

**Taylor W. Schmitz**  
*Curriculum Vitae*

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## EDUCATION

- 2006 - **University of Toronto, Toronto, ON, Canada**  
Ph.D., Psychology (Brain and behavior); Program in Neuroscience  
Advisors: Professors Eve De Rosa and Adam Anderson
- 1998 - 2002 **University of Wisconsin, Madison, WI, USA**  
BSc Psychology (with honors)

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## POSITIONS HELD

- 2002 - 2006 **University of Wisconsin Medical School / VA Medical Center, Madison, WI, USA**  
Neuropsychology & Neuroimaging lab  
Research Specialist, with Sterling Johnson, PhD
- 2001 - 2002 **University of Wisconsin Medical School, Madison, WI, USA**  
Wisconsin Psychiatric Institute and Clinics (WISPIC)  
Research Assistant, with Teri Woods, PhD
- 2000 - 2001 **University of Wisconsin, Madison, WI, USA**  
**Department of Psychology**  
Research Assistant, with Morton Ann Gernsbacher, PhD

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## AWARDS AND GRANT FUNDING

- Vanier NSERC Scholarship, Fall 2009 – Spring 2012
- Ontario Graduate Scholarship, Fall 2009; Declined
- University of Toronto Neuroscience Program travel award (Society for Neuroscience), Fall 2008
- Ontario Graduate Scholarship, Fall 2007
- University of Toronto Graduate Fellowship (Psychology), Fall 2006 – Spring 2007
- Gilchrist Award, UW—Madison Psychology Department, Spring 2001

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## PUBLICATIONS (*h-index* = 14)

17. Menon M, **Schmitz TW**, Anderson AK, Graff A, Korostil M, Mamo D, Gerretsen P, Addington J, Remington G, Kapur S. (2011). Exploring the neural correlates of delusions of reference. *Biological Psychiatry*, 70, 1127-33.
16. **Schmitz TW**, Cheng FH, De Rosa E (2010). Failing to ignore: paradoxical neural effects of perceptual load on early attentional selection in normal aging. *Journal of Neuroscience*, 30, 14750-8.
15. **Schmitz TW**, De Rosa E, Anderson AK (2009). Opposing influences of affective state valence on visual cortical encoding. *Journal of Neuroscience*, 29, 7199-207.

14. Trivedi MA, **Schmitz TW**, Ries ML, Hess TM, Fitzgerald ME, Atwood CS, Rowley HA, Asthana S, Sager MA, Johnson SC (2008). fMRI activation during episodic encoding and metacognitive appraisal across the lifespan: risk factors for Alzheimer's disease. *Neuropsychologia*, 46, 1667-78.
13. Johnson SC, **Schmitz, TW**, Asthana S, Gluck MA, Myers C (2008). Associative Learning Over Trials Activates the Hippocampus in Healthy Elderly but not Mild Cognitive Impairment. *Aging, Neuropsychology, and Cognition*, 15, 129-45.
12. Ries ML, Jabbar BM, **Schmitz, TW**, Trivedi MA, Gleason CE, Carlsson CM, Rowley HA, Asthana S, Johnson SC (2007). Anosognosia in mild cognitive impairment: Relationship to activation of cortical midline structures involved in self-appraisal. *JINS*, 13, 450-61
11. **Schmitz, TW**, Johnson, SC (2007). Relevance to self: A brief review and framework of neural systems underlying appraisal. *Neuroscience and Biobehavioral Reviews*, 31, 585-96.
10. Trivedi MA, Wichmann AK, Torgerson BM, Ward MA, **Schmitz TW**, Ries ML, Kosciak RL, Asthana S, Johnson SC (2006). Structural MRI discriminates individuals with Mild Cognitive Impairment from age-matched controls: A combined neuropsychological and voxel based morphometry study. *Alzheimer's and Dementia*, 2, 296-302.
9. Gleason, CE, **Schmitz, TW**, Hess, T, Kosciak, RL, Trivedi, MA, Ries ML, Carlsson CM, Sager, MA, Asthana S, Johnson, SC (2006). Hormone effects on fMRI and cognitive measures of encoding: importance of hormone preparation. *Neurology*, 67, 2039-41.
8. Johnson SC, **Schmitz, TW**, Trivedi MA, Ries ML, Torgerson BM, Carlsson CM, Asthana S, Hermann BP, Sager MA (2006). *Journal of Neuroscience*, 26, 6069-6076.
7. Trivedi, MA, **Schmitz, TW**, Kawahara-Baccus, TN, Ries, ML, Sager, MA, Hermann, BP, Asthana, S, Johnson, SC (2006). Reduced hippocampal activation during episodic encoding in middle-aged individuals at genetic risk for Alzheimer's Disease: a cross-sectional study. *BMC Medicine*, 4, open access.
6. **Schmitz, TW**, Johnson, SC (2006). Self-appraisal decisions evoke dissociated dorsal—ventral aMPFC networks. *Neuroimage*, 15, 1050-1058
5. Johnson, SC, **Schmitz, TW**, Moritz, CH, Meyerand, ME, Rowley, HA, Alexander, AL, Hansen, KW, Gleason, CE, Carlsson, CM, Ries, ML, Asthana, S, Chen, K, Reiman, EM, Alexander, GE (2006). Activation of Brain Regions Vulnerable to Alzheimer's Disease: The Effect of Mild Cognitive Impairment. *Neurobiology of Aging*, 27, 1604-1612.
4. **Schmitz, TW**, Rowley, HR, Kawahara-Baccus, TN, Johnson, SC (2006). Neural correlates of self-evaluative accuracy after traumatic brain injury. *Neuropsychologia*, 44, 762-773.
3. Ries, ML, **Schmitz, TW**, Kawahara-Baccus, TN, Torgerson, BM, Trivedi, MA, Johnson, SC (2006). Task-dependent posterior cingulate activation in mild cognitive impairment. *Neuroimage* 29, 485-492.
2. Johnson, SC, **Schmitz, TW**, Kawahara-Baccus, TN, Rowley, HR, Alexander, AL, Lee, J, Davidson, RJ (2005). The Cerebral Response During Subjective Choice With and Without Self-Reference. *Journal of Cognitive Neuroscience*, 17, 1897-1906.
1. **Schmitz, TW**, Kawahara-Baccus, TN, Johnson, SC (2004). Metacognitive evaluation, self-relevance, and the right prefrontal cortex. *Neuroimage*, 22, 941-947.

## INVITED TALKS

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6. **Schmitz, TW**, Pun, C, Ferber, S, Anderson, AK, De Rosa, E (2011). Predictive coding and feature-based attention are dissociable cortical feedback signals for perceptual inference. Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.
5. De Rosa, E, Dixon, ML, Anderson, AK, **\*Schmitz, TW** (2011). Age-related changes in top-down modulation of extrastriate cortical push-pull discriminatory signal. \*Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.

4. **Schmitz, TW**, Dixon, ML, Anderson, AK, De Rosa, E (2010). Manipulations of perceptual load reveal age-related differences in extrastriate push-pull discriminatory signal. Nanosymposium presenter, Society for Neuroscience, San Diego, USA.
3. **Schmitz, TW**, Dixon, ML, Anderson, AK, De Rosa, E (2009). The influence of physical and affective salience on visuocortical processing. Nanosymposium presenter, Society for Neuroscience, Chicago, USA.
2. **Schmitz, TW**, De Rosa, E, Anderson, AK (2008). Emotional states differentially modulate the scope of attentional 'spotlight' in younger and older adults. Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.
1. **Schmitz, TW**, Cheng, F, De Rosa, E. (2007). Neural evidence of unintentional encoding of irrelevant information in normal ageing. Nanosymposium presenter, Society for Neuroscience, San Diego, USA.

## POSTER PRESENTATIONS

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20. **Schmitz, TW**, Dixon, ML, Anderson, AK, De Rosa, E (2010). Attention to affective stimuli abolishes age-related susceptibility to unattended information. Organization for Human Brain Mapping, Barcelona, Spain.
19. \*Dixon, ML, **Schmitz, TW**, De Rosa, E (2009). Aging and Selective Attention: Modulating the Salience of Signal and Noise. American Psychological Association, Toronto, Canada. \*Anne Anastasi Student Recognition Award.
18. **Schmitz, TW**, De Rosa, E, Anderson, AK (2008). Positive and negative emotion alters the distribution of the attentional spotlight. Cognitive Neuroscience Society, San Francisco, USA.
17. **Schmitz, TW**, Adamo, M, De Rosa, E (2007). Distinct frontal and posterior networks facilitate changes in selective attention to irrelevant information. Cognitive Neuroscience Society, New York City, USA.
16. **Schmitz, TW**, Trivedi, MA, Ries, ML, Torgerson, BM, Kalmoe, KM, Johnson, SC (2006). Age related changes in neural signature across a large N-size healthy cohort. Organization for Human Brain Mapping, Florence, Italy.
15. **Schmitz, TW**, Atwood, CS, Johnson, SC (2005). Effective connectivity analysis of the ventral temporal lobe during novelty detection. Society for Neuroscience, Washington DC, USA
14. Johnson, SC, **Schmitz, TW**, Myers, CE, Gluck, MA (2005). Associative learning over trials activates the anterior hippocampus in healthy elderly but not mild cognitive impairment. Society for Neuroscience, Washington DC, USA
13. Gleason, CE, Trivedi, MA, **Schmitz, TW**, Ries, ML, Asthana, S, Johnson, SC (2005). Exposure to menopausal hormone therapy increases right hippocampal activation on a functional MRI verbal encoding task. Society for Neuroscience, Washington DC, USA.
12. Trivedi, MA, **Schmitz, TW**, Ries, ML, Kawahara-Baccus, TN, Torgerson, BM, Hermann, BP, Sager, MA, Ward, MA, Asthana, S, Johnson, SC (2005). The relationship between medial temporal atrophy and functional activation during memory encoding in middle-aged individuals at risk for Alzheimer's disease. Society for Neuroscience, Washington, DC.
11. Ries, ML, **Schmitz, TW**, Asthana, S, Johnson, SC (2005). Effective connectivity of the posterior cingulate cortex during episodic retrieval. Society for Neuroscience, Washington, DC.
10. **Schmitz, TW**, Johnson, SC (2005). Effective connectivity of neural processes underlying self-evaluation. Poster presented at Organization for Human Brain Mapping, Toronto, Canada.
9. Ries, ML, **Schmitz, TW**, Kawahara-Baccus, TN, Torgerson, BM, Trivedi, MA, Johnson, SC (2005). Task-dependent integrity of posterior cingulate activation in mild cognitive impairment. Organization for Human Brain Mapping, Toronto, Canada.

8. Trivedi, MA, **Schmitz, TW**, Kawahara-Baccus, TN, Ries, ML, Sager, MA, Hermann, BP, Asthana, S, Johnson, SC (2005). Reduced hippocampal activation during episodic encoding in middle-aged individuals at genetic risk for Alzheimer's Disease: a cross-sectional study. Organization for Human Brain Mapping, Toronto, Canada.
7. Pereira, AA, **Schmitz, TW**, Kawahara-Baccus, TN, Johnson, SC (2005). Hippocampal activity during encoding in persons with traumatic brain injury. International Neuropsychological Society, St. Louis, USA.
6. Johnson, SC, **Schmitz, TW**, Kawahara-Baccus, TN, Jahn, NM, Gleason, CE, Carlsson, CM, Sager, MA, Rowley, HA, Moritz, CH, Meyerand, ME, Asthana, S (2005). MCI patients with better RAVLT Learning Performance have greater fMRI activation in the anterior hippocampus during an encoding task. 9<sup>th</sup> International Conference on Alzheimer Disease and Related Disorders, Philadelphia, USA.
5. Johnson, SC, Moritz, CH, Meyerand, ME, **Schmitz, TW**, Kawahara-Baccus, TN, Rowley, HA, Gleason, CE, Carlsson, CM, Sager, MA, Asthana, S. (2004). The fMRI cerebral response during encoding differs between mild cognitive impairment and controls. Society for Neuroscience, San Diego, USA.
4. **Schmitz, TW**, Kawahara-Baccus, TN, Asthana, S, Sager, M, Rowley, HR, Moritz, CH, Johnson, SC (2004). Apolipo-protein E genotype affects neural activation in the mesial temporal lobe of a cognitively normal cohort with familial history of AD. Poster presented at International Neuropsychological Society, Baltimore, USA.
3. Kawahara-Baccus, TN, **Schmitz, TW**, Carlsson, CM, Johnson SC (2004). Do Hemoglobin and Hematocrit levels affect fMRI activation? International Neuropsychological Society, Baltimore, USA.
2. Pereira, AA, **Schmitz, TW**, Kawahara-Baccus, TN, Johnson, SC (2004). Brain activation on fMRI and visuospatial memory ability: Functional neuroanatomic correlates of BVMT-R performance. International Neuropsychological Society, Baltimore, USA.
1. Johnson, SC, **Schmitz, TW**, Kawahara-Baccus, TN, Moritz, CH, Meyerand, ME (2003). Anterior Hippocampal Activation to Novel Items: A 3T MRI Study. Organization for Human Brain Mapping, New York, USA.

## **ADDITIONAL EDUCATION**

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- ERP Bootcamp (2012). Short Course by Steve Luck. University of Toronto.
- Software Carpentry (2010). Webinar. University of Toronto.
- Analysis and Function of Large-Scale Brain Networks (2010). Short course. Society for Neuroscience.
- Statistical Parametric Mapping (2005). Short Course. Yale University, New Haven, CT.
- Advanced fMRI methods (2004). Short Course. Medical College of Wisconsin (MCW), Milwaukee, WI.
- Neuroimaging Clinical Populations (2004). Short Course. Society for Neuroscience.
- FMRI methods (2003). Short Course. Organization for Human Brain Mapping.

## **TEACHING EXPERIENCE**

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University of Toronto (2006—present)

- Co-supervision of undergraduate research project (2012): Lev Tankelevitch\*  
 Thesis title: "Perceptual attention in aging: An eye-tracking study"  
 \*Awardee: NSERC Undergraduate Student Research Award (USRA)
- Co-supervision of undergraduate research project (2011): Nassim Collishaw  
 Thesis title: "Dissociating the influences of predictive coding and feature-based attention during object perception"  
 Finalist: NSERC Undergraduate Student Research Award (USRA)

- Learning and Plasticity (PSY260).  
Guest Lecture: “Emotional pathways in learning and memory”
- Teaching Assistantship (Spring 2009). Introduction to Development (PSY210).  
Guest Lecture: “Cortical development in children: The relationship between intelligence and plasticity”
- Teaching Assistantship (Fall 2008). Perception (PSY280).  
Guest Lecture: “Perception: The somatosensory system”
- Instructor (Summer 2008). FMRI Methods Short Course. The Hospital for Sick Children (Rovet lab).
- Teaching Assistantship (Spring 2008). Perception (PSY280).
- Training and supervision of undergraduate research assistants (2006-2008): Sharon Sadry, Fred Cheng
- Instructor (Fall 2007). FMRI Methods Short Course. University of Toronto (Affect and Cognition lab).
- Teaching Assistantship (Summer 2007). Introduction to Learning (PSY260).  
Guest Lecture: “Neuromodulatory pathways of selective attention”
- Teaching Assistantship (Spring 2007). Introduction to Learning (PSY260).  
Guest Lecture: “Neuromodulatory pathways of selective attention”
- Teaching Assistantship (Fall 2006). Physiology and Psychology of Emotion (PSY394).

University of Wisconsin Medical School / VA Medical Center (2002—2006)

- Training and supervision of undergraduate research assistants

Wisconsin Early Autism Project (2001—2002)

- Lead Therapist (2002). Applied Behavioral Analysis (caseload = 2).
- Line Therapist (2001). Applied Behavioral Analysis (caseload = 1).

## PROFESSIONAL ORGANIZATIONS

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- Organization for Human Brain Mapping
- Society for Neuroscience
- Cognitive Neuroscience Society

## AD HOC REVIEWER

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- NeuroImage
- Neuropsychologia
- Neuroscience and Biobehavioral Reviews
- Alzheimer’s and Dementia Journal
- Brain Research Bulletin
- Journal of Experimental Psychology

## PRESS COVERAGE

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- 16. **Schmitz TW**, Cheng FH, De Rosa E (2010). Failing to ignore: paradoxical neural effects of perceptual load on early attentional selection in normal aging. *Journal of Neuroscience*, 30, 14750-8.

Featured in: University of Toronto Media Room, ScienceDaily, The Brain Alchemist

- 15. **Schmitz TW**, De Rosa E, Anderson AK (2009). Opposing influences of affective state valence on visual cortical encoding. *Journal of Neuroscience*, 29, 7199-207.

Featured in: University of Toronto Media Room, Globe and Mail, Toronto Star, Canada AM, CBC Radio/Quirks and Quarks, Scientific American, Discovery Channel, New Scientist, Chicago Tribune, The Australian, The Times of India, MSNBC, USnews.com, Wired.com, WhyFiles.com, Times Online.