Recherche sur la Société et la Culture.
- 2006, Site visit, Centre for Studies of Behavioral Neurobiology, Concordia University, Montréal, Québec, Fonds Québécois de la Recherche sur la Société et la Culture.
- 2005-2008, Society for Psychophysiological Research's Early Career Award committee.
- 2005, Search committee for Tier 1 CRC chair in the Department of Psychology, University of Toronto.
- 2005, NSF review committee.
- 2004, NSF review committee.
- 2002, FRSQ review committee for Career Scientist.
- 2000-2003, NSERC review committee for Life Science and Psychology (Chair of the review committee for the 2003 meeting).

GRANTS (Total amount for the granting period)

Submitted:

Current:

- Alain, C. Neuroimaging studies of auditory perception and attention. National Sciences and Engineering Research Council of Canada, \$250,000, 2011-2016.
- Alain C., Arnott, S.R., & Ross, B. Aging and the neural architecture supporting the perceptual organization of speech. Canadian Institutes of Health Research, \$787,640, 2010-2015.
- Christensen, B., Alain, C., Bennett, P.J., Kiang, M., Noseworthy, M.D., Patrick, R.E., & Zipursky, R.B. Investigating behavioural, electrophysiological, and neurochemical facets of dorsal auditory stream impairment in persons with schizophrenia. Canadian Institute of Health Research, \$321,303, 2013-2016.
- Levine, B.T., Alain, C., Black, S.E., Feinstein, A., Graham, S.J., Gryfe, P., McIntosh, A.R., O'Connor, P.W., Stuss, D.T., Turner, G.R., & Ween, J.E. Diffuse brain damage effects on distributed systems: multimodal brain imaging and rehabilitation. Canadian Institutes of Health Research, \$853,770, 2010-2015.
- Ross, B., & Alain, C. The role of oscillatory brain networks in understanding age-related decline in speech perception. Canadian Institutes of Health Research, \$820,855, 2013-2018.

Past:

- Alain, C. & Turner, G. Combined EEG/fMRI biomarker development for covert stroke and small vessel disease (SVD). Heart and Stroke Foundation Centre for Stroke Recovery Catalyst Grant, \$47,000, 2012-2013.
- Bidelman, G.M., Alain, C., & Moreno, S. Effects of musical training on the behavioral and neurophysiological processing of speech in older adults. The GRAMMY Foundation, \$17,250, 2011-2012.
- Grady, C., & Alain, C. The effect of aging on processing of spatial and nonspatial information in the auditory and visual systems. Canadian Institutes of Health Research, \$341,340, 2007-2012.
- Bialystok, E., Alain, C., Luo, L., Moreno, S., & Kystok, E. Effects of normal aging on brain networks over the time course of working memory processing: a simultaneous EEG/fMRI

- study. Canadian Institutes of Health Research, Catalyst Grant: Pilot Projects in Aging – Biological & Clinical Aspect of Aging, \$49,900, 2011.
- Alain, C., Ross, B., & Tremblay, K. Neural mechanisms of auditory-based remediation programs. Canadian Institutes of Health Research, \$255,855, 2008-2011.
- Itier, R., McIntosh, A.R., & Alain, C. Modulations of the face and eye gaze processing brain networks. Canadian Institutes of Health Research, \$234,000, 2008-2011.
- Schneider, B., Li, L., & Alain, C. The effects of noise, competing speech, and age on speech comprehension in monolingual and bilingual Chinese and English listeners. CHINA-CANADA Joint Health Research Initiative, \$88,800, 2008-2011.
- Alain, C., Dyson, D., & Snyder, J. Neuro-anatomical correlates of age-related changes in central auditory processing. The Hearing Foundation of Canada, \$24,900, 2006.
- Alain, C. Neuroimaging studies of auditory perception and attention. National Sciences and Engineering Research Council of Canada, \$200,000, 2006-2011.
- Ross, B., Picton, T.W., & Alain, C. Magnetoencephalographic studies of the human auditory cortex. Canadian Institutes of Health Research, \$681,170, 2006-2011.
- Alain, C., & Dyson, B. Age-related changes in primary auditory cortex: implication for temporal acuity and speech perception. The Hearing Foundation of Canada, \$22,500, 2005.
- Alain, C. Neural architecture of auditory scene analysis. Canadian Institutes of Health Research, \$513,000, 2005-2010.
- Grady, C., & Alain, C. Age-related differences in working memory for "what" and "where" in the auditory system. Canadian Institutes of Health Research, \$177,000, 2004-2007.
- McNeely, H., Christensen, B., Lau, M.A., & Alain, C. Neurophysiology of emotion processing in major depression. Dean's Fund for New Investigator, University of Toronto, \$10,000, 2004.
- McNeely, H., Christensen, B., Lau, M.A., & Alain, C. Neurophysiology of cognitive inhibition deficits in major depressive disorders. Ontario Mental Health Foundation, \$93,892, 2004-2006.
- McNeely, H., Young, T., Christensen, B., Lau, M.A., & Alain, C. The functional neurobiology of cognitive inhibition deficits in major depressive disorder. Canadian Psychiatric Research Foundation, \$40,000, 2004-2006.
- Alain, C., & Schneider, B. Aging and the perceptual separation of sounds in the human auditory cortex. The Hearing Foundation of Canada, \$21,500, 2003.
- Alain, C. Functional organization of human auditory system. National Sciences and Engineering Research Council of Canada, \$148,000, 2002-2006.
- Alain, C., & Ostroff, J. Auditory temporal processing: An event-related brain potential study. The Hearing Foundation of Canada, \$14,000, 2002.
- Alain, C. Neural basis of auditory scene analysis. Canadian Institutes of Health Research, \$257,585, 2001-2004.
- Pantev, C., Picton, T.W., & Alain, C. Magnetoencephalographic studies of the human auditory cortex. Canadian Institutes of Health Research, \$752,450, 2001-2005.
- Alain, C., & Grady, C. Spatiotemporal mapping of auditory and visual cognition during aging. Canadian Foundation for Innovation: New Opportunities and Ontario Matching Funds, \$74,000, 1999-2001.
- Alain, C. Selective attention in patients with schizophrenia using spatio-temporal mapping of ERPs and PET. National Alliance for Research on Schizophrenia and Depression, \$88,000, 1999-2001.
- Alain, C. Spatiotemporal mapping of auditory selective attention using PET and ERPs. National Sciences and Engineering Research Council of Canada, \$92,400, 1998-2002.

- Alain, C. Age-related changes in auditory scene analysis. Canadian Institutes of Health Research, \$143,631, 1998-2001.
Picton, T.W., & Alain, C. Human event-related potentials. Canadian Institutes of Health Research, \$392,205, 1998-2002.
Alain, C. Auditory selective attention, perception and schizophrenia. National Alliance for Research in Schizophrenia and Depression, \$82,000, 1997-1999.

STUDENTS/POSTDOCTORAL FELLOWS SUPERVISED

Current:

- Hannah Stewart, PhD visiting student, Nottingham University, England, 2014.
Madeline Cusimano, Summer NSERC Create Student, University of Toronto, Ontario, 2014.
Jacqueline Zimmerman, M.A. student, Psychology, University of Toronto, 2013-present.
Stefanie Hutka, Ph.D. student, Psychology, University of Toronto, 2012-present.
Yi Du, Ph.D., postdoctoral fellow, Pekin University, 2012-present
Susan Gillingham, Ph.D. student, Psychology, University of Toronto, 2011-present

Past:

- Bettina Habelt, visiting student, Chemnitz University of Technology, Germany, 2014
Laura Oliva, visiting student, University of Victoria, British Columbia, 2014.
Sandra Campeanu, Ph.D. student, Psychology, University of Toronto, 2008-2014.
Kristina Backer, Ph.D. student, Psychology, University of Toronto, 2009-2014.
Alice Kim, Ph.D. student, Psychology, University of Toronto, 2008-2013.
Anja Roye, Ph.D., postdoctoral fellow, Leipzig University, 2011-2013.
Claudia Freigang, visiting student, Leipzig University, 2012-2013.
Adam Cadesky, summer student, 2012, 2013.
Dean Carcone, summer student, 2012.
Laura Sokka, visiting student from Helsinki University, winter 2012.
Gavin M. Bidelman, postdoctoral fellow, co-supervised, 2011-2012.
Stefanie Hutka, M.A. student, Psychology, University of Toronto, 2010-2012.
Ben Zendel, Ph.D. student, Psychology, University of Toronto, 2006-2011.
Sylvain Moreno, postdoctoral fellow, co-supervise, 2008-2011.
Ada Leung, postdoctoral fellow, 2008-2011.
Olga Kciuk, 4th year undergraduate thesis, University of Toronto, 2009-2010.
Kuang Da Zhu, M.A. student, Psychology, University of Toronto, 2008-2009.
Boaz M. Ben-David, postdoctoral fellow, 2007-2008.
Alina Gheorghe, M.A. student, Psychology, University of Toronto, 2007-2008
Sandra Campeanu, M.A. student, Psychology, University of Toronto, 2007-2008.
Zofia Wodniecka, postdoctoral fellow, co-supervise, 2007-2008
Dawei Shen Ph.D., postdoctoral fellow, 2006-2009.
Laura Vecchio, 4th year undergraduate thesis, University of Toronto, 2006-2007.
Jessica Quan 4th year undergraduate thesis, University of Toronto, 2006-2007.
Ben Zendel, M.A. student, Psychology, University of Toronto, 2005-2006.
Anthony Shahin, postdoctoral fellow, 2005-2006.
Roxanne Itier, postdoctoral fellow, co-supervise, 2005-2008.
Sandra Priselac, M.A. student, co-supervise, Psychology, University of Toronto, 2004-2006.
Ranil Sonnadara, Ph.D. student, co-supervise, Psychology, McMaster University, 2002-2006.
Asaf Gilboa, postdoctoral fellow, 2004-2005.
Stephen Arnott, Ph.D. student, Psychology, University of Toronto, 1998-2005.
Joel Snyder, postdoctoral fellow, 2003-2005.
Ben Dyson, postdoctoral fellow, 2003-2005.

Aaron Izenberg, summer student, 2002.
Karen Reinke, postdoctoral fellow, co-supervise, 2001-2004.
Kelly McDonald, M.A. student, Psychology, University of Toronto, 2002-2004.
Heather McNeely, postdoctoral fellow, 1999-2001.
Janine Hay, postdoctoral fellow, co-supervise, 1998-2000.
Jodi Ostroff, postdoctoral fellow, 1998-1999.
Alessandra Schiavetto, postdoctoral fellow, co-supervise, 1997-1999.
Robert West, postdoctoral fellow, co-supervise, 1997-1999.

EXTERNAL Ph.D. APPRAISER

Mike E. Klein, McGill University, Montreal, Quebec, Canada, 2014.
Guylaine Bélizaire, Université de Montréal, Québec, Canada, 2014.
Claudia Freigang, Leipzig University, Germany, 2013.
Blake Edward Butler, McMaster University, Hamilton, Ontario, Canada, 2012.
Latifa Lazzouni, Université de Montréal, Québec, Canada, 2012.
Amineh Koravand, Université de Montréal, Québec, Canada, 2012.
Peter Varghese, Macquaries University, Sidney, Australia, 2011.
Jean-Pierre Chartrand, Université de Montréal, Québec, Canada, 2010.
Anja Roye, Leipzig University, Germany, 2010.
François Champoux, Université de Montréal, Québec, Canada, 2009.
Rowena Jane Cooper, University of Newcastle, Australia, 2009.
Phillip Gander, McMaster University, Hamilton, Ontario, Canada, 2009.
Chao He, McMaster University, Hamilton, Ontario, Canada, 2008.
Philippe Paiement, Université de Montréal, Québec, Canada, 2008.
Carmen Marie Atkinson, University of Newcastle, Australia, 2005.
Sébastien Grimard, Université du Québec à Montréal, Québec, Canada, 2004.
Anthony Singha, York University, Toronto, Ontario, Canada, 2003.
Matthew Tata, University of British Columbia, British Columbia, Canada, 2003.

MANUSCRIPTS IN PREPARATION OR SUBMITTED

Alain, C., Shen, D., Ross, B. (In preparation). Low binaural white noise enhances human auditory evoked fields to binaural stimuli.

Shams, N., Alain, C., & Strother, S. (In preparation). Simultaneous EEG-fMRI recording of passive sensory processing.

Kim, A.S.N., Binns, M.A., Ross, B., & Alain, C. (In preparation). An ERP investigation of episodic association formation: Evidence for scale-invariant encoding processes. Neuropsychologia.

Gillingham, S. M., Arnott, S.R., Stuss, D.T., & Alain, C. (In revision). The separation of what and where in anterior brain regions: A surprising role of the medial frontal lobes. Neuroimage.

Shams, N., Alain, C., & Strother, S. (In revision). Comparison of artifact removal methods in simultaneous EEG-fMRI. Journal of Neuroscience Methods.

Alain, C., Bernstein, L.J. (Submitted). Auditory scene analysis: Tales from cognitive neurosciences. Music Perception.

Kim, A.S.N., Binns, M.A., Ross, B. & Alain, C. (Submitted). Not all associations are created equal: Electrophysiological correlates of episodic associative binding strength. Journal of Cognitive Neuroscience.

Leung, A.W.S., Jolicoeur, P. & Alain, C. (Submitted). Neuroelectric evidence of competition for attention during concurrent sound perception. Journal of Cognitive Neuroscience.

Moussard, A., Tays, W., Alain, C., & Moreno, S. (Submitted). The influence of life-long music training on executive control in older adults: An event-related potential study. Psychology and Aging.

Palombo, D.J., Alain, C., Söderlund, H., Khuu, W., & Levine, B. (Submitted). **Severely deficient autobiographical memory in otherwise healthy adults: A new mnemonic syndrome.** Neuropsychologia.

Shen, D., Ross, B. & Alain, C. (Submitted). Temporal cue modulates brain oscillations during auditory attentional blink. Journal of Neuroscience.

PUBLISHED ARTICLES (total 149)

Kulagina, E., Drisdelle, B.L., Alain, C., Grimault, S., Eck, D., Vachon, F., & Jolicoeur, P. (In press). The perception of concurrent sound objects through the use of harmonic enhancement: A study of auditory attention. Attention, Perception, & Psychophysics.

Bidelman, G.M. & Alain, C. (In press). Hierarchical neurocomputations underlying concurrent sound segregation: Connecting periphery to percept. Neuropsychologia.

Hutka, S.A., & Alain, C. (In press). The effects of absolute pitch and tone language on pitch processing and encoding in musicians. Music Perception.

Backer, K.C. Binns, M.A. & Alain, C. (2015). Neural dynamics underlying attentional orienting to auditory representations in short-term memory. Journal of Neuroscience, *35*(3), 1307-1318.

Bidelman, G.M. & Alain, C. (2015). Musical training orchestrates coordinated neuroplasticity in auditory brainstem and cortex to counteract age-related decline in categorical vowel perception. Journal of Neuroscience, *35*(3), 1240-1249.

Campeanu, S., Craik, F.I.M., & Alain, C. (2014). Voice as a memory cue. International Journal of Psychophysiology. doi: 10.1016/j.ijpsycho.2014.08.988 [invited paper for special issue “Recent advances in auditory perception”]

Du, Y., He, Y., Arnott, S.R., Ross, B., Wu, X., Li, L., & Alain, C. (2014). Rapid tuning of auditory “what” and “where” pathways by training. Cerebral Cortex. doi: 10.1093/cercor/bht251.

Alain, C., Zhu, K.D., He, Y. & Ross, B. (2014). Sleep-dependent neuroplastic changes during auditory perceptual learning. Neurobiology of Learning and Memory, *118*, 133-142

Alain, C., Roye, A., & Salloum, C. (2014). Effects of age-related hearing loss and background noise on neuromagnetic activity from auditory cortex. Frontiers in Systems Neuroscience, *8*:8. doi:10.3389/fnsys.2014.00008. [invited paper for special issue “The effect of hearing loss on neural processing”]

Alain, C., Zendel, B.R., Hutka, S., & Bidelman, G.M. (2014). Turning down the noise: The benefit of musical training on the aging auditory brain. Hearing Research, *308*, 162-173. doi:10.1016/j.heares.2013.06.008 [invited paper for special issue “Music: A window into the hearing brain”]

Alain, C. & Zendel, B.R. (2014). Use it or lose it: Hearing abilities are preserved in older musicians. Canadian Audiologist, *1*:3, <http://canadianaudiologist.ca/tag/musicians/>. [invited review paper for a general audience]

Arsenault, J., He, Y., Bidelman, G.M., & Alain, C. (2014). The impact of context on the perceptual organization of speech. Canadian Acoustics, *42*, 72-73.

Backer, K.C. & Alain, C. (2014). Attention to memory: Orienting attention to sound object representation. Psychological Research, *78*, 439-452. doi:10.1007/s00426-013-0531-7. [invited paper for special issue “Auditory attention: Merging paradigms and perspectives”]

Bidelman, G.M., Villafuerte, J.W. Moreno, S., & Alain, C. (2014). Age-related changes in the subcortical-cortical encoding and categorical perception of speech. Neurobiology and Aging, *35*, 2526-2540. doi:10.1016/j.neurobiolaging.2014.05.006

Bidelman, G.M., Weiss, M.W., Moreno, S., & Alain, C. (2014). Musical training yields coordinated plasticity in the neural encoding and categorical perception of speech. European Journal of Neuroscience, *40*, 2662-2673. doi:10.1111/ejn.12627

- Campeanu, S., Craik, F.I.M., Backer, K.C., & Alain, C. (2014). Voice reinstatement modulates neural indices of continuous word recognition. *Neuropsychologia*, *62*, 233-244. doi: 10.1016/j.neuropsychologia.2014.07.022
- Du, Y., Buchsbaum, B., Grady, C., & Alain, C. (2014). Noise differentially impacts phoneme representations in the auditory and speech motor systems. *Proceedings of the National Academy of Sciences*, *111*(19), 7126-7131. doi: 10.1073/pnas.1318738111.
- Kielar, A., Meltzer, J. A., Moreno, S., Alain, C., & Bialystok, E. (2014). Oscillatory responses to semantic and syntactic violations. *Journal of Cognitive Neuroscience*, *26*, 2840-2862. doi:10.1162/jocn_a_00670
- Moreno, S., Wodniecka, Z., Tays, W., Alain, C., & Bialystok, E. (2014). Inhibitory control in bilinguals and musicians: ERP evidence for experience-specific effects. *PLoS ONE*, *9*(4): e94169. doi:10.1371/journal.pone.0094169
- Sokka, L., Pakarinen, S., Leinikka, M., Korpela, J., Alain, C., Huotilainen, M. (2014). Alteration in attention capture to auditory emotional stimuli in job burnout: An event-related potential study. *International Journal of Psychophysiology*, *94*, 427-436. doi:10.1016/j.ipsycho.2014.11.001
- Zendel, B.R., & Alain, C. (2014). Enhanced attention-dependent activity in the auditory cortex of older musicians. *Neurobiology of Aging*, *35*, 55-63. doi:10.1016/j.neurobiolaging.2013.06.022
- Bidelman, G.M., Moreno, S., & Alain, C. (2013). Tracing the emergence of speech perception in the human auditory system. *NeuroImage*, *79*, 201-212. doi:10.1016/j.neuroimage.2013.04.093.
- Campeanu, S., Craik, F.I.M., & Alain, C. (2013). Voice congruency facilitates word recognition. *PLoS ONE*, *8*(3): e58778. doi:10.1371/journal.pone.0058778.
- Hutka, S.A., Alain, C., Binns, M.A., & Bidelman, G.M. (2013). Age-related difference in the sequential organization of speech sounds. *Journal of Acoustical Society of America*, *133*(6), 4177-4187.
- Leung, A.W.S., He Y., Grady, C.L., & Alain, C. (2013). Age differences in the neuroelectric adaptation to meaningful sounds. *PLoS ONE*, *8*(7): e68892. doi:10.1371/journal.pone.0068892
- Zendel, B.R., & Alain, C. (2013). The influence of lifelong musicianship on neurophysiological measures of concurrent sound segregation. *Journal of Cognitive Neuroscience*, *25*(4), 503-516. doi:10.1162/jocn_a_00329.
- Alain C., McDonald, K.L., & Van Roon, P. (2012). Effects of age and background noise on processing a mistuned harmonic in an otherwise periodic complex sound. *Hearing Research*, *283*, 126-135.
- Backer, K.C. & Alain, C. (2012). Orienting attention to sound object representations attenuates change deafness. *Journal of Experimental Psychology: Human Perception and Performance*, *38*(6), 1554-1566. doi:10.1037/a0027858.
- Dyson, B.J., & Alain, C. (2012). Task, time, and context as potential mediators of repetition priming effects. *Cognitive Neuroscience*, *3*, 348-349.
- Kim, A.S.N., Binns, M.A., Alain, C. (2012). Neural electric evidence for cognitive association formation. *PLoS ONE*, *7*(4): e34856. doi:10.1371/journal.pone.0034856.
- Shen, D. & Alain, C. (2012). Implicit temporal expectation attenuates auditory attentional blink. *PLoS ONE*, *7*(4): e36031. doi:10.1371/journal.pone.0036031.
- Snyder, J.S, Gregg, M.K., Weintraub, D.M., & Alain, C. (2012). Attention, awareness, and the perception of auditory scenes. *Frontiers in Psychology*, *3*: 15, doi:10.3389/fpsyg.2012.00015
- Wu, S., Chen, C.K., Feng, J., D'Angelo, L., Alain, C., & Spence, I. (2012). Playing a first-person shooter videogame induces neuroplastic changes. *Journal of Cognitive Neuroscience*, *24*, 1286-1293. doi:10.1162/jocn_a_00192.
- Zendel, B.R., & Alain, C. (2012). Musicians experience less age-related decline in auditory perception. *Psychology and Aging*, *27*, 410-417. doi:10.1037/a0024816.

- Arnott, S.A., & Alain, C. (2011). The auditory dorsal pathway: Orienting vision. Neuroscience and Biobehavioral Reviews, 35, 2162-2173. [invited paper for special issue “*Wired for sound*”]
- Arnott, S.A., Bardouille, T., Ross, B., & Alain, C. (2011). Neural generators underlying concurrent sound segregation. Brain Research, 1387, 116-124.
- Ben-David, B.M., Campeanu, S., Tremblay, K., & Alain, C. (2011). Auditory evoked potentials dissociate rapid perceptual learning from task repetition without learning. Psychophysiology, 48, 797-807.
- Diaconescu, A.O., Alain, C., & McIntosh, A.R. (2011). Modality-dependence of “what” and “where” preparatory process. Journal of Cognitive Neuroscience, 23, 1609-1628.
- Diaconescu, A.O., Alain, C., & McIntosh, A.R. (2011). The co-occurrence of multisensory facilitation and crossmodal conflict in the human brain. Journal of Neurophysiology, 106, 2896-2909. doi: jn.00303.2011 10.1152/jn.00303.
- Du, Y., He, Y., Ross, B., Bardouille, T., Wu, X., Li, L., & Alain, C. (2011). Human auditory cortex activity shows additive effects of spectral and spatial cues during speech segregation. Cerebral Cortex, 21, 698-707.
- Grady, C.L., Charlton, R., He, Y., & Alain C. (2011). Age differences in neural adaptation for sound identity and location. Frontiers in Human Neuroscience, 5:24, doi:10.3389/fnhum.2011.00024.
- Itier, R.J., Van Roon, P., & Alain, C. (2011). Species sensitivity of early face and eye processing. NeuroImage, 54, 705-713.
- Leung, A., & Alain, C. (2011). Working memory load modulates the auditory “What” and “where” neural networks. NeuroImage, 55, 1260-1269.
- Leung, A.W.S., Jolicoeur, P., Vachon, F., & Alain, C. (2011). Concurrent sound perception impairs gap detection: Implication for object-based account of auditory attention. Journal of Experimental Psychology: Human Perception and Performance, 37, 727-736.
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BOOK CHAPTERS

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ABSTRACTS AND CONFERENCE PROCEEDINGS

Bidelman, G. M. & Alain, C. (2015). Musical training orchestrates coordinated neuroplasticity in auditory brainstem and cortex to counteract age-related declines in categorical speech perception. Poster presented at the 37th Annual meeting of the Association for Research in Otolaryngology, February 21–25, Baltimore, MD.

Sokka, L., Pakarinen, S., Leinikka, M., Korpela, J., Alain, C., Huotilainen, M. (2015s). Allocation of attentional resources during cognitively demanding tasks in altered in job burnout. Poster presented at the 168th APA Annual Meeting, May 16-20, Toronto, On, Canada.

Zimmermann, J., Moscovitch, M., & Alain, C. (2014). Long term memory influences the deployment of auditory attention as revealed by neuromagnetic recordings. Poster presented at the Society for Neuroscience, November 15-19, Washington DC.

Kielar, A., Meltzer, J. A., Moreno, S., Alain, C., & Bialystok, E. (2014). Oscillatory responses to sentence embedded semantic and syntactic violations: Effects of bilingualism. Poster presented at the 2014 Canadian Association for Neuroscience Meeting, Montreal, Quebec.

Backer, K.C., & Alain, C. (2013). Neural correlates of selective attention to sound object representations. Poster presented at the 20th Annual Meeting of the Cognitive Neuroscience Society, April 13-16, 2013, San Francisco, California.

Bidelman, G. M., Villafuerte, J. W., & Moreno, S., & Alain, C. (2014). “Age-related changes in subcortical-cortical encoding and categorical perception of speech,” 37th Annual meeting of the Association for Research in Otolaryngology, San Diego, CA, February 22–26, 2014.

Bidelman, G.M., Weiss, M.W., Moreno, S., & Alain, C. (2013). Musical training strengthens the subcortical-cortical encoding and categorical perception of speech. Association for Research in Otolaryngology MidWinter Meeting.

Backer, K.C., & Alain, C. (2013). Neural correlates of selective attention to sound object representations. Poster to be presented at the 20th Annual Meeting of the Cognitive Neuroscience Society, April 13-16, 2013, San Francisco, California.

Du, Y., Buchsbaum, B., Grady, C., & Alain, C. (2013). The compensatory mechanism of auditory-motor integration in speech perception. Poster to be presented at the 20th Annual Meeting of the Cognitive Neuroscience Society, April 13-16, 2013, San Francisco, California.

Esopenko, C., Kumar, P.K., Alain, C., Chow, T. W., McIntosh, A.R., Strother, S., & Levine, B. (2013). Neuroimaging during a Working Memory Task in Remote Traumatic Brain Injury: Evidence from NHL Alumni. Poster to be presented at the 20th Annual Meeting of the Cognitive Neuroscience Society, April 13-16, 2013, San Francisco, California and the 23rd Annual Neuroscience Conference, Toronto, March 4-6, 2013.

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- Vuvan, D., & Alain, C. (2009). The cognitive-perceptual effects of audio game training. *Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
- Snyder, J.S., Carter, O.L., Hannon, E.E., & Alain, C. (2008). Multiple levels of representation in auditory stream segregation: Evidence from context effects. *Association for Research in Otolaryngology MidWinter Meeting*.

- Snyder, J.S., Carter, O.L., Hannon, E.E., & Alain, C. (2008). Adaptation reveals multiple levels of representation in auditory stream segregation. Cognitive Neuroscience Society, San Francisco, CA.
- Zendel, B., & Alain, C. (2008). Concurrent sound segregation and related auditory evoked potentials are enhanced in musicians. Cognitive Neuroscience Society, San Francisco, CA.
- Alain, C., Campeanu, S., & Trembkay, K. (2007). Neuroelectric correlates of rapid perceptual learning of speech sounds. Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Dyson, B.J., & Alain, C. (2007). Complex sounds in the brain: Neuroelectric correlates representing pitch and harmonicity. Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Quan, J., & Alain, C. (2007). Age-related increased in auditory evoked fields: A central or peripheral problem? Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Snyder, J.S., Ross, B., McDonald, K., Aalto, M., Schneider, B.A., & Alain C. (2007). Sound duration processing in human auditory cortex of aging adults. Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- Zendel, B.R., & Alain, C. (2006). Musical expertise and concurrent sound segregation. Acoustic society of America. Honolulu, HI.
- Alain, C., & Reinke, K. (2005). Rapid Neural Changes Underlie Auditory Discrimination Learning. Cognitive Neuroscience Society Annual Meeting. New York, NY.
- Dyson, B.J. & Alain, C. (2005). Tales of the unexpected (frequency): What harmonicity can tell us about acoustic processing. Paper presentation at the 4th Auditory Perception, Cognition and Action Meeting, November 2005, Toronto, ON.
- Dyson, B.J., Alain, C. & He. Y. (2005). Exogenous and endogenous contributions to acoustic perceptual invariance. Paper presentation at the Methods In Mind Conference, September 2005, Birmingham, UK.
- Gilboa, A., Alain, C., Stuss, D.T., & Moscovitch, M. (2005). Confabulation after anterior communicating artery (AcoA) aneurysm rupture: temporal context confusion (TCC) or general monitoring failure? Cognitive Neuroscience Society Annual Meeting. New York, NY.
- Huang, J., Wu, X.-H., He, Y., Qi, J.G., Alain, C., Schneider, B.A., & Li, L. (2005). The event-related brain potentials to uncorrelated fragment of noise. The 149th meeting of the Acoustic Society of American, 4pPP23.
- Reinke, K.S., & Alain, C. (2005). Neural underpinnings of speech separation and identification. International Neuropsychological Society, St. Louis, MO.
- Snyder, J.S., Alain, C., & Picton, T.W. (2005). Differential effects of attention on segregation and buildup of auditory streams: Evidence from event-related potentials. Cognitive Neuroscience Society Annual Meeting. New York, NY.
- Arnott, S.R., & Alain, C. (2004). Neural chronometry of sound identification and sound localization. Cognitive Neuroscience Society Annual Meeting, 136D.
- Dyson, B.J., & Alain, C. (2004). Effect of visual attentional load on low-level auditory scene analysis. Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- Dyson, B.J., & Alain, C. (2004b). Constraints on the development and maintenance of harmonic templates: Evidence from inter-trial repetition effects. Poster presentation at the Hanse Conference on Auditory Grouping and Speech Perception, Delmenhorst, Germany.
- Itier, R.J., Fatima, Z., Alain, C., Stuss, D.T., McIntosh, A.R. (2004). Are you looking at me? Effects of attention and head orientation on eye gaze processing. Society for Neuroscience, Abstract viewer/Itinary planner, CD-ROM, Washington, DC.
- Snyder, J.S., & Alain, C. (2004). Age-related changes in identification of simultaneous speech events: Event-related potential (ERP) and behavioral evidence. Cognitive Neuroscience Society Annual Meeting. San Francisco, CA.

- Snyder, J.S., Alain, C., & Picton, T.W. (2004). Human steady-state cortical activity reflects auditory stream segregation. Auditory Perception, Cognition, and Action Meeting. Minneapolis, MN.
- Alain, C., McNeely, H.E., Christensen, B.K., & West, R. (2003). Neurophysiological Evidence for Deficits in Conflict Processing in Patients with Schizophrenia. Cognitive Neuroscience Annual Meeting, New York, NY.
- Alain, C., He, Y., Wang, C., Reinke, K., & Lobaugh, N. (2003). Hearing Two Things at Once: a Neurophysiological Index of Concurrent Vowel Segregation. 2nd Annual Auditory Perception, Cognition, and Action Meeting, Vancouver, BC.
- McDonald, K.L., Alain, C., & Schneider, B.A. (2003). The contribution of harmonicity and location cues to concurrent sound segregation. Cognitive Neuroscience Annual Meeting, New York, NY.
- Reinke, K.S., He, Y., Wang, C., & Alain, C. (2003). Perceptual learning modulated neural activity in auditory cortices. Cognitive Neuroscience Annual Meeting, New York, NY.
- Sonnadara, R.R., Alain, C., & Trainor, L.J. (2003). MMN elicited by changes in sound location is moderated by location and probability of the occasional stimulus. 43rd Annual Meeting for the Society for Psychophysiological Research, Chicago, IL.
- Dyson, B., & Alain, C. (2003). Representation of concurrent auditory objects as revealed by middle Latency auditory evoked potentials. 43rd Annual Meeting for the Society for Psychophysiological Research, Chicago, IL.
- Itier, R.J., Glaholt, M., Alain, C., & McIntosh, A.R. (2003). Cross-modal facilitation in a cueing task using ERPs. Society for Neuroscience, Abstract viewer/Itinerary planner, CD-ROM, Washington, DC.
- Li, L., Qi, J.G., He, Y., Alain, C., Schneider, B.A. (2003). The nature of the precedence effect: attribute capture. Canadian Society for Brain, Behaviour and Cognitive Science Annual Meeting, 119.
- Alain, C., & Izenberg, A. (2002). Effects of attentional load on auditory scene analysis. Society for Neuroscience, Abstract viewer/Itinerary planner. CD-ROM, Washington, DC.
- Arnott, S.R., Alain, C., Hevenor, S., Graham, S., Dade, L., & Grady, C.L. (2002). What, where, and how in the human prefrontal cortex. Society for Neuroscience, Abstract viewer/Itinerary planner, program. CD-ROM, Washinton, DC.
- Reinke, K., O'Craven, K., Alain, C., & Graham, S. (2002). Neural mechanisms of perceptual learning investigated with fMRI and ERP. Society for Neuroscience, Abstract viewer/Itinerary planner, CD-ROM, Washington, DC.
- Alain, C, Arnott, S.R., Hevenor, S., Graham, S., & Grady C. (2001). Distinct pathways for identification and localization of auditory objects. Cognitive Neuroscience Annual Meeting, New York, NY.
- Arnott, S.R., Alain, C., Pratt, J., & Shore, D.I. (2001). Attentional set modulates visual areas: An event-related potential study of attentional capture. Cognitive Neuroscience Annual Meeting, New York, NY.
- McDonald, K.L., Ostroff, J.M., Alain, C., & Schnieder, B.A. (2001). Effects of automatic and controlled processes on gap detection as a function of age. 41st Annual Meeting for the Society for Psychophysiological Research, Montreal, PQ.
- Shuler, B., McDonald, K.L., & Alain, C. (2001). Effects of Sound Duration on Distinguishing Concurrent Auditory Events as Evidenced by Event-Related Brain Potentials. 41st Annual Meeting for the Society for Psychophysiological Research, Montreal, PQ.
- Arnott, S.R., & Alain, C. (2000). Effects of perceptual context on event-related brain potentials during auditory spatial attention. Society for Neuroscience, 26(2), 2230.
- Trainor, L.J., McDonald, K., & Alain, C. (2000). Musical pitch processing: Changes in melodic interval and contour elicit early mismatch negativity responses. Presented at the New York Academy of Sciences Conference on The Biological Foundations of Music, New York, NY.

- Ostroff, J.M., McDonald, K.L., Alain, C., & Schneider, B. (2000). Effect of tonal duration on auditory evoked potentials as a function of age. Acoustical Society of America, Newport Beach, CA.
- Arnott, S.R., Alain, C. Cortese, F., & Grady, C. (1999). Separate memory-related processing for auditory object location and identity. Psychophysiology Supplement, 36, 27.
- Hay, J.F., Kane, K.A., West, R. & Alain, C. (1999). Event-related brain activity associated with recollection and habit in young adults. Journal of Cognitive Neuroscience Supplement, 11, 41.
- Woods, D.L., Alain, C., & Knight, R.T. (1999). The effects of brain lesions on target processing: A comparison of ERPs and event-related difference spectra (ERDISPs). Journal of Cognitive Neuroscience Supplement, 102.
- West, R., & Alain, C. (1999). Neural correlates of goal neglect revealed by event-related brain potentials. Paper presented at the 40th meeting of the Psychonomic Society, Los Angeles, CA.
- Alain, C., & Arnott, S.R. (1998). Event-related brain potentials associated with perception of simultaneous auditory objects. Psychophysiology, Supplement, 35, 15.
- Cortese, F., & Alain, C. (1998). Human event-related evoked potential evidence of feature conjunction in vision. Investigation of Ophthalmology & Visual Science, 39(4), s862.
- Schiavetto, A., Alain, C., & Cortese F. (1998). ERP evidence of global and local processing of musical sequences. Journal of Cognitive Neuroscience, Supplement, 96.
- John, M.S., Picton, T.W., & Alain, C. (1998). Auditory steady-state responses: using phase to measure latency. Society for Neuroscience, 24(2), 1634.
- West, R.W., & Alain, C. (1998). Attentional set modulates the activity of neural systems supporting performance of the Stroop task. Journal of Cognitive Neuroscience, Supplement, 10, 139.
- West, R., & Alain, C. (1998). ERPs reveal age-related decline in inhibitory processes. Paper presented at the 39th meeting of the Psychonomic Society, Dallas, TX.
- Woods, D.L., & Alain, C. (1998). Auditory Attention modulates rhythmic brain oscillations in humans. Journal of Cognitive Neuroscience, Supplement, 10, 75.
- Alain, C., Cortese, F., & Picton, T.W. (1997). Representation of complex auditory patterns in the human brain. Society for Neuroscience, 23(2), 1582.
- Alain, C., & Woods, D.L. (1996). Age-related changes in auditory sensory memory. Society for Neuroscience, 22(3), 1853.
- Alain, C., Woods, D.L., & Knight, R.T. (1995). Prefrontal and temporo-parietal lesions impair automatic pattern processing. Society for Neuroscience, 21(1), 437.
- Woods, D.L., & Alain C. (1995). Auditory feature-conjunction: an event-related brain potential study. Human Brain Mapping Supplement, 1, 163.
- Alain, C., Woods, D.L., & Covarrubias, D. (1994). Activation of duration-sensitive auditory neurons in humans. Society for Neuroscience Abstract, 20(2), 1002.
- Ogawa, K.H., Woods, D.L., & Alain, C. (1994). Visual search of complex displays. American Psychological Society. Washington, DC. Abstract Proceeding, 45.
- Woods, D.L., Alain C., Covarrubias, D., & Remler, M. P. (1994). Event-related differences in EEG spectral power (ERDISP). Society for Neuroscience Abstract, 20(2), 1003.
- Alain, C., & Woods, D.L. (1993). Auditory streaming modulates brain signs of selective attention. Third West Coast Attention Meeting, Eugene, OR.
- Alain, C., & Woods, D.L. (1993). Streaming modulates auditory cortical activity during selective listening. Society for Neuroscience Abstract, 19(1), 561.
- Ogawa, K.H., Woods, D.L., Alain, C., & Covarrubias, D. (1993). Feature conjunction during rapid serial visual presentation. Third West Coast Attention Meeting, Eugene, OR.
- Woods, D.L., Alain, C., Ogawa, K.H., & Covarrubias, D. (1993). Auditory feature conjunction: primacy of frequency over lateralization cues. Society for Neuroscience Abstract, 19(3), 1805.

- Alain, C., & Woods, D.L. (1992). Auditory streaming reduces reaction times to infrequent targets. Society for Neuroscience Abstract, 18(2), 1208.
- Woods, D.L., Alain, C., & Algazi, A. (1992). Auditory feature conjunction during selective attention to high-rate tone sequences. ICON V Proceedings, 5, 7.
- Woods, D.L., Alain, C., Zaidel, O., & Covarrubias, D. (1992). Frequency-related differences in the speed of human auditory processing. Society for Neuroscience Abstract, 18(1), 840.
- Alain, C., Achim, A., & Richer, F. (1991). Grouping effect on auditory processing of irrelevant stimuli: an event-related potentials (ERPs) study. 3rd IBRO World Congress of Neuroscience Proceeding, 3, 478.
- Achim, A., Alain, C., Richer, F., & Saint-Hilaire, J.M. (1990). Statistical detection of differences in averaged evoked potential waveshapes or topographies. Electroencephalography and Clinical Neurophysiology, 75, 8P.
- Alain, C., Richer, F., Achim, A., & Saint-Hilaire, J.M. (1990). Intracerebral distribution of the human auditory late potential. Electroencephalography and Clinical Neurophysiology, 75, 8P.
- Alain, C., Achim, A., & Richer, F. (1990). Auditory streaming influences onset of selective attention effect on auditory ERPs. Society For Neuroscience Abstracts, 16, 577.
- Alain, C., Achim, A., & Richer, F. (1990). Le rôle du contexte auditif sur le potentiel évoqué (PE) durant une écoute sélective. Paper presented at XIII Congrès Annuel de la SQRP, Résumés des Communications, p.58.
- Alain, C., Vigneux, P., Laframboise, M., & Keller, E. (1990). Dissociation des paramètres acoustiques associés à la modulation de la parole chez le sujet normal. Paper presented at XIII Congrès Annuel de la SQRP, Résumés des Communications, p.59.
- Alain, C., Achim, A., Baribeau, J., & Richer, F. (1990). Perceptual context influences the selective attention effect on late auditory evoked potentials (LAEP). Brain and Language, 39, 594.
- Alain, C., Richer, F., Achim, A., & Saint-Hilaire, J.M. (1989). Intracerebral distribution of the human late potentials associated with target, novel and missing auditory stimuli. Society For Neuroscience Abstracts, 15, 477.
- Alain, C., Richer, F., & Achim, A. (1989). Dissociation des générateurs des réponses évoquées N1 et N2: une étude intracérébrale. Paper presented at XII Congrès Annuel de la SQRP, Résumés des Communications, p.61.
- Pilon, N., Richer, F., Alain, C., & Achim, A. (1989). Effet des excisions frontales sur la réponse neuro-électrique auditive. Paper presented at XII Congrès Annuel de la SQRP, Résumés des Communications, p.149.
- Alain, C., Richer, F., Achim, A., & Saint-Hilaire, J.M. (1988). Distribution of the intracerebral auditory evoked potential. Journal of Clinical and Experimental Neuropsychology, 11, 83.
- Alain, C., Richer, F., Achim, A., & Saint-Hilaire, J.M. (1988). Contribution de la région temporo-pariétale à la genèse du potentiel évoqué auditif. The Canadian Journal of Neurological Sciences, 15, 347.
- Alain, C., Richer, F., Achim, A., & Saint-Hilaire, J.M. (1988). Distribution intracérébrale du potentiel évoqué cognitif P300 chez l'humain. Paper presented at XI Congrès Annuel de la SQRP, Résumés des Communications, p.48.
- Alain, C., Richer, F., Achim, A., Saint-Hilaire, J.M., & Mercier, M. (1987). Distribution intracrânienne du potentiel évoqué auditif chez l'humain. Paper Presented at X Congrès Annuel de la Société Québécoise pour la Recherche en Psychologie (SQRP), Résumés des Communications, p.78.
- Kabene, M., Harnois, C., & Alain, C. (1986). Aspects neurocognitifs du diabète mellitus. L'Union Médicale du Canada, 115, 563.

Richer, F., Marcil, F., Fortier, L., Alain, C., & Beatty, J. (1986). The task-evoked pupillary response in delayed choice tasks. Paper presented at Society for Psychophysiological Research, Montréal, PQ.

INVITED SPEAKER/ SYMPOSIUM

Auditory scene analysis: From sound to meaning. BKN 25: Milestones in Music Cognition. Schulich School of Music, McGill University, Montreal, PQ, Canada, July 7, 2014.

Neurocomputation underlying sound segregation: From periphery to percept. Paper presented at the symposium "Auditory processing from the brainstem to cortex", 53th Annual Meeting of the Society for Psychophysiological Research, Florence, Italy, October, 2013.

Distinguishing attention and working memory for sound location. Attention and Performance XXV conference. Montreal, Quebec, Canada, July 2013.

Neural architecture underlying concurrent speech separation. Paper presented at the symposium "Auditory Scene Analysis: From Sound to Meaning", International Conference on Psychology, Cape Town, South Africa, July, 2012.

Concurrent sound perception interferes with signal detection. Paper presented at the symposium "Open Challenges in Auditory Scene Analysis", Acoustic 2012 Hong Kong Conference, Hong Kong, China, May 2012.

Noise-induced increase in human auditory evoked fields. Paper presented at the symposium "Release from Masking in Listeners with Normal and Impaired Hearing", Acoustic 2012 Hong Kong Conference, Hong Kong, China, May 2012.

Working memory load modulates the auditory "what" and "where" neural networks. Paper presented at the symposium "Auditory Processing", X1th International Conference on Cognitive Neuroscience, Mallorca, Spain, September, 2011.

The cocktail party problem: Insight from electromagnetic recordings. Paper presented at the symposium "Auditory stream segregation and selection", The Association for Research on Otolaryngology 33rd MidWinter Meeting, Anaheim, CA, USA, February, 2010.

Neuromagnetic recordings reveal additive effects of spectral and spatial cues in human auditory cortex. Paper presented at a scientific day from The International Laboratory for Brain, Music and Sound Research (BRAMS), Montreal, PQ, Canada, April, 2010.

Varieties of auditory attention. Paper presented at the Summer School and Research Training Group on Function of attention in cognition, Dierhagen, Germany, July, 2010.

Aging and the perceptual organization of sounds. Paper presented at Aging and Cognition. Dortmund, Germany, October, 2010.

Aging and the cocktail party problem: What can we learn from electromagnetic recording? Paper presented at the third research conference on aging and speech communication. University of Indiana, Bloomington, IN, USA, October, 2009.

From young to older to dementia: What can we learn from neuroimaging studies. Paper presented at the 18th Annual Conference of the Rotman Research Institute, "Neuroimaging and Dementia", Toronto, ON, Canada, March, 2008.

Top-down influences on memory- and response-related activity for sound location. Paper presented at the meeting "Theoretical and Experimental Approaches to Auditory and Visual Attention", Banbury Center, Cold Spring Harbor Laboratory, New York, NY, USA, April, 2008.

Working memory load for sound location modulates activity in the where pathway. Paper presented at the symposium "Brain mechanisms of auditory attention and auditory short-term memory", 48th Annual Meeting of the Society for Psychophysiological Research, Austin, TX, USA, October, 2008.

Signal duration modulates age differences in neuromagnetic activity associated with concurrent sound segregation. European and American Acoustic Society, Paris, France, June 2008.

- Aging and the cocktail party problem: Where is the problem? Paper presented at the symposium "Auditory scene analysis: From sound to meaning", Canadian Acoustic Society, Vancouver, BC, Canada, October, 2008.
- The contribution of inferior parietal lobule to auditory spatial working memory. Paper presented at the symposium "Attention and memory in audition: Measurements of brain activity and behavior", 47th Annual Meeting of the Society for Psychophysiological Research, Savannah, GA, USA, October, 2007.
- Age-related changes affecting temporal processing: Evidence from event-related potentials. Paper presented at the second research conference on aging and speech communication. University of Indiana, Bloomington, IN, USA, October, 2007.
- Neural correlates of auditory scene analysis: Potential clinical applications. Paper presented at the XVII National Week against Deafness, Buenos Aires, Argentina, July, 2006.
- Aging and the perceptual organization of sounds: A change of scene. Paper presented at the XVII National Week against Deafness, Buenos Aires, Argentina, July, 2006.
- Assessing learning and rehabilitation effects using auditory evoked potentials. Paper presented at the XVII National Week against Deafness, Buenos Aires, Argentina, July, 2006.
- Domain-specific of auditory working memory. Paper presented at the symposium "ERPs and Working Memory", 14th Biennial Congress from Pharmacology-EEG Society, Awaji Island, Japan, September, 2006.
- Breaking the wave: Effects of attention and learning on concurrent sound perception. Paper presented at the 2nd International Conference on the Auditory Cortex -- The Listening Brain, Grantham, England, September, 2006.
- Aging and speech separation: Further insight from recording and analysis of event-related brain potentials. Paper presented at the CRBCS Communication and Aging Symposium at UTM, Mississauga, ON, Canada, May, 2005.
- Age-related changes in auditory attention and scene analysis. Paper presented at the 15th Annual Conference of the Rotman Research Institute, "The Centre of Attention: Theoretical Advances and Implications for Rehabilitation", Toronto, ON, Canada, April, 2005.
- Aging and perceptual organization of sounds. Paper presented at the symposium "Aging and Event-Related Brain Potentials", 45th Annual Meeting of the Society for Psychophysiological Research, Lisbon, Portugal, October, 2005.
- Neural concomitant of auditory scene analysis. Paper presented at the 13th Annual Conference of the Rotman Research Institute "Neuroimaging of Cognitive Functions", Toronto, ON, Canada, April, 2003.
- Domain- and process-specific organization of auditory working memory. Paper presented at the 5th Congress of the Federation of European Psychophysiology Societies, Bordeaux, France, August, 2003.
- Aging: a switch from automatic to controlled processing of sounds? Paper presented at the symposium "Attention and Working Memory Changes in Aging", 43th Annual Meeting of the Society for Psychophysiological Research, Chicago, IL, USA, October, 2003.
- Neural concomitant of vowels segregation. Paper presented at a workshop "Separation of Speech Sounds", Montreal, PQ, Canada, September, 2003.
- Event-related brain potentials associated with distinguishing simultaneous auditory objects. Paper presented at the conference "The Listening Brain", University of British Columbia, Vancouver, BC, Canada, May, 2001.
- Representing auditory features in patients with schizophrenia. Paper presented at the symposium "MMN and Neuropsychiatry", 2nd international meeting on clinical application of the mismatch negativity, Barcelona, Spain, August, 2000.

Distinguishing simultaneous auditory events. Paper presented at the symposium "Integration and Segregation in Auditory Processing", 7th International Conference on Cognitive Neuroscience, Budapest, Hungary, July, 1999.

Feature conjunction in patients with schizophrenia. Paper presented at the symposium "Electrophysiological Studies of Feature Conjunction" 39th Annual Meeting of the Society for Psychophysiological Research, Granada, Spain, October, 1999.

Electrophysiological studies of auditory organization in humans. Paper presented at the symposium "Approches to auditory organization", 26th Congrès International de Psychologie. Montréal, PQ, Canada, July, 1996.

COLLOQUIUM/SEMINAR SPEAKER

The benefit of musical training on the aging brain. *Toronto Western Hospital, Ontario, December 2012.*

The auditory "what" and "where" in human. *Graduate Diploma Program in Neuroscience at York University, Toronto, Ontario, March 2011.*

The auditory "what" and "where" in human: memory vs. sensory-motor account. *Neuroscience Seminar series, West Virginia University, Virginia, November 2011.*

Aging and the cocktail party problem: What can we learn from recording of neuroelectric and neuromagnetic brain activity. *Department of Speech-Language Pathology, University of Toronto, Toronto, Ontario, October 2010.*

The auditory "what" and "where" in humans: 10 years after. *Ebbinghaus Empire Meeting, Department of Psychology, University of Toronto, Ontario, November, 2010.*

The "what" and the "where" in human auditory system: Ten years later. *Department of Psychology, York University, Toronto, Ontario, May 2009.*

Différentes voies cortico-corticales impliquées dans l'identification et la localisation d'objets auditifs. *Department of Psychology, Université de Montréal, Montreal, Quebec, February 2007.*

Breaking the wave: Effects of attention and learning on concurrent sound perception. *Department of Psychology, Peking University, Beijing, China, June 2007.*

Age effects on auditory stream segregation. *Department of Psychology, Peking University, Beijing, China, June 2007.*

The "what" and the "where" in human auditory system. *Department of Psychology, Peking University, Beijing, China, June 2007.*

Différentes voies cortico-corticales impliquées dans l'analyse de scène auditive. *Department of Psychology, Université du Québec à Montréal, Montreal, Quebec, October 2004.*

Cognitive control and response monitoring in patients with schizophrenia. *Psychiatry, Toronto Western Hospital, Toronto, Ontario, November 2002.*

Age-related changes in auditory scene analysis. *Hôpital Cote des Neige, Montréal, Québec, December 2001.*

Neurophysiological studies of auditory perception in patients with schizophrenia. *Psychiatry, Toronto Western Hospital, Toronto, Ontario, December 2000.*

One object or two objects: that is the question. *Rotman Research Institute, Baycrest Centre, Toronto, Ontario, March 1999.*

Feature conjunction in patients with schizophrenia. *Rotman Research Institute, Baycrest Centre, Toronto, Ontario, November 1999.*

Everything you ever wanted to know about the MMN -- but were afraid to ask. *Rotman Research Institute, Baycrest Centre, Toronto, Ontario, October 1998.*

Feature- versus object-based attention system.

Rotman Research Institute, Baycrest Centre, Toronto, Ontario, May 1997.

Processing of auditory stimuli during visual attention in patients with schizophrenia.

Clarke Institute of Psychiatry, Toronto, Ontario, November 1997.

The role of attention in processing auditory patterns.

Department of Psychology, University of Québec at Montréal, Montreal, Québec, January 1996.

Brain indices of auditory pattern processing.

Department of Psychology, University of Alberta, Edmonton, Alberta, February 1996.

Neurophysiological studies of auditory pattern perception.

Department of Psychology, University of Missouri, Columbia, Missouri, March 1996.

Event-related brain activity associated with auditory pattern perception.

Department of Psychology, University of Toronto, Toronto, Ontario, April 1996.

Perceptual organization of sounds: Behavioral and neurophysiological correlates.

Department of Psychology, University of Montréal, Montreal, Quebec, February 1995.

Contribution of event-related brain potentials to research in auditory cognition.

Department of Psychology, Reed College, Portland, Oregon, October 1995.

Auditory perceptual grouping: An event-related potentials analysis.

Montreal Neurological Institute, Montréal, Québec, January 1994.

Perceptual organization of sounds.

Department of Psychology, University of California at Davis, Davis, California, May 1994.

Neurophysiological correlates of perceptual organization of sounds.

Department of Psychology, University of Concordia, Montreal, Quebec, June 1993.

Perceptual organization of sounds: An event-related potentials study.

Department of Neurology, VA Medical Center, Martinez, California, November 1991.

TEACHING

Psychology:

Graduate seminar

PSY5201HS, Advanced Topics in Auditory Perception and Cognition, spring term, 2008.

Guest lecture on recording and analysis of neuroelectric and neuromagnetic recording event-related brain potentials.

PSY5221, Neurocognitive Aging, 2006

PSY5221, Neurocognitive Aging, 2004.

PSY 2005, Strategies and methods in psychological research. 2001

PSY 2005, Strategies and methods in psychological research. 2000

Institute of Medical Sciences:

MSC1010Y - M.Sc. Student Seminars, 2005

MSC1011Y - Ph.D. Student Seminars, 2004

LIST OF POSSIBLE REFEREES

Dr. Ben Dyson is a former postdoctoral fellow who is currently an associate Professor at Ryerson University. Dr. Bruce Schneider is a colleague for the Department of Psychology, University of Toronto at Mississauga. Dr Donald Stuss is the founding director of the Rotman Research Institute and I worked under his leadership from 1996 to 2008.

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