**Jed A. Meltzer**

Neurorehabilitation Scientist

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**INTERESTS**: I am a cognitive neuroscientist investigating issues in language processing and injury-induced neural plasticity, with the goal of developing rehabilitation programs for brain injury based on the biological mechanisms that underlie successful recovery. I am strongly interested in the applications of signal processing, statistics, and computational linguistics to the investigation of human language and the development of technology based on neuroscience research.

**EDUCATION**:

Ph.D. in Neuroscience, 2006.

Yale University, New Haven, CT

Dissertation Title: Cognitive and Electrophysiological Aspects of Task-Induced Deactivation in Functional MRI.

Advisor: R. Todd Constable, Ph.D.

B.S. in Neuroscience, B.A. in Linguistics, *Summa Cum Laude,* 1998.

University of Pittsburgh, Pittsburgh, PA

Special courses:

2003: Summer course in Neuroinformatics, Marine Biological Laboratory, Woods Hole, MA.

2013: Intensive course in Transcranial Magnetic Stimulation, and Transcranial Direct Current Stimulation, Harvard University.

**RESEARCH AND PROFESSIONAL HISTORY:**

2017-present: Canada Research Chair (Tier 2) in Interventional Cognitive Neuroscience, University of Toronto

2010-present: Neurorehabilitation Scientist, Rotman Research Institute, Baycrest Hospital, Toronto, Ontario, Canada.

2020-present: Associate Professor, University of Toronto, Depts. Psychology and Speech-Language Pathology.

2011-2020: Assistant Professor, University of Toronto, Depts. Psychology and Speech-Language Pathology.

2006-2010: Postdoctoral Fellow, laboratory of Dr. Allen Braun, NIH, Bethesda, MD, USA.

2006: Visiting Researcher, laboratory of Dr. Andreas Ioannides, Riken Brain Science Institute, Wako, Japan.

2000-01: Auditory physiology research, rotation in the laboratory of Dr. Joseph Santos-Sacchi, Yale University.

1998-99: Full-time instructor of English Language, part-time student of Korean Language and Literature, Sogang University, Seoul, South Korea.

**INVITED MEMBERSHIPS**

Fellow of the Academy of Aphasia, 2018-present

**AWARDS**:

Fellow’s Award for Research Excellence, 2009, NIH Intramural Program

American Epilepsy Society Predoctoral Research Fellowship, 2005.

Travel Award, Organization for Human Brain Mapping, 2005.

National Science Foundation Predoctoral Fellowship, 2001.

Howard Hughes Medical Institute Predoctoral Fellowship Honorable Mention, 2001.

Bradler Award for Excellence in Undergraduate Research, Univ. Pittsburgh, 1998.

**LANGUAGES**: Native English, Fluent Esperanto, Proficient Spanish and French, academic knowledge of Russian, Mandarin Chinese, Japanese, Hebrew, Korean, Italian, Portuguese, German, Arabic (Modern Standard), Ojibwe, Mohawk

**SOFTWARE EXPERIENCE**: Frequent programming in Python, MATLAB, and R. Basic familiarity with C/C++, Java, Javascript, Perl. Expert user of neuroimaging software packages such as AFNI, SPM, FSL, Fieldtrip, CTF MEG, EEGLAB.

**TEACHING**:

Instructor, Interventional Neuroscience: Brain Hacks and Brain Quacks. University of Toronto, Department of Psychology, Graduate Seminar Course (self-designed). Fall 2018, Fall 2022.

TA, Brain and Thought, Yale University, 2001.

TA, Neurobiology Laboratory, Yale University, 2002.

TA, Introduction to Statistics, Yale University, 2003, 2004.

TA, Neuroscience, Johns Hopkins University, Center for Talented Youth, 2000.

**FUNDING**

**Active research grants**

Indigenous Language Revitalization Boosted by Learning Theory. SSHRC Partnership Development Grant. March 2022-2026. CAD$197,075. Role: PI. Partner Organization: Kingston Indigenous Language Nest. Co-applicants: Maureen Buchanan, Lindsay Morcom, Juvenal Ndayiragije.

Leveraging Existing Software for Indigenous Language Revitalization. Critical Digital Humanities Initiative Emerging Project Fund, University of Toronto. April 1 2022 – March 31 2023. CAD$4000. Role: PI. Co-applicants: Lindsay Morcom, Juvenal Ndayiragije.

 Development of a spaced repetition course for the Ojibwe language. SSHRC SIG Explore Grant, University of Toronto. Jan. 1 2022 – March 31 2022. CAD$1200. Role: PI.

MyHand Development. Ontario Centre for Innovation, Voucher for Innovation and Productivity Program. Jan. 1 2022 – Aug. 30, 2022. CAD$45,000. Role: PI. Industry Partner: iRegained.ca

Neuromechanistic influences of prior knowledge (PK) on memory in the aging brain. CIHR Operating Grant. April 1, 2021- March 31, 2026, CAD$635,000.

Role: Co-applicant. PI: Asaf Gilboa.

Distinguishing excitatory and inhibitory transcallosal interactions. Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant. April 2019-March, 2025. CAD$168,000. Role: PI.

Brain stimulation in stroke recovery: Linking short-term physiological effects with long-term benefits. Heart and Stroke Foundation of Canada Grant-in-Aid. July 2019-June 2023. CAD$279,875. Role: PI. Collaborators: Regina Jokel, Bojana Stefanovic.

Canada Research Chair (Tier 2) in Interventional Cognitive Neuroscience. Second term April 2022-March 2027. $500,000

**Past research grants**

Memory as a dynamic system (DyMnemo): implications for aging, clinical

interventions, and technological innovations. Canada Foundation for Innovation, Innovation Fund. April 2017-March 2022, CAD $4,654,570 equipment funds. Role: Principal User. Project Leader: Jennifer Ryan.

Boosting Cognitive Reserve through Adult Second Language Acquisition with Duolingo. Centre for Aging and Brain Health Innovation, Industry Innovation Partnership Program. June 1, 2018-November 31, 2019. CAD$50,000. Role: Research Lead. Co-PIs: Bozena Pajak (Industry lead, Duolingo Inc), Burr Settles.

Treatment of Comorbid Depression and Cognitive Impairment in Older Adults with Alzheimer's Disease Using Deep Transcranial Magnetic Stimulation (dTMS). Centre for Aging and Brain Health Innovation, Canada Israel Collaboration Program. January 1, 2018,-June 30, 2019. CAD$250,000. Role: Co-PI. PI: Linda Mah.

Bilateral repetitive transcranial magnetic stimulation in acute post-stroke aphasia: Does it stimulate changes in white matter? Canadian Partnership for Stroke Recovery Catalyst Grant, September 2018-March 2020. CAD$50,000. Role: Co-investigator. PI: Karine Marcotte.

Augmentation of neurorehabilitation training using targeted brain stimulation. Canada Foundation for Innovation Leader’s Opportunity Fund (infrastructure/equipment Grant). February 2014 – January 2019, CAD$277,791. Role: PI. Co-PIs Asaf Gilboa, Sylvain Moreno.

Canada Research Chair (Tier 2) in Interventional Cognitive Neuroscience. First term April 2017-March 2022. $500,000

Interventional Cognitive Neuroscience for Acquired Brain Disorders. Canada Foundation for Innovation John E. Evans Leadership Fund. April 2017-March 2022, $376,244

Effects of Noninvasive Brain Stimulation on pathological perilesional activity in stroke. Heart and Stroke Foundation Canadian Partnership for Stroke Recovery Catalyst Grant. July 1, 2016 - December 31, 2017, CAD$50,000. ROLE: PI. Co-investigators: Regina Jokel, Paul Verhoeff

Evaluation of telerehab effectiveness for post-stroke communication disorders. Heart and Stroke Foundation Canadian Partnership for Stroke Recovery, Telerehabilitation Grants Program (Matching funds provided by Manitoba Patient Access Network). April 2014-December 2015, CAD$126,886. Role: PI. Co-PI Allison Baird.

Characterizing functional lesions in stroke recovery using MEG and MRI.

Hakim Award for Innovative Stroke Research, Centre for Stroke Recovery. June 2012-May 2014, CAD$100,000. Role: PI. Co-PI Jean J. Chen.

Detection of early cortical pathology using MEG and speech analysis.

New Investigator Research Grant, Alzheimer’s Association, Oct 2012-Sept 2014, USD$97,090. Role: PI.

Effects of language experience and education on brain functional connectivity.

University of Toronto / University of São Paulo Joint Research Program. May 1, 2013-April 30, 2015. CAD$39,880. Role: PI, jointly with Cheryl Grady, Leticia Mansur, Ricardo Nitrini.

Investigating treatment-induced plasticity after aphasia therapy. Heart and Stroke Foundation Centre for Stroke Recovery Catalyst Grant. April 1, 2013-March 31, 2014, CAD$49,172. Role: PI, jointly with Elizabeth Rochon and Carol Leonard.

Behavioral and eye movement indices of cognitive and neural integrity in aging.

CIHR Operating Grant. January 1, 2013-December 31, 2017, CAD$1,150,000.

Role: Co-applicant. PI: Jennifer Ryan.

Individually optimized brain stimulation in dementia using MEG. Ontario Brain Institute Neurodegeneration Basic Science Program (Operating Grant). March 2014-February 2018, CAD$726,655. Role: PI. Co-PIs Faranak Farzan, Regina Jokel, Frank Rudzicz.

**Training grants / fellowships with laboratory personnel**

Mitacs-Accelerate Research Internship. Graduate Student: Tiana Wei. Internship with Winterlight Labs. Title: Revealing the mechanism behind word-finding difficulties in older adults as detected by speech analysis software. CAD$15,000. Jan. 1 2022-June 30 2022.

Canadian Partnership for Stroke Recovery Trainee Grant. Postdoctoral Fellow: Priyanka Shah-Basak. Title: Functional network properties in post-stroke aphasia and alterations induced by tDCS. Role: PI. CAD$25,000. July 1, 2017-June 30, 2018.

Mitacs-Accelerate Research Internship. Postdoctoral Fellow: Frank Oppermann, Ph.D. Role: Co-PI, with PI Elizabeth Rochon. Title: Neural Correlates of Aphasia Therapy After Stroke. CAD$15,000. April 1, 2012-July 31, 2012.

Centre for Stroke Recovery Stimulus Trainee Grant. Graduate Student: Kathleen Fraser. Role: PI, with co-PI Graeme Hirst. Title: Machine Learning Based Analysis of Natural Speech in Stroke and Dementia. CAD$12,000. April 1, 2012-March 31, 2013.

Centre for Stroke Recovery Non-Catalyst Trainee Grant. Postdoctoral Fellow: Aneta Kielar, Ph.D., and Graduate Student: Ronald Chu. Role: PI, with co-PIs Bernhard Ross and Regina Jokel. Title: MEG-based measures of neuronal pathology in stroke and progressive disease. CAD$27,971. April 1, 2013-March 31, 2014.

**PUBLICATIONS**

Trainees under my direct supervision are underlined.

**Journal articles, published**

P.68 Ghosh Hajra S, **Meltzer JA**, Keerthi P, Pappas C, Sekuler A**,** Liu CC.(2024) Spontaneous blinking and brain health in aging: Large-scale evaluation of blink-related oscillations across the lifespan. *Frontiers in Aging Neuroscience,* in press.

P.67 Johnston PR, Griffiths JD, Rokos L, McIntosh AR, **Meltzer JA**. (2024) Secondary thalamic dysfunction underlies abnormal large-scale neural dynamics in chronic stroke. *Proc. Natl. Acad. Sci.,* in press.

P.66 **Meltzer JA** (2024) Aphasia recovery: The role of physiological dysfunction in perilesional tissue: Commentary on Billot and Kiran. *Brain and Language****,***in press.

P.65 Page C, Liu CC, **Meltzer JA,** Ghosh Hajra S. (2024) Blink Related Oscillations provide naturalistic assessments of brain function and cognitive workload within complex real-world multitasking environments. *Sensors*, 2024 Feb 7;24(4):1082.

 doi: 10.3390/s24041082.

P.64 **Meltzer JA,** Sivaratnam G, Deschamps T, , Zadeh M, Li C, Farzan F, François-Nienaber A. (2024) Contrasting MEG effects of anodal and cathodal high-definition TDCS on sensorimotor activity voluntary finger movements. *Frontiers in Neuroimaging,* 2024, 3:1341732.

P.63 Wei HT, Kulzhabayeva D, Erceg L, Robin J, Hu YZ, Chignell M, **Meltzer JA**. (2024) Cognitive components of aging-related increase in word-finding difficulty. *Aging, Neuropsychology, and Cognition.* 1-32. Feb 14:1-32. doi:10.1080/13825585.2024.2315774.

P.62 **Meltzer JA.** Empowering adult language learners using DIY Spaced Repetition Software: Theoretical background and my own personal journey with Anishinaabemowin. (2024) Proceedings of the 27th Stabilizing Indigenous Languages Symposium*.* in press.

P.61 Freedman M, Binns MA, **Meltzer JA,** Hashimi R, Chen R. (2024) Enhanced mind-matter interactions following rTMS induced frontal lobe inhibition. *Cortex.* Mar;172:222-233. doi: 10.1016/j.cortex.2024.02.001. Epub 2024 Feb 9.

P.60 Johnston PR, McIntosh AR, **Meltzer JA.** (2022) Spectral slowing in chronic stroke reflects abnormalities in both periodic and aperiodic neural dynamics. *Neuroimage Clinical,* 2022 Dec 1; 37:103277. doi: 10.1016/j.nicl.2022.103277.

P.59 de Grosbois J, Canthiya L, Phillipp-Muller A, Hickey N, Hodzic-Santor B, Heleno MC, Jokel R, **Meltzer JA.** (2023) Asynchronous, online spaced-repetition training alleviates word-finding difficulties in aphasia. *Neuropsychological Rehabilitation*,  Dec;33(10):1672-1696. doi: 10.1080/09602011.2022.2143822.

P.58 Shah-Basak P, Sivaratnam G, Teti S, Deschamps T, Kielar A, Jokel R, **Meltzer JA.** (2022) Electrophysiological connectivity markers of preserved language functions in post-stroke aphasia. *Neuroimage: Clinical*, 2022;34:103036. doi: 10.1016/j.nicl.2022.103036. Epub 2022 May 7.

P.57. Mosabbir AA, Braun Janzen T, Al Shirawi M, Rotzinger S, Kennedy SH, Farzan F, **Meltzer J.,** Bartel L. (2022) Investigating the Effects of Auditory and Vibrotactile Rhythmic Sensory Stimulation on Depression: An EEG Pilot Study. *Cureus*, 14(2).  *10*.7759/cureus.22557

P56. Kielar A, Shah-Basak P, Patterson D, Jokel R, **Meltzer J.** (2022) Electrophysiological abnormalities as indicators of early-stage pathology in Primary Progressive Aphasia (PPA): A case study in semantic variant PPA. *Neurocase,* 2022 Feb;28(1):110-122. doi: 10.1080/13554794.2022.2039207. Epub 2022 Mar 1.

P55. Wei HT, Hu YZ, Chignell M, **Meltzer JA.** (2021) Picture-Word Interference Effects Are Robust With Covert Retrieval, With and Without Gamification. *Frontiers in Psychology*, 12, 825020. https://doi.org/10.3389/fpsyg.2021.825020

P54. **Meltzer JA,** Kates Rose M, Le AY, Spencer KA, Goldstein L, Gubanova A, Lai AC, Yossofzai M, Armstrong SEM, Bialystok E. (2023) Improvement in executive function with smartphone apps: a randomized clinical trial comparing language learning and brain training. *Aging, Neuropsychology, and Cognition,* 2023 Mar;30(2):150-171.

https://doi.org/10.1080/13825585.2021.1991262

P53. Truzman T, Rochon E, **Meltzer J,** Leonard C, Bitan T. Simultaneous Normalization and Compensatory Changes in Right Hemisphere Connectivity During Aphasia Therapy. (2021) *Brain Sciences,* 11(10). https://doi.org/10.3390/brainsci11101330

P52. Cotosck K, **Meltzer JA**, Nucci MP, Lukasowa K, Amaro E. Engagement of language and domain general networks during word monitoring in a native and unknown language. (2021) *Brain Sciences,* 11(8):1063.20 pages. PMID: 34439682 DOI: 10.3390/brainsci11081063

P51**.** Wei HT, Francois-Nienaber A, Deschamps T, Bellana B, Hebscher M, Sivaratnam G, Bagherzadeh M, **Meltzer JA**. (2021) Sensitivity of amplitude and phase based MEG measures of interhemispheric connectivity during unilateral finger movements. *NeuroImage,* 242:118457. 15 pages. PMID: 34363959 DOI: 10.1016/j.neuroimage.2021.118457

P50**.** Shah-Basak PP, Fernandez A, Armstrong SEM, Lavoie M, Jokel R, **Meltzer JA.** (2021)Behavioural and neurophysiological responses to written naming treatment and high definition tDCS: a case study in advanced primary progressive aphasia.

 *Aphasiology.* Published online 2021-08-07, 24 pages. DOI: 10.1080/02687038.2021.1959015

P49. Boasquevisque DS, ServinsckinsL, de Paiva JPQ, dos Santos DG, SoaresP, PiresDS, **Meltzer JA,** Plow EB, de Freitas PF, Speciali DS, Lopes P, Peres MFP, Silva GS, Lacerda S, Conforto AB. (2021) Contralesional cathodal transcranial direct current stimulation does not enhance upper limb function in subacute stroke: a pilot randomized clinical trial. *Neural Plasticity,* 2021:8858394, 11 pages. PMID: 34426738 PMCID: PMC8380180 DOI: 10.1155/2021/8858394

P48. Edwards J; Black S, Boe S, Boyd L, Chaves A, Chen R, Dukelow S, Fung J, Kirton A; **Meltzer J**, Moussavi Z, Neva J, Paquette C, Ploughman M, Pooyania S, Rajji T, Roig M, Tremblay F, Thiel Alex. Canadian Platform for Trials in Non-Invasive Brain Stimulation (CanStim) (2021) Consensus Recommendations for Repetitive Transcranial Magnetic Stimulation in Upper Extremity Motor Stroke Rehabilitation Trials. *.* (2021) *Neurorehabilitation and Neural Repair,* 35(2):103-116 PMID: 33410386 DOI: 10.1177/1545968320981960

P47. **Meltzer JA.** Towards early prediction of Alzheimer’s Disease through language samples. (2020) *EClinicalMedicine..*29-30:100644PMID: 33294826 PMCID: PMC7689272 DOI: 10.1016/j.eclinm.2020.100644

P46. Shah-Basak PP, Sivaratnam G, Teti S, Francois-Nienaber A, Yossofzai M, Armstrong S, †Nayar S, Jokel R, **Meltzer JA.** (2020) High-definition transcranial direct current stimulation modulates abnormal neurophysiological activity in post-stroke aphasia. *Sci. Rep.,*10(1):19625. PMID: 33184382 PMCID: PMC7665190 DOI: 10.1038/s41598-020-76533-0

P45. Das B, **Meltzer JA,** Armstrong B.(2021) Quantitative Assessment of Handedness and Cerebral Lateralization. *UTSC Journal of Natural Sciences*, 2(1):6-22.

P44. Hodzic-Santor BH, **Meltzer JA**, Verhoeff NPLG, Blumberger DM, Mah L. (2021) Intermittent Theta Burst Stimulation Using the H1-Coil for Treatment of Late-Life Depression With Comorbid Mild Cognitive Impairment. *American Journal of Geriatric Psychiatry*, 29(4):409-410. PMID: 32950361 DOI: 10.1016/j.jagp.2020.08.016

P43. Hodzic-Santor BH, **Meltzer JA**, Verhoeff NPLG, Blumberger DM, Mah L. (2021) Safety, Tolerability, and Feasibility of Deep Transcranial Magnetic Stimulation for Late-Life Depression with Comorbid Major or Mild Neurocognitive Disorder. *International Psychogeriatrics*, 33(1):99-101*.* PMID: 33153503 DOI: 10.1017/S1041610220003543

P42. Chu RKC, Joordens S, **Meltzer JA**. (2020) Transcallosal transfer of semantic information facilitates bilateral word recognition, *Journal of Experimental Psychology: General,* 149(5):984-1005. doi: 10.1037/xge0000687.

P41. Caughlin S, Mehta S, Corriveau H, Eng J, Eskes G, Kairy D, **Meltzer J**, Sakakibara B, Teasell R. (2020) Telerehabilitation after stroke: lessons learned from Canadian trials. *Telemedicine Journal and e-Health*, 26(6):710-719. PMID: 31633454 DOI: 10.1089/tmj.2019.0097

P40. Kielar A, Shah-Basak PP, Deschamps T, Jokel R, **Meltzer JA.** (2019) Slowing is slowing: Delayed neural responses to words are linked to abnormally slow resting state activity in Primary Progressive Aphasia. *Neuropsychologia,* 129:331-347. PMID: 31029594 DOI: 10.1016/j.neuropsychologia.2019.04.007

P39. Rondina II R, Olsen RK, Li L, **Meltzer JA**, Ryan JD. (2019) Age-related changes to oscillatory dynamics during maintenance and retrieval in a relational memory task. PLoS One, 14:e0211851. PMID: 30730952 PMCID: PMC6366750 DOI: 10.1371/journal.pone.0211851

P38. Hebscher M, **Meltzer JA**, Gilboa A. (2019) A causal role for the precuneus in network-wide theta and gamma oscillatory activity during complex memory retrieval. *Elife*, 8. PMID: 30741161 PMCID: PMC6397002 DOI: 10.7554/eLife.43114

P37. Conforto AB, Servinsckins L, Paiva J, Amaro E, Santos DG, Soares P, Pires DS, **Meltzer J**, Plow EB, Freitas PF, Speciali D, Lopes P, Peres MF, Silva GS, Lacerda S, Boasquevisque DS. (2019) Safety of cathodal transcranial direct current stimulation early after ischemic stroke. *Brain Stimulation,* 12:374-376. PMID: 30497884 DOI: 10.1016/j.brs.2018.11.009

P36. Shah-Basak PP**,** Kielar A, Deschamps T,Verhoeff NP, Jokel R, **Meltzer J**. (2019) Spontaneous oscillatory markers of cognitive status in two forms of dementia.

 *Human Brain Mapping,* 40(5):1594-1607. PMID: 30421472 PMCID: PMC6865664 DOI: 10.1002/hbm.24470

P35. Chu RKC, **Meltzer JA.** (2019, Feb.)Interhemispheric connectivity during lateralized lexical decision. *Human Brain Mapping,* 40(3):818-832*.* PMID: 30375129 PMCID: PMC6865399 DOI: 10.1002/hbm.24414

P34. Chu RC, **Meltzer JA,** Bitan T. (2018, Dec.) Interhemispheric interactions during sentence comprehension in patients with aphasia. *Cortex,* 109:74-91. PMID: 30312780 DOI: 10.1016/j.cortex.2018.08.022

P33. Marcotte K, Laird L, Bitan T, **Meltzer JA,** Graham SJ, Leonard C, Rochon E. (2018) Therapy-induced neuroplasticity in chronic aphasia after phonological component analysis: A matter of intensity. *Frontiers in Neurology.* PMID: 29686646 PMCID: PMC5900891 DOI: 10.3389/fneur.2018.00225

P32. Kielar A., Deschamps T, Jokel R., **Meltzer JA.** (2018) Abnormal language-related oscillatory responses in primary progressive aphasia. *NeuroImage: Clinical* 18:560-574. PMID: 29845004 PMCID: PMC5964832 DOI: 10.1016/j.nicl.2018.02.028

P31. **Meltzer JA,** Harvey S, Steele R, Baird A. (2018) Computer-based treatment of post-stroke language disorders: A non-inferiority study of telerehabilitation compared to in-person service delivery. *Aphasiology*, 32(3): 290-311. Published online July 20, 2017DOI:  10.1080/02687038.2017.1355440

P30. **Meltzer JA,** Kielar A, Panamsky L, Links K, Deschamps T, Leigh RC. (2017, May) Electrophysiological signatures of phonological and semantic maintenance in sentence repetition. *NeuroImage,* 156: 302-314*.* PMID: 28526621 DOI: 10.1016/j.neuroimage.2017.05.030

P29. Jokel R, **Meltzer J**, J. D.R., L. D.M., J. J.C., E. A.N., C. D.T. (2017, April) Group intervention for individuals with primary progressive aphasia and their spouses, who comes first? *J. Comm. Dis.*, 66: 51-64. PMID: 28412599 DOI: 10.1016/j.jcomdis.2017.04.002.

Note: Participating patients were included as anonymized authors.

P28. Marcotte K, Graham NL, Fraser KC, **Meltzer JA**, Tang-Wai D, Chow TW, Freedman M, Leonard C, Black SE, Rochon E (2017, March) White matter disruption and connected speech in non-fluent and semantic variants of primary progressive aphasia. *Dementia and Geriatric Cognitive Disorders Extra*, **7**(1): 52-73. PMID: 28611820 PMCID: PMC5465709 DOI: 10.1159/000456710

P27. Rondina II R, Curtiss K, **Meltzer JA**, Barense M, Ryan JD (2017, April) The organisation of spatial and temporal relations in memory. *Memory,* **25**(4): 436-449. PMID: 27184459 DOI: 10.1080/09658211.2016.1182553

P26. Kielar A, Deschamps T, Jokel R., **Meltzer JA** (2016, August). Functional reorganization of language networks for semantics and syntax in chronic stroke: Evidence from MEG. *Human Brain Mapping,* 2016 Aug; **37**(8):2869-2893. PMID: 27091757 PMCID: PMC6867366 DOI: 10.1002/hbm.23212

P25. Kielar A, Deschamps T, Chu R, Jokel R, Khatamian YB, Chen JJ, **Meltzer JA.** (2016, March) Identifying dysfunctional cortex: distinguishing the effects of stroke and aging on resting-state dynamics in MEG and fMRI. *Frontiers in Aging Neuroscience,* 2016 Mar 3; 8:40. PMID: 26973515 PMCID: PMC4776400 DOI: 10.3389/fnagi.2016.00040

P24. **Meltzer JA,** Rose NS, Panamsky L, Leigh RC, Links KA, Silberberg A, Madani N, Deschamps T. (2016, Feb.) Semantic and phonological contributions to immediate and delayed cued sentence recall. *Memory and Cognition*, 44(2): 307-329. PMID: 26374330 DOI: 10.3758/s13421-015-0554-y

P23. Rondina II R, Olsen R, McQuiggan D, Fatima Z, Li L, Oziel E, **Meltzer JA**, Ryan JD. (2016, Oct.) Age-related changes to oscillatory dynamics in hippocampal and cortical networks. *Neurobiology of Learning and Memory.* Oct;134 Pt A:15-30. PMID: 26688110 DOI: 10.1016/j.nlm.2015.11.017. PMID: 26688110 DOI: 10.1016/j.nlm.2015.11.017

P22. Fraser KC, **Meltzer JA**, Rudzicz F. (2016) Linguistic features identify Alzheimer's disease in narrative speech. *Journal of Alzheimer's Disease*, 2016; 49(2): 407-422. PMID: 26484921 DOI: 10.3233/JAD-150520

P21. Chu R, Braun AR, **Meltzer JA**. (2015, April) MEG-based detection and localization of electrophysiological slowing in perilesional cortex in chronic stroke. *NeuroImage: Clinical.* 8: 157-169.

P20. Kielar A, Panamsky L, Links K, **Meltzer JA.** (2015, Jan) Localization of electrophysiological responses to semantic and syntactic anomalies in language comprehension with MEG. *NeuroImage*. 105: 507-524.

P19. Mansur L, Ortiz KZ, **Meltzer JA.** (2014) Language assessment and treatment in the last decade. *Dement Neuropsychol.* 8(3): 195.

P18. Kielar A, **Meltzer JA**, Moreno S, Alain C, Bialystok E. (2014, Jun) Oscillatory responses to semantic and syntactic violations. *J. Cogn. Neurosci.* 26(12): 2840-2862. Published online June 4, 2014.

P17. Fraser KC, **Meltzer JA**, Graham NL, Leonard C, Hirst G, Black C, Rochon E. (2014, Jun) Automated classification of primary progressive aphasia subtypes from narrative speech transcripts. *Cortex.* 55:43-60.Special issue on “Language, Computers, and Cognitive Neuroscience.”

P16. Olsen RK, Rondina R, Riggs L, **Meltzer JA**, Ryan JD. (2013, Nov) Hippocampal and neocortical oscillatory contributions to visuospatial binding and comparison. *J Exp Psychol Gen.* 142(4):1335-1345.

P15. **Meltzer JA**, Wagage S, Ryder J, Solomon B, Braun AR. (2013, Jun) Adaptive significance of right hemisphere activation in aphasic language comprehension. *Neuropsychologia.* 2013 Jun;51(7):1248-1259.

P14. **Meltzer JA**, Braun AR (2013, Jan) P600-like positivity and left anterior negativity responses are elicited by semantic reversibility in nonanomalous sentences. *Journal of Neurolinguistics*. 26(1):129-148.

P13. **Meltzer JA** (2012)Localizing the component processes of lexical access using modern neuroimaging techniques. *The Mental Lexicon.* 7(1): 91-118.

P12. **Meltzer JA**, Braun AR (2011, Feb) An EEG-MEG dissociation between online syntactic comprehension and posthoc reanalysis. *Frontiers in Human Neuroscience* 2011 Feb 4;5:10. PMCID: PMC3035013

P11. Picchioni D, Horovitz SG, Fukunaga M, Carr WS, **Meltzer JA**, Balkin TJ, Duyn JH, Braun AR. (2011, Feb) Infraslow EEG oscillations organize large-scale cortical-subcortical interactions during sleep: a combined EEG/fMRI study.

*Brain Research* 2011 Feb 16;1374:63-72. PMCID: PMC3031777

P10. **Meltzer JA**, McArdle JJ, Schafer RJ, Braun AR (2010, Aug) Neural aspects of sentence comprehension: syntactic complexity, reversibility, and reanalysis. *Cereb Cortex*, 20(8):1853-1864. PMCID: PMC2901020

P9. **Meltzer JA**, Postman-Caucheteux WA, McArdle JJ, Braun AR (2009, Aug) Strategies for longitudinal neuroimaging studies of overt language production. *NeuroImage*, 47(2):745-755. PMCID: PMC2700210

P8. Bender G, Veldhuizen MG, **Meltzer JA**, Gitelman DR, Small DM (2009) Neural correlates of evaluative compared to passive tasting. *European Journal of Neuroscience*, 30(2):327-338. PMCID: PMC2776645

P7. **Meltzer JA**, Fonzo GA, Constable RT (2009, Jan) Transverse patterning dissociates human EEG theta power and hippocampal BOLD activation. *Psychophysiology* 46: 153-162. PMCID: PMC2675275

P6. **Meltzer JA**, Zaveri HP, Goncharova II, Distasio MM, Papademetris X, Spencer SS, Spencer DD, Constable RT (2008, Aug) Effects of working memory load on oscillatory power in human intracranial EEG. *Cereb Cortex* 18: 1843-1855. PMCID: PMC2474453

P5. **Meltzer JA**, Negishi M, Constable RT (2008, Apr) Biphasic hemodynamic responses influence deactivation and may mask activation in block-design fMRI paradigms. *Human Brain Mapping* 29(4):385-399. PMCID: PMC3496427

P4. **Meltzer JA**, Negishi M, Mayes LC, Constable RT (2007, Nov) Individual differences in EEG theta and alpha dynamics during working memory correlate with fMRI responses across subjects. *Clin Neurophysiol* 118(11):2419-2436. PMCID: PMC2080790

P3. Ment LR, Peterson BS, **Meltzer JA,** Vohr B, Allan W, Katz KH, Lacadie C, Schneider KC, Duncan CC, Makuch RW, Constable RT (2006, Sep) A functional magnetic resonance imaging study of the long-term influences of early indomethacin exposure on language processing in the brains of prematurely born children. *Pediatrics* 118(3):961-970. PMCID: PMC2364718

P2. **Meltzer JA**, Constable RT (2005, Jan 15) Activation of human hippocampal formation reflects success in both encoding and cued recall of paired associates. *NeuroImage* 24(2):384-397.

P1. **Meltzer J,** Santos-Sacchi J (2001, Nov 9) Temperature dependence of non-linear capacitance in human embryonic kidney cells transfected with prestin, the outer hair cell motor protein. *Neurosci Lett* 313(3):141-144. PMID: 11682147

**Book Chapters: 3**

BC3. **Meltzer, JA.** Magnetoencephalography. In *The Neurotech Primer.* 2021,NeurotechX, Montreal.

BC2. **Meltzer, JA.** Brain imaging and conceptions of the lexicon. In *Methodological and Analytic Frontiers in Lexical Research.* (eds. G. Libben, G. Jarema, C. Westbury) 2012, John Benjamins, Amsterdam. (Also published as a journal article in The Mental Lexicon).

BC1. **Meltzer JA**, Constable RT. Long-term memory: Do incremental signals reflect engagement of cognitive processes? In *Brain Energetics and Neuronal Activity: Applications to fMRI and Medicine*. (eds. R.G. Shulman, and D.L. Rothman). 2004, Wiley, Hoboken, NJ.

**Published conference papers (peer reviewed):**

CP2. Fraser KC, Hirst G, Graham NL, **Meltzer JA**, Black SE, Rochon E. Comparison of different feature sets for identification of variants in progressive aphasia. In Proceedings of the 1st Workshop on Computational Linguistics and Clinical Psychology (CLPsych), pages 17–26, Baltimore, Maryland, June 27, 2014. Association for Computational Linguistics.

CP1. Fraser KC, Hirst G, **Meltzer JA**, Mack JE, Thompson CK. Using statistical parsing to detect agrammatic aphasia. In Proceedings of the 2014 Workshop on Biomedical Natural Language Processing (BioNLP), pages 134–142, Baltimore, Maryland, June 28, 2014. Association for Computational Linguistics.

**Manuscripts submitted:**

S1. Cotosck K, **Meltzer JA**, Nucci MP, Lukasowa K, Amaro E. Effects of aging and education on engagement of language networks in effortful listening.

S2. Wei HT, Kulzhabayeva D, Erceg L, Rose MK, Le A, Spencer KA, Robin J, Bialystok E, **Meltzer JA**. Natural speech analysis can reveal individual differences in executive function across the adult lifespan.

S3. Wei HT, Beck T, Bin Faisal F, **Meltzer JA**. Neuronal oscillatory modulations underlying picture-word interference and facilitation during covert naming.

S4. Wang G, **Meltzer JA.** Attentional Modulation of Functional Lateralization Biases with Verbal and Nonverbal Stimuli

**Manuscripts in preparation :**

Pr1. Oppermann F, Kielar A, Panamsky L, **Meltzer JA.** Oscillatory brain activity reflects semantic and phonological activation during sentence planning.

Pr2. François-Nienaber A, Bellana B, Deschamps T, Farzan F, **Meltzer JA**. Theta-burst stimulation modulates oscillatory neural activity primarily for ipsilateral, not contralateral, finger movements.

Pr3. Wang G, **Meltzer JA**. Investigating emotional lateralization biases with verbal and nonverbal stimuli.

**CONFERENCE PRESENTATIONS**

**Oral:**

O35. **Meltzer JA.** Why is brain stimulation beneficial? The excitatory-inhibitory balance hypothesis. *Neuromodulation for Neurocognitive Disorders Workshop, Satellite to 11th Canadian Conference for Dementia,* Nov. 1, 2023, Toronto, ON.

O34. **Meltzer JA.** How does cerebrovascular disease impair cognition, and can it be mitigated? Insights from electrophysiology and excitatory/inhibitory balance. *Rotman Research Institute Annual Conference.* March 21, 2023, online.

O33. **Meltzer JA.** Abnormal electrical activity in stroke patients – what causes it, and can it be fixed? *Canadian Partnership for Stroke Recovery Annual Scientific Meeting,* Jan. 23-25, 2023, online.

O32. **Meltzer JA.** Resting state slowing in dementia: relationships to functional activation and cognitive status. *22nd International Conference on Biomagnetism,* August 29, 2022, Birmingham, UK.

O31. **Meltzer JA.** Neuromodulation in post-stroke aphasia treatment. XII Brazilian Congress of Cerebrovascular Diseases. Nov. 25, 2021.

O30. **Meltzer JA.** Empowering adult language learners using DIY spaced repetition software. *Stabilizing Indigenous Languages Symposium.* June 15, 2021.

O29. **Meltzer JA.** Introduction to TMS. Virtual workshop, *Rotman Research Institute Annual Conference*, March 26, 2021.

O28. **Meltzer JA.** Advances in Aphasia Treatment: From High-Tech Discovery to Everyday Applications.  *Atlantic Canada Stroke Conference*. March 26, 2021

O27. **Meltzer JA.** How to memorize and retain vocabulary effectively using spaced repetition software, even if there are scarce resources for your language. *Manitoba Aboriginal Languages Symposium.* March 24, 2021.

O26. **Meltzer JA.** Running an online study involving assessment and intervention for aphasia**,** part of workshop on virtual assessments and interventions, *Canadian Partnership for Stroke Recovery Annual Scientific Meeting,* Dec. 2, 2020, online.

O25. **Meltzer JA.** Revisiting the theoretical foundations of therapeutic brain stimulation. *Rotman Research Institute Annual Conference.* March 3, 2020, online.

O24. **Meltzer JA.** MEG slowing in dementia: Can it inform interventions? *American Clinical MEG Society.* Feb. 6, 2020, New Orleans, LA.

O23. **Meltzer JA.** Resting state MEG for rational planning of neurostimulation treatment in stroke and dementia. *International Society for the Advancement of Clinical MEG.* Sept. 11-14, 2019, Toronto, ON.

O22. **Meltzer JA.** CPSR priorities and plans in cognitive recovery research**.** *Canadian Partnership for Stroke Recovery Annual Scientific Meeting,* Oct. 2, 2019, Ottawa, ON.

O21. Hebscher M, Ibrahim C, **Meltzer JA**, Gilboa A. Precuneus stimulation alters the spatiotemporal neural dynamics of autobiographical memory. *Society for Neuroscience,* Oct. 23, 2019. Chicago, IL.

O20. Kielar A (presenting), Jokel R, **Meltzer JA.** Modulation of Task-Related and Resting-State Oscillatory Responses in Primary Progressive Aphasia. *Academy of Aphasia.* Oct. 21-23, 2018. Montreal, QC.

O19. **Meltzer JA.** Neuromodulatory effects of individualized HD-TDCS on resting-state MEG dynamics in chronic post-stroke aphasia. *World Stroke Congress.* Oct. 17-19, 2018. Montreal, QC.

O18. **Meltzer JA.** Effects of noninvasive brain stimulation on pathological perilesional activity in stroke. *Advances in Stroke Recovery*. June 11-12, 2018, Gatineau, QC

O17. Chu RKC, **Meltzer JA**, Bitan T (presenting). Inhibitory or excitatory connections between hemispheres? Evidence from sentence comprehension in patients with aphasia. *Academy of Aphasia.* Nov. 5-7, 2017. Baltimore, MD.

O16. **Meltzer JA.** How noninvasive brain stimulation can reverse abnormal electrical activity in post-stroke perilesional cortex. *Canadian Stroke Congress.* Sept. 9-11, 2017, Calgary, AB.

O15. **Meltzer JA.** Evaluation of noninvasive brain stimulation treatments for stroke using MEG. *MEG North America Workshop*. Nov. 1-2, 2016, Bethesda, MD

O14. **Meltzer JA,** Harvey S, Steele R, Baird A. Treatment efficacy of telerehabilitation compared to in person speech therapy for post-stroke aphasia: a noninferiority study. *Advances in Stroke Recovery*. September 14, 2016, Quebec City, QC

O13. **Meltzer JA.** Transcallosal inhibition and stroke recovery: Evidence from magnetoencephalography. *North Sea Laterality.* Aug. 31-Sept. 3, 2016. Groningen, Netherlands.

O12. Chu RKC (presenting), **Meltzer JA**. MEG-based detection of perilesional dysfunction in chronic aphasia. *American Clinical Magnetoencephalography Society*, Feb. 10-11, 2016. Orlando, FL.

O11. **Meltzer JA.** Neural oscillatory activity as a biomarker for response to dementia interventions.*Ontario Neurodegenerative Disease Research Initiative Annual Meeting*, Oct. 28, 2015, London, ON

O10. **Meltzer JA.** Can we beat dementia? The promise of research. *Ontario Society of Medical Technologists Annual Meeting.* September 20, 2015. Toronto, ON.

O9. **Meltzer JA.** Aphasia Recovery: New technology and neuroplasticity. *Advances in Stroke Recovery*. September 17, 2015, Toronto, ON

O8. **Meltzer JA.** Brain electrical activity in dementia: opportunities for detection and intervention. *Ontario Neurodegenerative Disease Research Initiative Annual Meeting,* November 13, 2014. London, ON

O7. **Meltzer JA.** Electrophysiological slowing as a biomarker of localized cortical dysfunction. *19th International Conference on Biomagnetism,* August 26, 2014, Halifax, NS, Canada.

O6. **Meltzer JA**, Chu R, Braun AR. Detection and Quantification of Functional Lesions from Slowing in Resting-State MEG. *Canadian Stroke Congress*, October 2013, Montreal, QC

O5. **Meltzer JA.** Characterizing functional lesions in stroke recovery using MEG and MRI. *Centre for Stroke Recovery Annual Scientific Meeting,* October 2013, Montreal, QC

O4. **Meltzer JA.** Assessment of neural function and dysfunction using magnetoencephalography. *University of Sao-Paulo / University of Toronto Joint Neuroscience Conference,* December, 2012, Sao Paulo, Brazil

O3. **Meltzer JA.** Pathways to language recovery in aphasia. *Centre for Stroke Recovery Annual Scientific Meeting,* May 2012, Ottawa, ON.

O2. **Meltzer JA**, McArdle JJ, Braun AR. Dissociating between syntactic specialization and working memory in Broca’s area. *Society for Neuroscience*, November 2008, Washington, DC.

O1. **Meltzer JA**, Negishi M, Constable RT. Correspondence of EEG theta and alpha dynamics with negative BOLD in a working memory task. *Society for Neuroscience,* October, 2006, Atlanta, GA.

**Posters:**

Po71. Wang G, **Meltzer JA.** (2024, April). Investigating Emotional Lateralization Biases with Verbal and Nonverbal Stimuli. Cognitive Neuroscience Society, Toronto, ON, April 13-16, 2024.

Po70. Wei HT, Faisal FB, Shao C, Beck T, **Meltzer JA** (2023, November). Localizing covert and overt picture naming processes using MEG. MEG North America, National Institutes of Health, Bethesda, MD, USA, November 8-9, 2023

Po69. Wei HT, Faisal FB, Shao C, Beck T, **Meltzer JA** (2023, October). Localizing covert and overt picture naming processes using MEG. Society for the Neurobiology of Language, Palais du Pharo, Marseille, France, October 24-26, 2023

Po68. Rogojin A, Ahmed A, **Meltzer JA** (2023) Validation of a novel hand-squeezing paradigm for quantification of interhemispheric inhibition (IHI) between motor cortices using MEG. *MEG North America Conference*. Bethesda, MD, USA, November 8-9, 2023

Po67. Johnston PR, **Meltzer JA**, McIntosh AR, Griffiths JD. Thalamic disinhibition explains abnormal post-stroke neural dynamics in a corticothalamic neural field model. Poster presented at: Organization for Human Brain Mapping (OHBM) Annual Meeting; Jul 25-26 2023; Montréal, Canada

Po66. Johnston PR, **Meltzer JA**, McIntosh AR, Griffiths JD. *Thalamic disinhibition explains abnormal post-stroke neural dynamics in a corticothalamic neural field model.* Poster presented at: Rotman Research Institute Conference; Mar 21, 2023; Virtual

Po65. Johnston PR, McIntosh AR, **Meltzer JA**. *Spectral Slowing in Chronic Stroke Comprises Both Periodic and Aperiodic Components*. Poster presented at: Organization for Human Brain Mapping (OHBM) Annual Meeting; Jun 21-22, 2022; Glasgow, Scotland

Po64. Wang G, **Meltzer JA** (2023). Attentional modulation of functional lateralization with verbal and nonverbal stimuli. *2023 Cognitive Neuroscience Society*, San Francisco, CA, United States, March 25 – 28, 2023.

Po63. Truzman T, Rochon E, Meltzer J, Léonard C, Bitan T. Changes in Effective Connectivity Following Language Treatment for post-stroke patients with Aphasia. Academy of Aphasia. Online. October 24-26, 2021.

Po62. de Grosbois J, Canthiya L, Phillipp-Muller A, Hickey N, Hodzic-Santor B, **Meltzer J.** (2021).Online spaced-repetition training for treating word-finding difficulties in aphasia.Society for the Neurobiology of Language. Online. October 5-8, 2021.

Po61. Wei HT, Chignell M, **Meltzer JA.** (2021) Gamified Tip-of-the-Tongue Assessment in Aging. The Society for the Neurobiology of Language. Online. October 5-8, 2021.

Po60. Liu CC, **Meltzer JA**, Keerthi P, Pappas C, Sekuler AB. Spontaneous blinking and brain health: Can blink-related oscillations capture brain changes in aging? Alzheimer's Association International Conference, July 26, 2021, Denver, CO.

Po59. Spencer KA, **Meltzer JA**, Robin J, Xu M, Kates Rose M, Bialystok E. Fluency in Spontaneous Speech Predicts Individual Variance in Executive Function among Seniors. Alzheimer's Association International Conference, July 26, 2021, Denver, CO.

Po58. Marlatte H, **Meltzer JA**, Binns M, Gilboa A. Individual differences in prior knowledge application during word learning: A mechanistic Bayesian model. Neurobiology of Speech and Language, November 13, 2020, St. Petersburg, Russia.

Po57. Wei TS, Francois-Nienaber A, **Meltzer JA.** Quantifying Inter-hemispheric Connectivity between Motor Cortices During Finger Movements with MEG. Society for Neuroscience, Oct. 19-23, 2019, Chicago, IL.

Po56. Wei TS, Francois-Nienaber A, **Meltzer JA.** Quantifying Inter-hemispheric Connectivity between Motor Cortices During Finger Movements with MEG. PsyLinCS (Psychology-Linguistics-Computer Science Symposium), University of Toronto Mississauga, Sept. 7, 2019, Mississauga, ON.

Po55. Kates Rose M, Goldstein L, Gubanova A, Lai A, Yossofzai M, Armstrong S, Bialystok E, **Meltzer JA.** Boosting Cognitive Reserve Through Adult Second Language Acquisition with Duolingo. PsyLinCS (Psychology-Linguistics-Computer Science Symposium), University of Toronto Mississauga, Sept. 7, 2019, Mississauga, ON.

Po54. Edwards J, Black S, Boe S, Boyd L, Chaves AR, Chen R, Dukelow S, Fung J, Kirton A, **Meltzer J**, Moussavi Z, Paquette C, Ploughman M, Pooyania S, Rajii T, Roig M, Tremblay F, Thiel A. Canadian Platform for Trials in Non-Invasive Brain Stimulation (CanStim) Consensus Recommendations for Repetitive Transcranial Magnetic Stimulation in Upper Extremity Motor Stroke Rehabilitation Trials. *Canadian Stroke Congress.* Oct. 3-5, 2019. Ottawa, ON.

Po53. Brisebois A, Brambati S, Rochon E, de Beaumont L, Desautels A, Descoteaux M, Higgins J, **Meltzer JA**, Courson M, Marcotte K. Bilateral repetitive transcranial magnetic stimulation in acute post-stroke aphasia: Does it stimulate changes in white matter? *Canadian Stroke Congress.* Oct. 3-5, 2019. Ottawa, ON.

Po52. Shah-Basak PP, Sivaratnam G, Teti S, Francois-Nienaber A, Deschamps T, Meltzer JA. (2018) Neuromodulatory effects of individualized tDCS on MEG dynamics in chronic post-stroke aphasia. *Academy of Aphasia*, Quebec City, QC, October 21-23, 2018.

Po51. Shah-Basak PP, Deschamps T, Francois-Nienaber A, Teti S, Jokel R, Meltzer JA. Spontaneous oscillatory activity in response to intensive tDCS and anomia therapy in primary progressive aphasia: A case series. *Academy of Aphasia*, Quebec City, QC, October 21-23, 2018.

Po50. Shah-Basak PP, Sivaratnam G, Teti S, Francois-Nienaber A, Deschamps T, Meltzer JA. (2018) Neuromodulatory effects of individualized tDCS on MEG dynamics in chronic post-stroke aphasia. *Society for the Neurobiology of Language,* Quebec City, QC, August 16-18, 2018.

Po49. Meltzer JA, †Chu R (2018). Asymmetrical connectivity underlying the right visual field advantage in lateralized lexical decision. *Society for the Neurobiology of Language,* Quebec City, QC, August 16-18, 2018.

Po48. Shah-Basak PP, Sivaratnam G, Teti S, Francois-Nienaber A, Deschamps T, Kielar A, Meltzer JA. (2018) Frequency-dependent functional connectivity underlying language reorganization in chronic post-stroke aphasia. Advances in Stroke Recovery, June 11-12, 2018, Gatineau, QC

Po47. Hebscher M, Meltzer JA, Gilboa A. (2018) A causal role for the precuneus in autobiographical memory through network-wide theta/gamma oscillations. International Conference on Learning and Memory, April 18-22, 2018, Irvine, CA.

Po46. Kielar A., Deschamps T., Jokel R., Meltzer JA. (2017) Oscillatory Abnormalities in Primary Progressive Aphasia. Society for the Neurobiology of Language, November 8-10, 2017, Baltimore, MD.

Po45. Korcovelos EA, Fraser KC, Meltzer JA, Hirst G, Rudzicz F. (2017). Studying neurodegeneration with automated linguistic analysis of speech data. Alzheimer's Association International Conference, July 16-20, 2017, London, UK.

Po44. Francois-Nienaber A, Deschamps T, Farzan F, Meltzer JA. (2017). Effects of high-definition TDCS on oscillatory activity. 27th Annual Rotman Research Institute Conference, March 21-22, 2017, Toronto, ON

Po43. Deschamps T., Kielar A., Jokel R., Meltzer JA. (2017) Resting state MEG biomarkers of cognitive status across healthy aging and two forms of dementia. 27th Annual Rotman Research Institute Conference, March 21-22, 2017, Toronto, ON

Po42. Meltzer JA, Francois-Nienaber A, Bellana B, Hebscher M, Deschamps T, Farzan F. (2016) Theta burst stimulation primarily modulates motor cortex engagement for ipsilateral, not contralateral, finger movements. Society for Neuroscience, Nov. 12-16, 2016, San Diego, CA

Po41. Meltzer JA, Francois-Nienaber A, Bellana B, Hebscher M, Deschamps T, Farzan F. (2016) Theta burst stimulation primarily modulates motor cortex engagement for ipsilateral, not contralateral, finger movements. MEG North America Workshop, Nov 1-2. Bethesda, MD.

Po40. Meltzer JA, Kielar A, Chu R, Deschamps T (2016). Spontaneous MEG: a biomarker for cortical health in aging, stroke, dementia, and ordinary cognitive decline. 26th Annual Rotman Research Institute Conference, March 21-22, 2016, Toronto, ON

Po39. Harvey S, Baird A, Meltzer JA (2015). Evaluation of telerehab effectiveness for post-stroke communication disorders. *Canadian Stroke Congress*, Sept. 17-19, 2015, Toronto, ON.

Po38. Kielar A, Jokel R, Chu RKC, Deschamps T, Panamsky L, Chen JJ, Khatamian YB, Meltzer JA (2015). Distinguishing the effects of stroke and healthy aging with resting state MEG and fMRI. *Canadian Stroke Congress*, Sept. 17-19, 2015, Toronto, ON.

Po37. Chu R, Bitan T, Braun A, Meltzer JA (2015) The role of right to left hemisphere connectivity in sentence processing in post-stroke aphasia. Cognitive Neuroscience Society 22nd Annual Meeting, March 28-31, 2015, San Francisco, USA.

Po36. Chu R, Bitan T, Braun A, Meltzer JA (2015) The role of right to left hemisphere connectivity in sentence processing in post-stroke aphasia. 25th Annual Rotman Research Institute Conference, March 9-11, 2015, Toronto, ON

Po35. Kielar A, Jokel R, Chu RKC, Deschamps T, Panamsky L, Chen JJ, Khatamian YB, Meltzer, JA (2015). Altered neural dynamics in stroke and aging: sensitivity of resting state MEG vs fMRI. 25th Annual Rotman Research Institute Conference, March 9-11, 2015, Toronto, ON

Po34. Meltzer JA, Kielar A, D’Angelo MC, Ryan JD, Barense MD (2015). Electrophysiological abnormalities in older adults at risk for dementia: language lateralization and resting state changes.25th Annual Rotman Research Institute Conference, March 9-11, 2015, Toronto, ON

Po33. Kielar A, Deschamps T, Chu R, Panamsky L, Khatamian YB, Chen JJ, Meltzer JA (2014). Stroke induced reorganization of the neural networks for sentence comprehension, and relationship to perilesional dysfunction revealed by MEG and ASL. 52nd Meeting of the Academy of Aphasia, Miami, FL, USA, October 5-7, 2014.

Po32. Chu R, Kielar A, Deschamps T, Khatamian Y, Chen JJ, Braun AR, Meltzer JA (2014). Characterization of pathological perilesional activity in stroke using multiscale entropy. 19th International Conference on Biomagnetism, August 24-28, 2014. Halifax, NS, Canada.

Po31. Meltzer JA, Kielar A, Rose NS, Panamsky L, Leigh RC, Links KA (2014). MEG activity for phonological and semantic resources in verbal short-term memory. 19th International Conference on Biomagnetism, Halifax, NS, Canada.

Po30. Kielar A, Deschamps T, Chu R, Panamsky L, Khatamian YB, Chen JJ, Meltzer JA (2014). Functional reorganization of the neural networks for language after stroke and relationship to perilesional dysfunction revealed by MEG. Advances in Stroke Recovery Meeting, Ottawa, Ontario, June 9-10th, 2014.

Po29. Kielar A, Meltzer JA, Moreno S, Alain C, Bialystok E (2014). Oscillatory responses to sentence embedded semantic and syntactic violations: Effect of bilingualism. 8th Annual Canadian Association for Neuroscience Meeting, Montreal, Quebec, May 25-28th, 2014.

Po28. Meltzer JA, Kielar A, Rose NS, Panamsky L, Leigh RC, Links KA (2014). Phonological and semantic contributions to short-term and long-term verbal recall. *Rotman 24th Annual Neuroscience Conference: Memory and the Brain in Health and Disease,* March, 2014, Toronto, ON, Canada.

Po27. Oppermann F, Kielar A, Panamsky L, Meltzer J (2014). Oscillatory brain activity in the alpha and beta band reflect semantic and phonological activation during speech planning. Poster presented at the 8th International Workshop on Language Production. Geneve, Switzerland.

Po26. Oppermann F, Kielar A, Panamsky L, Meltzer J (2014). Desynchronisation of oscillatory brain activity reflects semantic and phonological processing in a language task [Abstract]. In A. Schuetz, K. Drewing, & K.R. Gegenfurtner (Eds.), Abstracts of the 56. Conference of Experimental Psychologists (p. 195). Lengerich: Pabst.

Po25. Oppermann F, Kielar A, Panamsky L, Meltzer JA (2013). Alpha and beta power decrease as a neural correlate of semantic and phonological processing in a language task. 54th Annual Meeting of the Psychonomic Society, November 14th-17th, 2013, Toronto, ON

Po24. Rochon E, Marcotte K, Laird L, Simic T, Grady C, **Meltzer J**, Leonard C. Extending PCA Aphasia Treatment to an Individual with Bilateral Lesions: A Pilot Study. Canadian Stroke Congress, Oct. 2013, Montreal QC.

Po23. †Wen MC, Gilboa A, **Meltzer J**, Lee SH, Liu HL. White matter integrity, chronic illness and executive function in mild late-life depression. International Society of Vascular Behavioural and Cognitive Disorders, June, 2013, Toronto, ON.

Po22. †Kielar A., Panamsky L., **Meltzer J**. Brain networks for semantic and syntactic processing: Converging evidence from MEG and DTI. 7th Annual Canadian Neuroscience Meeting, Toronto, Ontario, Canada, May 2013.

Po21. †Kielar A, Panamsky L, **Meltzer, J.** Localization of neural networks for semantic and syntactic processing using MEG. 20th Annual Cognitive Neuroscience Meeting, San Francisco, CA, USA, April 15th, 2013.

Po20. Chu R, **Meltzer J**. Noninvasive characterization of perilesional electrical activity. *Rotman 23rd Annual Neuroscience Conference: Brain Plasticity and Rehabilitation,* March, 2013, Toronto, ON.

Po19. Kielar A, Panamsky L, **Meltzer J**. Mapping brain networks for semantic and syntactic processing using MEG in healthy and damaged brains. *Rotman 23rd Annual Neuroscience Conference: Brain Plasticity and Rehabilitation,* March, 2013., Toronto, ON

Po18. Bhatt O, **Meltzer J,** Ross B, Chen JJ. Stability of Resting-State Brain Activity Fluctuations Across Time: Evidence from fMRI and MEG. *International Society for Magnetic Resonance in Medicine*, April, 2013, Salt Lake City, UT

Po17. Marcotte K, Graham NL, Black SE, Tang-Wai DF, Chow TW, Freedman M, **Meltzer JA,** Leonard C, Rochon E. White matter disruption and language processing in fluent and nonfluent variants of primary progressive aphasia. *Neurobiology of Language*, October 2012, San Sebastian, Spain

Po16. Kielar A, Panamsky L, Links K, **Meltzer JA**. Mapping of neural generators of electrophysiological responses to semantic and syntactic anomalies using MEG. *International Conference on Biomagnetism*, August 2012, Paris.

Po15. **Meltzer JA,** Braun AR. Statistical mapping of pathological slow activity in resting-state MEG data. *International Conference on Biomagnetism*, August 2012, Paris.

Po14. **Meltzer JA**. Detection of focal cortical dysfunction from resting-state MEG data. *Rotman 22nd Annual Neuroscience Conference: Mild Cognitive Impairment,* March 2012, Toronto, ON.

Po13. **Meltzer JA,** Braun AR. Adaptive significance of right hemisphere activation in aphasic language comprehension. *Society for Neuroscience,* 2010.

Po12. **Meltzer JA**, Braun AR. A dissociation of laterality for language production and comprehension in a subcortical aphasic patient, assessed with MEG and fMRI. *Academy of Aphasia*, October, 2009, Boston, MA.

Po11. **Meltzer JA**, Braun AR. Tracking sentence comprehension in real time using beamforming analysis of beta desynchronization. *Human Brain Mapping*, June, 2009, San Francisco, CA.

Po10. Arora J, Nallakkandi R, Relwani R, **Meltzer J**, Sherwin R , Constable R. Effects of Hypoglycemia on Working Memory: A functional MRI study. *Human Brain Mapping*, 2006.

Po9. **Meltzer JA** Negishi M, Constable RT. The contribution of the BOLD poststimulus undershoot to block-design subtraction outcomes  in cognitive fMRI. *Proc. Intl. Soc. Mag. Reson. Med*, 2006

Po8. **Meltzer JA**, Negishi M, Constable RT. EEG Theta Rhythm and FMRI deactivations in Mapping of Human Memory. *American Epilepsy Society,* 2005.

Po7. **Meltzer JA**, Negishi M, Fonzo G, Constable RT. Theta power correlates with widespread task-induced deactivations and enhanced post-stimulus hemodynamic undershoots in simultaneous EEG-fMRI. *Society for Neuroscience,* 2005.

Po6. **Meltzer JA**, Negishi M, Constable RT. BOLD correlates of alpha and theta power fluctuations in a mental task during simultaneous EEG and fMRI. *Human Brain Mapping*, 2005.

Po5. Constable RT, Scouten A, **Meltzer J**, Papademetris X. Spatial resolution, signal-to-noise ratios, and smoothing in multi-subject fMRI. *Human Brain Mapping*, 2004.

Po4. **Meltzer JA**, Zaveri HP, Spencer SS, Spencer DD, Constable RT. Individual variability in spectral correlates of working memory load in scalp and intracranial recordings. *Human Brain Mapping*, 2004.

Po3. **Meltzer JA**, Constable RT. Activation of human hippocampal formation reflects success in both encoding and cued recall of paired associates. *Human Brain Mapping*, 2003.

Po2. **Meltzer JA**, Olson IR, Constable RT. Medial temporal lobe activation correlates with encoding success for associative memory of novel information. *Society for Neuroscience*, 2001.

Po1. **Meltzer J,** Santos-Sacchi J, Folkinshteyn D, Temperature dependence of prestin's nonlinear capacitance. *Society for Neuroscience,* 2001.

**REVIEWER SERVICE**

Alberta Innovates

Alzheimer’s Association

Annals of Neurology

Aphasiology

BMC Neuroscience

Brain

Brain Imaging and Behavior

Brain and Language

Brain Research

Brain Topography

Cerebral Cortex

Cerebrovascular Diseases

Clinical Neurophysiology

Cortex

Dementia and Neuropsychology

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Frontiers in Aging Neuroscience

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Frontiers in Psychology

Human Brain Mapping

Journal of Alzheimer’s Disease

Journal of Cognitive Neuroscience

Journal of Family Medicine

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Journal of Neuroscience

Journal of the Neurological Sciences

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Journal of Rehab Medicine

Language and Cognitive Processes

Netherlands Organisation for Scientific Research

Medical Science Monitor

Neurobiology of Aging

NeuroImage

Neuropsychologia

Neuroradiology

Neuroscience

PLOS One

**Editorial Service**

Review Editor, Frontiers in Neuroscience, May 2015-Present

Review Editor, Frontiers in Psychology, May 2015-Present

**Invited Research Presentations:**

Halton-Peel Community Aphasia Programs, April, 2023

Krembil Centre for Neuroinformatics, March 2023

Yale University, February, 2023

Trent University Indigenous Research Day, November 2022

Stroke Recovery Association (Toronto Area), July, 2022

Kingston Indigenous Language Nest, May 2022

Association of Iroquois and Allied Indians, Language and Land-based gathering, May 2022

Rehabilitation Sciences Institute, U Toronto, May 2022

Baycrest Psychiatry Rounds, February, 2022

Baycrest Behavioural Neurology Rounds, January, 2022

Laurentian University, Dept. Kinesiology, November, 2021

Baycrest Behavioural Neurology Rounds, March, 2021

March of Dimes Aphasia Program webinar, August, 2020

Halton-Peel Community Aphasia Programs, October, 2019

Aphasia Institute Webinar Series, March, 2019

University of Toronto Ebbinghaus Empire Psychology Talks, February, 2019

Halton-Peel Community Aphasia Programs, October, 2018

York University Neuroscience Program, October, 2018

Baycrest Behavioural Neurology Rounds, November, 2017

National Institutes of Health, Bethesda, MD, October, 2017

Krembil Neuroscience Institute, Toronto Western Hospital, April, 2017

Sunnybrook Research Institute, March, 2017

Baycrest Hospital, Toronto, Neurology Rounds, March, 2017

March of Dimes Aphasia Program, February, 2017

University of Toronto Research Ethics Board Retreat, December, 2016

Bayview High School Bioethics Club, November, 2016

Baycrest Lightning rounds for visiting students of Peking Univ., July, 2016

University of Toronto Psycholinguistics Seminar, April, 2016

Baycrest Hospital, Toronto, Neurology Rounds, March, 2016

In with Forward (community organization) – Aging and the Brain. March, 2016

Aphasia Institute, January, 2016

March of Dimes, November, 2015

Ontario Society of Medical Technologists Annual Meeting. September, 2015

University of Toronto Psychology Retreat, May, 2015

Rotman Research Institute, February, 2015

Baycrest Hospital, Toronto, Neurology Rounds, February, 2015

Sunnybrook Health Sciences Centre, Toronto, October, 2014

Quantified Self Toronto, October, 2014

Dalhousie University, Halifax, NB, February, 2014

Centre for Addiction and Mental Health, January, 2014

University of Sao Paulo, Brazil, November, 2013

Baycrest Hospital, Toronto, Neurology Rounds, October, 2013

Alzheimer’s Society, York Region, March, 2013

York-Durham Aphasia Centre, January, 2013

Toronto Western Neuroimaging Rounds, October, 2012

Northwestern University, Evanston, IN, June, 2012

Baycrest Hospital, Toronto, Psychiatry Rounds, February, 2012

Hospital for Sick Children, Toronto, October, 2011

Baycrest Hospital, Toronto, Neurology Rounds, October, 2011

Rotman Research Institute, Toronto, September, 2011

University of Toronto, Ebbinghaus Symposium, September, 2011

Dalhousie University, Halifax, NB, July, 2010

Rotman Institute, Toronto, ON, June, 2010

McGovern Institute at MIT, May, 2010

University of Washington, Seattle, WA, March, 2010

University of Maryland, College Park, MD, November, 2008

Moss Rehab Institute, Philadelphia, PA, October, 2008

Washington Speech and Hearing Discussion Group, Bethesda, MD, May, 2007

**Guest course lectures:**

*Imaging in Neurorehabilitation,* University of Toronto, 2011

*Neuroimaging for Rehabilitation Sciences,* University of Toronto, Cognitive Rehabilitation Neuroscience: Basic Science to Clinical Applications, 2023, 2024

*Neuroimaging for Speech-Language Pathology,* University of Toronto, Aphasia, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

*Neuroimaging investigations of aphasia.* University of Toronto, Adult Speech and Language Disorders, 2021, 2022, 2023, 2024.

*Introduction to multi-level models for experimental psychologists.* University of Toronto, Experimental Methods in Human Factors Research, 2021, 2022, 2023.

*Aphasia and Recovery,* Translational Neuroscience, University of Maryland, 2010

*Neuroimaging in Aphasia*, Speech and Language Pathology Seminar, University of Maryland, 2009

*Philosophy of Neuroscience*, Principles of Neuroscience, Yale University, 2005.

*Networks and Language*, Systems Neuroscience, Harvard University, 2002.

**Media appearances:**

Print/online interview, Toronto Star, June 28, 2024. This common trait is a leading risk factor for dementia. It is easily treated, experts say.

https://www.thestar.com/life/health-wellness/this-common-trait-is-a-leading-risk-factor-for-dementia-it-is-easily-treated-experts/article\_9c4ef356-347d-11ef-9123-23cc986e2814.html

Print/online coverage. Toronto Star., March 20, 2024. This common trait could be an early warning sign of dementia, Toronto researchers discover. https://www.thestar.com/news/canada/this-common-trait-could-be-an-early-warning-sign-of-dementia-toronto-researchers-discover/article\_4c997236-e51e-11ee-bbee-93e0404e146e.html

Radio interview: Kelly Cutrara show. March 20, 2024. Coverage of study linking talking speed to cognitive health.

Radio interview: CBC Morning North with Markus Schwabe, “Meet the Anishinaabemowin speakers preserving their language for the next generation.” March 21, 2022. https://www.cbc.ca/listen/live-radio/1-41-morning-north/clip/15901776-meet-anishinaabemowin-speakers-preserving-language-next-generation

Print/online coverage: Discover Magazine. When COVID-19 'Brain Fog' Hit, They Turned to a Language App. Feb 1, 2022. https://www.discovermagazine.com/mind/when-covid-19-brain-fog-hit-they-turned-to-a-language-app

Radio interview: CBC’s Quirks and Quarks. “The Origins of Handedness.” Dec. 31, 2021

<https://www.cbc.ca/radio/quirks/jan-1-our-annual-holiday-listener-question-show-1.6295556>

Television/online coverage: CTV National News. “Learning another language is good for your brain, even if you don't become fluent: study.” Oct. 25, 2021.

[https://www.ctvnews.ca/health/learning-another-language-is-good-for-your-brain-even-if-you-don-t-become-fluent-study-1.5637828
(Numerous other online articles about the same study)](https://www.ctvnews.ca/health/learning-another-language-is-good-for-your-brain-even-if-you-don-t-become-fluent-study-1.5637828%28Numerous%20other%20online%20articles%20about%20the%20same%20study%29)

Television interview: CTV National News, “Electric stimulation 'a promising advancement' for reversing memory loss.” April 20, 2019

<https://www.ctvnews.ca/health/electric-stimulation-a-promising-advancement-for-reversing-memory-loss-1.4388758>

Newspaper column: Toronto Star, “Can brain stimulation be used to treat neurodegenerative disorders?” July 30, 2018

Radio Interview: Zoomer Radio, “Alzheimer’s Disease – Latest Research and Treatments.” Jan. 29, 2015

Magazine interview: Owl Magazine, “Extreme Brains.” Dec. 18, 2012.

Television interview: Global TV, 16x9 The Bigger Picture, “Word Play.” May 7, 2012.

**Trainee Supervision**

**Postdoctoral Fellows**

Graham Flick, Ph.D. Sept. 2023-Present. Role: Equal co-supervisor.

Topic: Neural basis of memory for Object Features.

Alica Rogojin, Ph.D. Sept. 2022-Dec. 2023. Role: Primary Supervisor

Topic: Neurophysiological bases of interhemispheric interaction. Current Position: Research Scientist, Multi-Health Systems, Inc.

John De Grosbois, Ph.D. Oct. 2019-Oct. 2021. Role: Primary Supervisor

Topic: Physiological changes associated with therapy for stroke-related hand impairment.

Current Position: Data Scientist, KPMG.

Abdullah Mosabbir, Ph.D. Feb. 2019-Dec. 2022. Role: Co-supervisor with Dr. Lee Bartel.

Topic: Physiological effects of vibrotactile stimulation applied to neurological disease.

Current Position: Researcher, KKT Inc.

Priyanka Shah-Basak, Ph.D. Jan. 2017-May 2019. (Scientific Associate) Role: Primary Supervisor.

Current Position: Assistant Professor, Medical College of Wisconsin

Topic: Abnormal resting state activity in stroke and dementia, physiological effects of brain stimulation on pathological activity.

Careesa Liu, Ph.D. Sept. 2019 – May 2021. Role: Co-supervisor with Dr. Allison Sekuler.

Current Position: Senior Researcher, Myant Inc.

Topic: Blink-related oscillations across the aging spectrum.

Aneta Kielar, Ph.D. Sept. 2011-Aug. 2016. Role: Primary Supervisor.

Current Position: Assistant Professor, University of Arizona, Dept. of Speech, Language, and Hearing Sciences.

Topic: Oscillatory neural activity related to language processing in healthy volunteers and patients with post-stroke and progressive aphasia.

Frank Oppermann, Ph.D. May 2012 – May 2013. Role: Primary Supervisor for short-term visiting fellowship (4 months + 2 months over the year). Current Position: Project Manager, Federal Ministry of Science and Education, Bonn, Germany.

Topic: Oscillatory neural activity involved in speech planning.

**Doctoral Students**

Tiana Hsi Wei. September 2018-Present. Role: Supervisor. Ph.D. program in Psychology, University of Toronto.

Grace Wang. September 2020-Present. Role: Supervisor. Ph.D. program in Psychology, University of Toronto.

Sabira Alibhai-Najarali. September 2021-Present. Role: Supervisor. Ph.D. program in Psychology, University of Toronto.

Ronald Chu. February 2014-December 2017. Role: Supervisor. Ph.D. program in Psychology, University of Toronto. Ph.D. Thesis: From right to left: Interhemispheric interactions while seeing words and hearing sentences.

Next position: Data Scientist, Compass Digital Labs, Toronto, ON.

Katie Fraser, Ph.D.. Sept. 2011-2016. Role: Joint supervisor with Dr. Graeme Hirst. Ph.D. program in Computer Science, University of Toronto. Ph.D. Completed. Thesis: Automatic Speech Processing for the Detection of Dementia. Present position: Research Officer, National Research Council of Canada, Ottawa, ON.

Nicolas Deom, January 2021 – Dec. 2021. Role: Outside project supervisor. Ph.D. program in Psychology, University of Toronto. Topic: Abnormal functional connectivity in stroke: linking electrophysiological and hemodynamic findings.

Philip Johnston, January 2020 – December 2020. Role: Outside project supervisor. Ph.D. program in Psychology, University of Toronto. Topic: Modelling abnormal electrophysiological activity in stroke patients.

Michael Bone, March 2016-Dec. 2016. Role: Outside project supervisor. Ph.D. program in Psychology, University of Toronto. Topic: Decoding of retinotopic location of visual stimulation from MEG responses.

Melissa Hebscher, January 2015-January 2016. Role: Outside project supervisor. Ph.D. program in Psychology, University of Toronto. Topic: MEG evaluation of neural effects of high-definition TDCS.

Buddhika Bellana, May 2014-January 2015. Role: Outside project supervisor. Ph.D. program in Psychology, University of Toronto. Topic: MEG evaluation of neural effects of theta burst TMS.

Kelly Cotosck, Dec. 2013-present. Role: Collaborator, outside committee member, host for scientific visit in 2016. Ph.D. in Psychology, University of Sao Paulo. Topic: Changes in language network organization related to age and literacy.

**Master’s Students**

Jessica Arsenault, MA. Oct. 2011-Aug. 2012. Role: Co-supervisor with Dr. Bradley Buchsbaum. M.A. Program in Psychology, University of Toronto. Thesis: Implicit and explicit effects of context on episodic auditory-verbal memory: A hybrid repetition-learning recognition paradigm. Current position: Scientific Officer, Heart and Stroke Foundation of Canada.

**Undergraduate Students (paid, excluding volunteers)**

Jiani Wu, Sept. 2024-present

Ramsha Mahmoud, May 2024-Aug. 2024, summer student

Kinkini Monaragala, May 2024-Aug. 2024, summer student

Korey Miller-Boyle, Sept. 2023-April 2024, co-op student

Alisha Ahmed, May 2023-Aug. 2023, summer student

Matea Skenderija, May 2023-July 2023, summer student

Clair Shao, May 2023-Auguest 2023, summer student

Farhan Bin Faisal, Sept. 2022-April 2023, co-op student

Si Yuan Pan, May 2022-Aug 2022, summer student

Madeline Heleno, May 2022-Aug 2022, summer student

Aarzoo Aarya, May 2022-Aug 2022, summer student

Cayley Genereux, May 2022-Aug 2022, SROP student (canadasrop.ca)

Jennifer Shao, Sept. 2021-April 2022, co-op student

Tehya Quachegan, May 2021-Aug 2021, SROP student (canadasrop.ca)

Dana Kulzhabayeva, May 2021-Aug 2021, summer student

Matthew Hawken, May 2021-Aug 2021, summer student

Cleo Page, May 2021-Aug 2021, summer student

Lathushikka Canthiya, Sept. 2020-Aug 2021, co-op student

Anna Le, Sept. 2019-Jan. 2020, co-op student

Kiah Spencer, May 2020-Aug 2020, summer student

Alina Gubanova, May 2019-Aug 2019, summer student

Karen Barboza, May 2019-Aug 2019, summer student

Abbie Lai, May 2018-Aug 2018, summer student

Maryam Yossofzai, May 2018-Aug 2018, summer student

Sabrina Armstrong, May 2017-Aug 2017, summer student

Gayatri Sivaratnam, May 2016-Aug 2016, May 2017-Aug 2017, summer student

Alex Francois-Nienaber, May 2015-Aug 2015, summer student

Alexandra Silberberg, May 2014-Aug 2014, summer student

Rosie Leigh, B.A. May 2011-Aug. 2011, summer student

**Undergraduate Students (course research)**

Kinkini Monogarala, Sept. 2024-May 2025. Role: Primary supervisor for senior thesis. University of Toronto.

Celina Abad, Sept. 2024-May 2025. Role: Primary supervisor for senior thesis. University of Toronto.

Amy Abid, Sept. 2024-May 2025. Role: Primary supervisor for senior thesis. University of Toronto.

Farhan Bin Faisal, Sept. 2023-May 2024. Role: Primary supervisor for senior thesis. University of Toronto.

Claire Shao, May 2023-Aug. 2023. Role: Primary supervisor for Undergraduate research award “University of Toronto Excellence Award.”

Madeline Heleno, Sept. 2022-Aug. 2023. Role: Primary supervisor for senior thesis. McMaster University.

Maria Fahim, Sept.2021-May 2022. Role: Primary supervisor for course research in “Human Biology,” University of Toronto.

Mimi Li, Sept.2021-May 2022. Role: Primary supervisor for course research in “Human Biology,” University of Toronto.

Kiah Spencer, Sept. 2020-May 2021. Role: Primary supervisor for undergraduate thesis research, University of Toronto Scarborough. Thesis: Quantitative Relationships between Neuropsychological Test Performance and Naturalistic Speech Characteristics.

Beauty Das. Sept. 2019-May 2020. Role: Primary supervisor for undergraduate thesis research, University of Toronto Scarborough. Thesis: Quantitative Assessment of Handedness and Cerebral Lateralization.

Catherine Li, Sept. 2015-May 2016. Role: Primary supervisor for course research in “Human Biology,” University of Toronto.

**ACADEMIC SERVICE**

Leader, Research Workshop “MEG: What is it good for?” Baycrest, July 11, 2024.

Leader, EEG Working Group, Toronto Dementia Research Alliance, May 2024-present.

Research Ethics Board, Baycrest Hospital, 2021-present.

Member, Collaboration of Aphasia Trialists (CATs) Trials for Aphasia Panel (TAP). April 2024-present.

Leader, Research Workshop “Introduction to laboratory instrumentation for cognitive neuroscience.” Baycrest, November 23, 2023.

Lecturer, Research Workshop on Magnetoencephalography, Baycrest, Jan. 2022. “Pipelines for analysis with third-party software.”

Baycrest Site Leader, Canadian Partnership for Stroke Recovery. June 2016-March 2023

Rotman Research Institute Equity, Diversity, and Inclusivity Committee, April 2020-present.

Science Officer, Centre for Aging and Brain Health Innovation, January 2018-Present

Seneca College Behavioural Sciences Program Advisory Committee, 2020-present

Research Ethics Board, University of Toronto Health Sciences, 2013-2021.

New Frontiers Research Fund Grant Review Panel, August 2019

CIHR Grant Review Panel, Behavioural Sciences B, December 2018, November 2019

Search Committee for VP Research, Baycrest, April 2016-Aug 2016

Co-chair, Organizing Committee, Rotman Research Institute Annual Research Conference, *Brain Plasticity and Neurorehabilitation*. 2013.

Co-chair, Organizing Committee, Rotman Research Institute Annual Research Conference, *Traumatic Brain Injury and Concussion*. 2017.

Co-chair, Organizing Committee, Rotman Research Institute Annual Research Conference, *Aging & Brain Health: Mental Health and Well-being*. 2020.

Co-chair, Organizing Committee, Rotman Research Institute Annual Research Conference, *Aging & Brain Health: The Vascular System and the Aging Brain*. 2023.

Research Ethics Board, Determinants of Community Health, University of Toronto Medical School, 2014.

Leader, Research Workshop “Word Nerd 101 - Methodological considerations for linguistic stimuli in psychology and neuroscience experiments.” Baycrest, October 2018.

Leader, Research Workshop on Magnetoencephalography, Baycrest, March 2013, April 2013, Jan 2016, Jan 2020

Leader, Research Workshop on Transcranial Magnetic Stimulation, April 2015; February 2019

Leader, Research Workshop on Brain Stimulation, Canadian Partnership for Stroke Recovery annual trainee course, November 2019.

Search Committee, Psycholinguistics professorship, University of Toronto – Scarborough, Dept. of Psychology and Centre for French and Linguistics, Feb-May 2016

Judge, Undergraduate Science Case Competition, University of Western Ontario, November, 2014

**Student Committees**

Norna Abbo, M.Sc. committee, Dept. Biomedical Engineering, University of Toronto, April 2024-.

Savannah Tremblay, Ph.D. committee, Dept. Psychology, University of Toronto, April 2023-.

Joannah Chen, M.Sc. committee, Dept. Biomedical Engineering, University of Toronto, Sept. 2023-.

Xiaole Zhong, Ph.D. qualifying exam examiner, Dept. Medical Biophysics, University of Toronto, February 2023

Prisca Hsu, M.Sc. thesis appraiser, Institute of Medical Sciences, University of Toronto, May 2023

Narges Moradi, Ph.D. defence external examiner, Dept. Biomedical Engineering, University of Calgary, Expected. April 2023

Cricia Rinchon, Ph.D. defence internal examiner, Institute of Medical Sciences, University of Toronto, March 2023

Ilya Demchenko, Ph.D. Committee, Institute of Medical Sciences, University of Toronto, Feb. 2023-

Hannah Van Lankveld, Ph.D. Committee, Dept. Biomedical Physics, University of Toronto, Feb. 2023-

Cindy Nguyen, M.Sc. Committee, Rehabilitation Sciences Institute, University of Toronto, Oct. 2022-

Jessica Schultz, M.A. defence internal examiner, Institute of Biomedical Engineering, University of Toronto, Sept. 2022-

Sarah Sino, M.A. Committee, Institute of Medical Science, University of Toronto, Aug. 2022-

Brendan Brady, Ph.D. defence external examiner, Dept. Physics, Dalhousie University, Aug. 2022.

Nasem Raies, M.A. Committee, Institute of Medical Science, University of Toronto, June 2022.

Philip Johnston, Ph.D. Committee, Psychology, University of Toronto. Defense expected, 2023

Kieran Wheatley, M.A. Committee, Rehabilitation Sciences Institute, University of Toronto. Defense expected, 2022.

Ruofeng Wang, M.A. Committee, Psychology, University of Toronto. Defense: Oct. 21, 2021

Shouyu Ling, Ph.D. Committee, Psychology, University of Toronto. Defense: March 24, 2023

Sandra Pacione, Ph.D. Committee, Psychology, University of Toronto. Defense: June, 2021

Raheleh Saryazdi, Ph.D. Committee, Psychology, University of Toronto. Defense: August, 2021

Arunan Srikanthanathan, M.A. Committee, Insitute of Medical Sciences, University of Toronto. Defense, 2023.

Fu Te Wong, M.A. Committee, Insitute of Medical Sciences, University of Toronto. Defense expected, 2023.

Emily Alexander, M.A. Committee, Psychology, University of Toronto. Defense: September, 2019

Nicholas Diamond, Ph.D. Committee, Psychology, University of Toronto. Defense: August, 2019

James Saravanamuttu, M.A. Committee, Insitute of Medical Sciences, University of Toronto. Defense: June, 2019

Hannah Marlatte, M.A. Committee, Psychology, University of Toronto. Defense: June, 2019

Renante Rondina, Ph.D. Committee, Psychology, University of Toronto. Defense: January, 2019

Foad Taghdiri, M.A. Committee, Insitute of Medical Sciences, University of Toronto. Defense: August, 2017

Chair, Final Oral Exam, Jun Ku Chung, Dept. Nutritional Sciences, Univ. Toronto, April 2014

Chair, Final Oral Exam, Andre Dias, Dept. Nutritional Sciences, Univ. Toronto, April 2014

**Commercial partnerships**

Winterlight Labs (AI software company), Toronto, ON. Board of Advisors. Consulting on the development of technology to detect and quantify cognitive impairment based on automated analysis of natural speech. June 2016-present. Publications: Fraser et al., 2014, Cortex; Fraser et al., 2015, J. Alzheimer’s Disease; Wei et al., 2024, Aging, Neuropsychology, and Cognition.

iRegained Inc (hand rehabilitation device), Sudbury, ON. Ongoing research collaborations and joint funding for research on hand function therapy in stroke patients.

Interaxon, Inc. (portable EEG company), Toronto, ON. Consulting on the use of portable EEG technology for monitoring brain health in seniors at risk of dementia. May 2017-May 2019. Pilot project with the Ontario Neurodegenerative Disease Research Initiative (ONDRI), Ontario Brain Institute.

Brainsway Inc. (TMS hardware manufacturer), Jerusalem, Israel. Co-principal investigator on clinical trial and biomarker study of deep TMS in the treatment of dementia with concomitant depression. Grant awarded from CABHI, January 2018. Publications: Hodzic-Santor et al., 2020a, 2020b

Duolingo Inc. (Language learning software company). Principal investigator on study of the cognitive benefits of second language acquisition in older adults. Grant awarded from CABHI, January 2018. Publication: Meltzer et al., 2021, Aging, Neuropsychology, and Cognition.

Lingraphica Inc. (Aphasia rehabilitation software company). Principal investigator on completed telerehabilitation grant from the Canadian Partnership for Stroke Recovery. Publication: Meltzer et al., 2017, Aphasiology.

Cogniciti (Computerized cognitive testing). R&D Advisory Board Member. September 2018-present.