

## Curriculum Vitae

Jeremy B. Caplan, Ph.D.

### Address

Psychology Department  
Biological Sciences Building, University of Alberta  
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### Personal

Born: September 27, 1973, Durham, NC, USA  
Citizenship: Canada, USA

### Professional

- July 2012–present. Associate Professor, Psychology Department, University of Alberta, Edmonton, Alberta, Canada.
- July 2014–July 2015. Visiting Scientist, Institut für Systemische Neurowissenschaften, Universitätsklinikum, Hamburg-Eppendorf, Hamburg, Germany.
- July 2006–June 2012. Assistant Professor, Psychology Department, University of Alberta, Edmonton, Alberta, Canada.
- December 2002–June 2006. Postdoctoral Fellow, Rotman Research Institute, Toronto, Ontario, Canada. Postdoctoral Advisor: Anthony R. McIntosh.
- September 1996–November 2002. Graduate Student, Neurosciences Program, Volen National Center for Complex Systems, Brandeis University. Dissertation Advisor: Michael J. Kahana.
- September 1995–August 1996. Research Assistant. Neural Systems Group and NMR Center, Massachusetts General Hospital. Advisor: Jeffery P. Sutton.

## Education

- 2002 Ph. D., Brandeis University (Neuroscience. Dissertation: *Serial and navigational learning: behavior, theory and the roles of theta oscillations*).
- 1995 Sc. B., Brown University (Physics. Thesis: *Toward the development of a holographic star chart*).

## Current Grant Support

*Title: Memory for associations and order*

*Principal Investigator: **Jeremy B. Caplan***

*Agency: Natural Science and Engineering Research Council of Canada*

*Programme: Discovery*

*Amount: \$145 000*

*Funding Period: 2013/04/01–2018/03/31*

## Prior Support

*Title: High density sensory arrays for cognitive neuroscience research*

*Principal Investigator: Anthony Singhal*

*Co-Investigator: **Jeremy B. Caplan***

*Agency: Natural Science and Engineering Research Council of Canada*

*Programme: Research Tools and Instruments*

*Amount: \$37 447*

*Funding Period: 2013/03/01–2015/03/31*

*Title: Infrastructure Operating Fund for The brain-activity basis of human memory, attention and motor control*

*Co-Investigators: Anthony Singhal and **Jeremy B. Caplan***

*Agency: Canada Foundation for Innovation*

*Programme: Infrastructure Operating Fund*

*Amount: \$55 177*

*Funding Period: 2009/04/01–2014/03/31*

*Title: Cognitive and brain-activity basis of relational memory*

*Principal Investigator: **Jeremy B. Caplan***

*Agency: Natural Science and Engineering Research Council of Canada*

*Programme: Discovery*

*Amount: \$75 000*

*Funding Period: 2008/04/01–2013/03/31.*

*Title: Individual differences in reward-based memory enhancement*

*Principal Investigators:* Esther Fujiwara and **Jeremy B. Caplan**

*Agency:* Alberta Gambling Research Institute

*Amount:* \$9998

*Funding Period:* 2011/10/01–2012/09/30.

*Title: How do older adults resolve associative interference?: A search for effective strategies and early markers of neurodegenerative disease*

*Principal Investigator:* **Jeremy B. Caplan**

*Agency:* Alberta Centre on Aging

*Amount:* \$4000

*Funding Period:* March 1, 2010–Feb 28, 2011.

*Title: Interference in human memory: its cognitive and neural origins and mechanisms of resolution*

*Principal Investigator:* **Jeremy B. Caplan**

*Agency:* Alberta Ingenuity Fund

*Amount:* \$277 321

*Funding Period:* September 1, 2008–August 31, 2011.

*Title: The brain-activity basis of human memory, attention and motor control*

*Principal Investigators:* **Jeremy B. Caplan** and Anthony Singhal

*Agency:* Canada Foundation for Innovation

*Project #:* 13111

*Amount:* \$220 708

*Award Date:* June, 2007.

*Title: Open RF Head Coil for 4.7 T.*

*Principal Investigator:* Alan Wilman

*Agency:* AHFMR Multiuser Equipment grant

*Amount:* \$80 000

*Award Date:* May, 2007.

*Title: Startup Funds.*

*Principal Investigator:* **Jeremy B. Caplan**

*Agency:* Faculty of Sciences/Psychology Department, University of Alberta

*Amount:* \$120 000

*Funding Period:* July 1, 2006–June 30, 2009.

*Title: Development of an Integrative Computational Neuroscience Program to Understand Human Mental Function.*

*Principal Investigator:* Anthony R. McIntosh  
*Agency:* Canadian Institute of Health Research (CIHR) *CIHR/INMHA 54001*  
*Funding Period:* December 2, 2002–June 30, 2006.

*Title:* *The Cognitive Roles of Human Theta Oscillations.*  
*Principal Investigator:* **Jeremy B. Caplan**  
*Agency:* NIH/NIMH *Type:* F 31 MG12860  
*Project Period:* April 20, 2001–October 19, 2002.

*Title:* *IGERT Formal Proposal.*  
*Principal Investigator:* Eve Marder  
*Agency:* NSF/DGE *Type:* DGE-9972756  
*Project Period:* July 1 1999–June 30, 2000.

*Title:* *Neuroscience: from Channels to Behavior.*  
*Principal Investigator:* Irwin Levitan  
*Agency:* NIH/NIMH *Type:* 5 T 32 MH19929  
*Project Period:* February 1, 1998–June 30, 1999.

*Title:* *Graduate Funds.*  
*Agency:* Brandeis University  
*Period:* September 1, 1996–January 31, 1998.

Undergraduate Teaching and Research Assistantship  
Brown University, summer, 1994.

## Supervision and mentorship

### Graduate students

- Sucheta Chakravarty (Psychology PhD candidate), Sept. 2015–present.
- Kenichi Kato (Psychology MSc candidate), Sept. 2013–present.
- Yvonne Chen (Neuroscience PhD candidate), Jan. 2011–present. Bennet B. Murdock Award for best poster at the 2012 Context in Episodic Memory Symposium.
- Chris Madan (Psychology PhD, co-supervisor with Dr. Esther Fujiwara, Psychiatry), Sept. 2009–2013. Funding received: CIHR master's fellowship, QEII doctoral fellowship, DAAD graduate scholarship for study abroad (Germany), NSERC doctoral fellowship (CGS-D) and two Alberta Gaming Research Institute studentships.

- Yang Liu (Psychology PhD), Aug. 2008–2015. Funded by a NSERC doctoral fellowship and a QEII-D. Earned a MITACS Accelerate internship.
- Leanna Cruikshank (Neuroscience PhD candidate; co-supervisor with Dr. Anthony Singhal), Jan. 2008–June 2014. Funded by a QEII doctoral fellowship and Dissertation Fellowship.

**Graduate student lab rotations**

- Stanislau Hrybouski (Neuroscience), Winter, 2013.
- Michelle Chan (Psychology), Winter, 2011.
- Andrea Shafer (Neuroscience), Winter, 2009.
- Tara Whitten (Neuroscience), Fall, 2008.
- Farhang Nazer (Neuroscience), Fall, 2007.

**Undergraduate students**

- Supervisor to Zainab Sari, undergraduate student, September 2015–present.
- Supervisor to Tomi Ann Limcangco, undergraduate student, including Psychology 496, September 2015–present (awarded an Undergraduate Research Initiative stipend, summer, 2016).
- Supervisor to Angela Wan, undergraduate student, including Psychology 299, September 2015–present.
- Supervisor to Anam Wattoo, undergraduate student, including Psychology 496, September 2014–present.
- Supervisor to Avik Sharma, undergraduate student, including Psychology 496 and NSERC USRA, Jan 2014–2015.
- Supervisor to Yondu Mori, undergraduate student, Psychology Honours, 2013–2015.
- Co-Supervisor to Patricia (Ioana) Bacus, undergraduate student, including Psychology 496/8, Sept 2013–May 2014.
- Supervisor to Pardeep Kang, undergraduate student, including Psychology 496, May 2013–May 2014.
- Supervisor to Aditi Gupta, undergraduate student, including Psychology 496, May 2013–March 2014.

- Supervisor to Isha Ober, undergraduate student, Neuroscience Honours, including Psychology 496, January 2013–2015 (NSERC USRA, Summer, 2013).
- Supervisor to Brittany Hopkins, undergraduate student, Psychology, including Psychology 496, January 2013–May 2013.
- Supervisor to Kenichi Kato, undergraduate student, including Psychology 496, May 2012–August 2013.
- Supervisor to Monica Bottomley, undergraduate student, Neuroscience Honours, July 2012–May 2013.
- Supervisor to Ivan Witt, undergraduate student, Neuroscience Honours, Feb. 2012–present.
- Supervisor to Shrida Sahadevan, undergraduate student, Neuroscience Honours, Nov. 2011–2015 (awarded an Undergraduate Research Initiative stipend, summer, 2013).
- Supervisor to Nathan Ikuta, undergraduate student, Psychology 496, Winter, 2012.
- Supervisor to Jumjy Hemmerich, undergraduate student, including Psychology 496, Spring, 2010.
- Supervisor to Bevin Cheng, undergraduate research assistant, Feb. 2009–2012, including Psychology 299, 496 and 498 independent studies.
- Supervisor to Yvonne Chen, undergraduate student, 2009–2010, including Psychology 496 and 498 independent studies. Currently: Graduate student in Neuroscience with J. Caplan
- Supervisor to Jennifer Cole Andrews, undergraduate student, 2009–2010, including Psychology 496 and 498 independent studies.
- Supervisor to Kathy Boulton, undergraduate research assistant, Apr. 2007–Apr. 2008, including Psychology 496 independent study. Currently: Education after-degree, University of Alberta.
- Supervisor to Jingjing Song, undergraduate research assistant, Sept. 2008–May 2009, Psychology 299 independent studies.
- Supervisor to Enoch Ng, undergraduate research assistant, Jan. 2008–Aug. 2009, including Psychology 496 independent study.

- Supervisor to Rachel Burton, undergraduate psychology honours student, research assistant, Mar. 2007–April, 2010. Currently: Graduate student (Clinical Psychology, University of Saskatchewan, funding by a fellowship from the Alzheimer’s Society of Canada; turned down a CIHR master’s fellowship)
- Supervisor to Michelle Chan, undergraduate research assistant, Mar. 2007–Aug. 2009, including Psychology 496 independent studies and including funding from Canada Summer Jobs (summer 2007) and NSERC USRA (summer 2008). Currently: Graduate student (Dr. A. Singhal, UofA Psychology), funded by an NSERC fellowship.
- Supervisor to Adam Hughes, undergraduate research assistant, Oct. 2006–Aug. 2009.
- Supervisor to Chris Madan, undergraduate research assistant, Oct. 2006–Aug. 2009, including Psychology 496 and 498 independent studies and including funding from Canada Summer Jobs (summer 2007) and Summer Temporary Employment Program (summer 2008). Currently: Graduate student in Psychology with J. Caplan and E. Fujiwara.
- Supervisor to Mayank Rehani, undergraduate research assistant, Oct. 2006–Aug. 2009, including Psychology 496 independent studies and including funding from Canada Summer Jobs (summer 2007).
- Supervisor to Darren Bedwell, research assistant, Oct. 2006–Oct. 2008, including funding from Summer Temporary Employment Program (summer 2007).
- Co-supervisor to Mackenzie Glaholt, Research Assistant, The Rotman Research Institute (December 2002–August 2004) and Graduate Student, University of Toronto (September 2004–June 2006). Currently: Postdoctoral fellow at University of California at San Diego.
- Co-supervised Signe Bray, Research Assistant, The Rotman Research Institute, September 2003–August 2004. Subsequently: Graduate Student at Caltech.
- Co-supervised Ehren Newman, Undergraduate Student, Brandeis University (currently Graduate Student at Princeton University)
- Supervisor to Rena Walles, Summer Undergraduate Student, summer, 2001.
- Supervisor to Stephanie Killian, Summer High School Research Intern, summer, 1999, Brandeis University.

### Research Assistants

- Isabel Lek, research assistant, May 2010–May 2011.
- Stan Hrybouski, research assistant, Sept 2010–April 2011.
- Anton Poon, research assistant, Jan–April, 2010.
- Bridgette Gerson, research assistant, June 2009–Oct 2009.
- Mark Hueppelsheuser, research assistant, Jan 2008–Mar 2009.

### Supervisory Committees

- Psychology MSc supervisory committee: Jonathan Kuziek (Dr. Kyle Mathewson), 2016–present.
- Neuroscience MSc supervisory committee: Melanie MacGillivray (Dr. Nikolai Malykhin), 2014–present.
- Psychiatry MSc supervisory committee: Michael Mazo (Dr. Kathleen Hegadoren), 2013–2014.
- Psychology PhD supervisory committee: Brian Dupuis (Dr. Michael Dawson), 2013–present.
- Psychology MSc supervisory committee: Lin Wang (Dr. Weimin Mou), 2012–present.
- Neuroscience MSc supervisory committee: Stanislau Hrybouski (Dr. Nikolai Malykhin), 2012–present.
- Neuroscience MSc supervisory committee: Anastasia Greenberg (Dr. Clayton Dickson), 2012–present.
- Psychology MSc supervisory committee: Ruoqing Zhou (Dr. Weimin Mou), 2011–present.
- Psychology MSc and PhD supervisory committee: Michelle Chan (Dr. Anthony Singhal), 2010–2016.
- Psychology MSc supervisory committee: Lisa Smithson (Dr. Elena Nicoladis), 2010–2014.
- Neuroscience MSc supervisory committee: Graeme Armstrong, 2009–2012.
- Psychology MSc supervisory committee: Tugba Uzer (Dr. Norman Brown), 2010–2012.



- Psychology PhD supervisory committee: Arjun Sharma (Dr. Clayton Dickson), 2008–2010.
- Neuroscience MSc and PhD supervisory committee: Tara Whitten (Dr. Clayton Dickson), 2008–2016.

### **Examination Committees**

- Linguistics PhD examiner: Georgie Columbus (Dr. Harald Baayen and Dr. Patrick Bolger), January, 2012.
- Neuroscience PhD examiner: Trisha Wolansky (Dr. Clayton Dickson), September 16, 2009.
- Neuroscience PhD examiner: Darren Clark (Dr. Fred Colbourne), September 17, 2009.
- Neuroscience MSc examiner: Gregory Silasi (Dr. Fred Colbourne), April, 2009.
- Linguistics PhD candidacy examiner: Georgie Columbus (Dr. Patrick Bolger), March, 2009.
- Psychology PhD external examiner: Andrew Gilbert (Dr. Suzanna Becker, McMaster University), November, 2008.
- Psychology MSc examining committee chair: Eric Legge (Dr. Marcia Spetch), September 5, 2008
- Psychology PhD candidacy examiner: Angela Auriat (Dr. Fred Colbourne), May 6, 2008
- Neuroscience PhD candidacy examiner: Trish Wolansky (Dr. Clayton Dickson), May 30, 2007
- Psychology PhD candidacy examiner: Emily Batty (Dr. Marcia Spetch), May 2, 2007
- Undergraduate Neuroscience Honours Examiner: Colin Casault (Dr. Clayton Dickson), Dec. 7, 2006

### **Grant reviewing**

1. AI-HS undergraduate summer studentship for the University of Alberta (university-level)

2. National Science Foundation/National Institutes of Health, “Collaborative Research in Computational Neuroscience,” panel member, 2006, 2009, 2011. Ad-hoc reviewer, 2008.
3. Israel Science Foundation (ad-hoc reviewer), 2010, 2011.
4. National Science and Engineering Research Council of Canada, “Discovery Grant” (ad-hoc reviewer), 2008, 2010, 2015.
5. Canadian Institutes of Health Research (ad-hoc reviewer), 2009. Stage 1 Project Scheme Competition review panel member, 2016.
6. National Science Foundation (ad-hoc reviewer), 2007.
7. Netherlands Organisation for Scientific Research (NWO) doctoral fellowship, ad-hoc reviewer, 2013.
8. Canada Foundation for Innovation, ad-hoc reviewer, 2013, 2015.

## **Referee for Journals Articles**

1. Acta Psychologica
2. American Journal of Psychology
3. Behavior Research Methods
4. BioMed Central Neuroscience
5. Brain Research
6. Canadian Journal of Experimental Psychology
7. Cerebral Cortex
8. Cognitive Computation
9. Cognitive Neurodynamics
10. Cognitive Neuroscience
11. Cognitive Psychology
12. Current Directions in Psychological Science
13. European Journal of Neuroscience
14. Experimental Brain Research
15. Hippocampus
16. Human Brain Mapping
17. Journal of Cognitive Neuroscience
18. Journal of Cognitive Psychology
19. Journal of Experimental Psychology: Learning, Memory, & Cognition

20. Journal of Memory and Language
21. The Journal of Neurophysiology
22. The Journal of Neuroscience
23. Journal of Neuroscience Methods
24. Memory
25. Memory & Cognition
26. Neurobiology of Aging
27. Neuropsychology
28. Neuroscience
29. Open Cybernetics and Systemics Journal
30. Open Statistics & Probability Journal
31. PLoS ONE
32. Progress in Neurobiology
33. Psychiatry Research
34. Psychological Review
35. Psychological Science
36. Psychonomic Bulletin & Review
37. Quarterly Journal of Experimental Psychology
38. Trends in Cognitive Science

### **Conference Reviewing Committees**

- The Organization for Human Brain Mapping
- The Organization for Computational Neurosciences
- The Rotman Research Institute Annual Conference

### **Other Committees**

- Graduate Scholarship Screening Committee member (Psychology), 2010–2014.

### **Events Organized**

- Joseph R. Royce Research Conference, University of Alberta: Co-Organizer, 2013, 2014.
- Computational Neuroscientists of Upper Canada, one-day symposium, theme: Memory. Toronto, March 10, 2005.

## Teaching

Courses Taught [3 h/week each]

- Psychology 375: Introduction to Cognitive Neuroscience, Winter, 2014, University of Alberta. [honours]
- Psychology 403/505: Cognitive Neuroscience of Memory, Fall, 2013, University of Alberta. [honours with distinction]
- Psychology 375: Introduction to Cognitive Neuroscience, Fall, 2013, University of Alberta.
- Psychology 375: Introduction to Cognitive Neuroscience, Winter, 2013, University of Alberta. [honours]
- Psychology 375: Introduction to Cognitive Neuroscience, Fall, 2012, University of Alberta. [honours]
- Psychology 403/505: Computational Memory Models, Fall, 2012, University of Alberta. [honours]
- Psychology 375: Introduction to Cognitive Neuroscience, Winter, 2012, University of Alberta.
- Psychology 403/505: Computational Memory Models, Winter, 2012, University of Alberta. [honours with distinction]
- Psychology 375: Introduction to Cognitive Neuroscience, Fall, 2011, University of Alberta. [honours]
- Psychology 403/505: Computational Memory Models, Winter, 2011, University of Alberta. [honours with distinction]
- Psychology 302: Introduction to Cognitive Neuroscience, Winter, 2011, University of Alberta.
- Psychology 403/505: Computational Memory Models, Winter, 2010, University of Alberta.
- Psychology 371: Neurobiology of Learning and Memory, Winter 2010, University of Alberta.
- Psychology 302: Introduction to Cognitive Neuroscience, Fall, 2009, University of Alberta. [honours]
- Psychology 403/505: Memory Models, Winter, 2009, University of Alberta. [honours with distinction]

- Psychology 371: Neurobiology of Learning and Memory, Winter 2009, University of Alberta. [honours]
- Psychology 302: Introduction to Cognitive Neuroscience, Fall, 2008, University of Alberta.
- Psychology 371: Neurobiology of Learning and Memory, Winter 2008, University of Alberta.
- Psychology 371: Neurobiology of Learning and Memory, Winter 2007, University of Alberta.
- Psychology 377: Human Neuropsychology, Fall 2006, University of Alberta.
- Teaching Assistant, Introductory Astronomy (Phsc 2b), 1996, Brandeis University.
- Teaching Assistant, Basic Physics II (Phys 11b), 1997, Brandeis University.
- Teaching Assistant, Introductory Astronomy (Phsc 2b), 1997, Brandeis University.

**Guest lectures**

- Advanced Topics in Neuroscience, PSYCO 574 (C. Dickson). Topic: Sleep and memory. 2014/01/21.
- Neurobiology of Learning and Memory, PSYCO 371 (C. Dickson). Topic: Interference theory and long-term retrieval in amnesia. 2011/11/08.
- Advanced Topics in Neuroscience, PSYCO 574 (A. Singhal). Topic: Non-synaptic association-learning in the brain. 2011/11/02.
- Introduction to Cognitive Neuroscience, PSYCO 302 (A. Singhal). Topic: Memory. 2010/10/14.
- Honors Seminar I, PSYCO 300 (K. Noels), topic: Free recall and amnesia. 2011/03/29.
- Introduction to Cognitive Neuroscience, PSYCO 302 (A. Singhal). Topic: Memory. 2010/10/14.
- Lifespan Developmental Psychology, PSYCO 223 (E. Nicoladis), Topic: Memory and early development. 2010/03/26.
- Methods & analysis of Neurophysiological time series data (C. Dickson), PSYCO 402/505. Topic: Wavelets and Analyzing Oscillations. 2008/02/28.

## Publications

(trainees are underlined)

- Burton, R. L., Lek, I. and **Caplan, J. B.** (in press). Associative independence revisited: competition between conflicting associations can be resolved or even reversed in one trial. *Quarterly Journal of Experimental Psychology*.
- Talmi, D., **Caplan, J. B.**, Richards, B. and Moscovitch, M. (2015). Long-term recency in anterograde amnesia. *PLoS ONE*, 10(6) e0124084.
- **Caplan, J. B.** (2015). Order-memory and association-memory. *Canadian Journal of Experimental Psychology*, 69(3), 221–232.
- **Caplan, J. B.**, Bottomley, M., Kang, P. and Dixon, R. A. (2015). Distinguishing rhythmic from non-rhythmic brain activity during rest in healthy neurocognitive aging. *NeuroImage*, 112, 341–352.
- **Caplan, J. B.**, Madan, C. R. and Bedwell, D. R. (2015). Item properties may influence item–item associations in serial recall. *Psychonomic Bulletin & Review*, 22(2), 483–489.
- Chen, Y. Y., Lithgow, K., Hemmerich, J. A. and **Caplan, J. B.** (2014). Is what goes in what comes out? Encoding and retrieval event-related potentials together determine memory outcome. *Experimental Brain Research*, 232(10), 3175–3190.
- Liu, Y. S., Chan, M. and **Caplan, J. B.** (2014). Generality of a congruity effect in judgements of relative order. *Memory & Cognition*, 42(7), 1086–1105.
- Cruikshank, L. C., **Caplan, J. B.** and Singhal, A. (2014). A perception-based ERP reveals that the magnitude of delay matters for memory-guided reaching. *Experimental Brain Research*, 232(7), 2087–2094.
- **Caplan, J. B.**, Boulton, K. L., and Gagné, C. L. (2014). Associative asymmetry of compound words. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 40(4), 1163–1171.
- **Caplan, J. B.**, Rehani, M. and Andrews, J. C. (2014). Associations compete directly in memory. *Quarterly Journal of Experimental Psychology*, 67(5), 955–978.
- Masuda, T., Russell, M. J., Chen, Y. Y., Hioki, K. and **Caplan, J. B.** (2014). N400 incongruity effect in an episodic memory task reveals different strategies for handling irrelevant contextual information for Japanese than European Canadians. *Cognitive Neuroscience*, 5(1), 17–25.

- Legge, E. L., Madan, C. R., Ng, E. T. and **Caplan, J. B.** (2012). Building a memory palace in minutes: equivalent memory performance in virtual and conventional environments using the Method of Loci. *Acta Psychologica*, *141*(3), 380–390.
- Madan, C. R., Fujiwara, E., Gerson, B. C. and **Caplan, J. B.** (2012). High reward makes items easier to remember, but harder to bind to a new temporal context. *Frontiers in Integrative Neuroscience*, *6*(61), 1–15.
- Cruikshank, L. C., **Caplan, J. B.** and Singhal, A. (2012). Human electrophysiological reflections of the recruitment of perceptual processing during actions that engage memory. *Journal of Vision*, *12*(6), 1–13.
- Madan, C. R., Lau, C. S. M., **Caplan, J. B.** and Fujiwara, E. (2012). Emotional arousal does not enhance association-memory. *Journal of Memory and Language*, *66*(4), 695–716.
- Hughes, A. M., Whitten, T. A., **Caplan, J. B.** and Dickson, C. T. (2012). BOSCO: a Better OSCillation detection method, extracts both sustained and transient rhythms from rat hippocampal recordings. *Hippocampus*, *22*(6), 1417–1428.
- Cruikshank, L. C., Singhal, A., Hueppelsheuser, M. and **Caplan, J. B.** (2012). Theta oscillations reflect a putative neural mechanism for human sensorimotor integration. *Journal of Neurophysiology*, *107*(1), 65–77. [21 citations (ISI)]
- Rehani, M. and **Caplan, J. B.** (2011). Interference and the representation of order within associations. *Quarterly Journal of Experimental Psychology*, *64*(7), 1409–1429.
- Whitten, T. A., Hughes, A. M., Dickson, C. T. and **Caplan, J. B.** (2011). A better oscillation detection method robustly extracts EEG rhythms across brain state changes: The human alpha rhythm as a test case. *NeuroImage*, *54*(2), 860–874.
- Madan, C. R., Glaholt, M. G. and **Caplan, J. B.** (2010). The influence of item properties on association-memory. *Journal of Memory and Language*, *63*(1), 46–63. [21 citations (ISI)]
- Jacobs, J., Korolev, I. O., **Caplan, J. B.**, Ekstrom, A. D., Litt, B., Baltuch, G., Fried I., Schulze-Bonhage, A., Madsen, J. R. and Kahana, M. J. (2010). Right-lateralized brain oscillations in human spatial navigation. *Journal of Cognitive Neuroscience*, *22*(5), 824–836. [17 citations (ISI)]

- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2009). EEG activity underlying successful study of associative and order information. *Journal of Cognitive Neuroscience*, 21(7), 1346–1364.
- Chan, M., Ross, B., Earle, G., and **Caplan, J. B.** (2009). Precise instructions determine participants' memory search strategy in judgments of relative order in short lists. *Psychonomic Bulletin & Review*, 16(5), 945–951.
- Caplan, P. J. and **Caplan, J. B.** (2009). *Thinking Critically about Research on Sex and Gender*, 3 ed. Allyn & Bacon: Boston, 168 pages.
- Talmi, D., Anderson, A. K., Riggs, L., **Caplan, J. B.** and Moscovitch, M. (2008). Immediate memory consequences of the effect of emotion on attention to pictures. *Learning & Memory*, 15(3), 172–182. [55 citations (ISI)]
- **Caplan, J. B.** and Glaholt, M. G. (2007). The roles of EEG oscillations in learning relational information. *NeuroImage*, 38(3), 604–616. [26 citations (ISI)].
- **Caplan, J. B.**, McIntosh, A. R. and De Rosa, E. (2007). Two distinct functional networks for successful resolution of proactive interference, *Cerebral Cortex*, 17(7), 1650–1663. [20 citations (ISI)]
- Newman, E. L., **Caplan, J. B.**, Kirschen, M. P., Korolev, I. O., Sekuler, R. and Kahana, M. J. (2007). Learning your way around town: How virtual taxicab drivers learn to use both layout and landmark information. *Cognition*, 104(2), 231–253. [29 citations (ISI)]
- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2006). Linking associative and serial list memory: pairs versus triples, *Journal of Experimental Psychology: Learning, Memory & Cognition*, 32(6), 1244–1265.
- **Caplan, J. B.**, Luks, T. L., Simpson, G. V., Glaholt, M. G. and McIntosh, A. R. (2006). Parallel networks operating across attentional deployment and motion processing: A multi-seed partial least squares fMRI study, *NeuroImage*, 29(4), 1192–1202.
- **Caplan, J. B.** (2005). Associative isolation: unifying associative and order paradigms. *The Journal of Mathematical Psychology*, 49(5), 383–402. [18 citations (ISI)]
- Ekstrom, A. D., **Caplan, J. B.**, Shattuck, K., Fried, I. and Kahana, M. J. (2005). Human hippocampal theta activity during virtual navigation, *Hippocampus*, 15(7), 881–889. [134 citations (ISI)]



- **Caplan, J. B.** and Caplan, P. J. (2005). The perseverative search for sex differences in mathematics ability. In: A. M. Gallagher and J. C. Kaufman, eds., *Gender differences in mathematics: an integrative psychological approach*, Cambridge: Cambridge University Press, 25–47.
- **Caplan, J. B.** (2004). Unifying models of paired associates and serial learning: insights from simulating a chaining model. *NeuroComputing*, 58–60, 739–743.
- Howard, M. W., Rizzuto, D. S., **Caplan, J. B.**, Madsen, J. R., Lisman J., Aschenbrenner-Scheibe, R., Schulze-Bonhage, A. and Kahana, M. J. (2003). Gamma oscillations correlate with working memory load in humans. *Cerebral Cortex*, 13(12), 1369–1374. [290 citations (ISI)]
- Ekstrom, A. D., Kahana, M. J., **Caplan, J. B.**, Fields, T. A., Isham, E. A., Newman, E. L. and Fried, I. (2003). Cellular networks underlying human spatial navigation. *Nature*, 425(6954), 184–188. [477 citations (ISI)]
- **Caplan, J. B.**, Madsen, J. R., Schulze-Bonhage, A., Aschenbrenner-Scheibe, R., Newman, E. L. and Kahana, M. J. (2003) Human theta oscillations related to sensorimotor integration and spatial learning. *Journal of Neuroscience*, 23(11), 4726–4736. [184 citations (ISI)]
- Kahana, M. J. and **Caplan, J. B.** (2002). Associative asymmetry in probed recall of serial lists. *Memory & Cognition*, 30(6), 841–849. [41 citations (ISI)]
- **Caplan, J. B.**, Kahana, M. J., Raghavachari, S. and Madsen, J. R. (2001). Distinct patterns of brain oscillations underlie two basic parameters of human maze learning. *Journal of Neurophysiology*, 86(1), 368–380. [112 citations (ISI)]
- Raghavachari, S., Kahana, M. J., Rizzuto, D. S., **Caplan, J. B.**, Kirschen, M. P., Bourgeois, B., Madsen, J. R. and Lisman, J. E. (2001). Gating of human theta oscillations by a working memory task. *Journal of Neuroscience*, 21(9), 3175–3183. [326 citations (ISI)]
- **Caplan, J. B.**, Kahana, M. J., Sekuler, R., Kirschen, M. and Madsen, J. R. (2000). Task dependence of human theta: the case for multiple cognitive functions. *NeuroComputing*, 32–33, 659–665.
- Kahana, M. J., **Caplan, J. B.**, Sekuler, R. and Madsen, J. (1999). Using intracranial recordings to study theta: Response to J. O’Keefe and N. Burgess (1999). *Trends in Cognitive Science*, 3(11), 406–407.

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## Manuscripts in Review/Revision

- Chen, Y. Y. and **Caplan, J. B.** (submitted). Rhythmic activity and individual variability in recognition-memory: theta oscillations correlate with performance whereas alpha oscillations correlate with event-related potentials.
- **Caplan, J. B.** and Madan, C. R. (submitted). Word-imageability enhances association-memory by increasing hippocampal engagement.
- Kato, K. and **Caplan, J. B.** (submitted). The brain’s representations may be compatible with convolution-based memory models.

- Klingmüller A., **Caplan, J. B.** and Sommer, T. (in preparation). Intrusions in episodic memory: reconsolidation or interference?

## Invited Lectures

- Memory for order. Banff Annual Seminar in Cognitive Science, Banff, AB, May, 2012.
- Is there a context-coding basis for paired associate learning? Context and Episodic Memory Symposium, Palm Beach, FL, USA, January 2-3, 2009.
- Are words remembered as Gestalts? Linguistics Colloquium, Linguistics Department, University of Alberta, November 14, 2008.
- Theta oscillations: mechanisms of learning or coordinating brain areas? Keynote, Centenary Neuroscience Symposium. Queen's University, Belfast, Northern Ireland, October, 28, 2008.
- Verbal Memory: connecting behaviour and brain activity. Psychology Department, University of Glasgow, March 2006, Glasgow, UK.
- Verbal memory: connecting brain activity and behavioral approaches. Psychology Department, University of Alberta, March 2006, Edmonton, AB, Canada.
- Verbal Memory: connecting behaviour and brain activity. Psychology Department, University of Warwick, February 2006, Warwick, UK.
- Verbal memory: connecting brain activity and behavioral approaches. Psychology Department, Columbia University, February 2006, New York, NY, USA.
- Human memory: Connecting brain activity with behaviour. NeuroInformatics Group, University of Edinburgh, August 2005, Edinburgh, UK.
- Human memory: Connecting brain activity with behaviour. MEG Group Meeting, F.C. Donders Centre for Cognitive Neuroimaging, August 2005, Nijmegen, Netherlands.
- Human memory: Connecting brain activity with behaviour. Bernstein Center for Computational Neuroscience Symposium, August 2005, Berlin, Germany.
- *Discussant*: Context and Brain Activity on Kahana and Norman. Symposium on Context and Human Memory, March 2005, Philadelphia, PA, USA.
- Connecting associative and list memory. Cognitive Lunch, University of Colorado at Boulder, February, 2005, Boulder, CO, USA.

- Memory for associations and lists across domains. Institute of Cognitive Science, University of Colorado at Boulder, February, 2005, Boulder, CO, USA.
- Unifying paired associates and serial learning. Ebbinghaus Empire meeting, February 2003, Toronto, ON, Canada.
- Theta oscillations and spatial navigation: analyzing rhythmic activity and its relationship to spatial cognition. Computational Neuroscientists of Upper Canada meeting, January 2003, Toronto, ON, Canada.
- Isolation: unifying associative and list memory. Symposium on Context and Human Memory, November 2003, Orlando, FL, USA.
- Exploring exploring: Intracranially recorded oscillations are linked to human virtual navigation. Sloan-Swartz conference, June 2002, Boston, MA, USA.
- Human theta oscillations during virtual navigation. Neurozentrum, Universität Freiburg, December 2001, Freiburg, Germany.
- Probing the cortical surface. Volen National Center for Complex Systems Annual Retreat, April 2000, Woods Hole, MA, USA.

## Presentations at Scientific Meetings

- **Caplan, J. B.** and Madan, C. R. (2016). Imageability may act via the hippocampus to enhance memory for word pairs. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- **Caplan, J. B.**, Burton, R. L., Rehani, M., Cole, J. A. and Lek, I. (2016). Associative independence revisited. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.
- **Caplan, J. B.** and Madan, C. R. (2016). Imageability may enhance pair-memory by leveraging the hippocampus. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.
- Chakravarty, S., Ober, I., Madan, C. R., Chen, Y. Y., **Caplan, J. B.** and Fujiwara, E. (2016). Feedback related negativity signals prediction error in a value-learning task involving many stimuli. *Alberta Gambling Research Institute*, Banff, AB, Canada.
- **Caplan, J. B.** and Madan, C. R. (2016). Stimulus properties may enhance association-memory by recruiting hippocampal activity. *Cognitive Neuroscience Society*, New York, NY, USA.

- Sommer, T. and Klingmüller, Angela and Caplan, J. B. (2015). Interference in episodic memory: reconsolidation or interference? *Society for Neuroscience*, Chicago, IL, USA.
- Kato, K. and **Caplan, J. B.** (2015). Is the constituent order fundamental or additional to the association memory? *Canadian Society for Brain, Behaviour and Cognitive Science*, Ottawa, ON, Canada.
- **Caplan, J. B.** and Madan, C. R. (2015). Does imagery enhance hippocampus-dependent memory by recruiting more hippocampal activity? *Spring Hippocampal Research Conference*, Taormina, Italy.
- Chen, Y. Y. and **Caplan, J. B.** (2014). Alpha, but not theta, oscillations covary with individual-differences recognition-memory. *Cognitive Neuroscience Society*, San Francisco CA, USA.
- Liu, Y. S. and **Caplan, J. B.** (2014). Chunking facilitates memory judgments of relative order. *Psychonomics*, Long Beach, CA.
- Kato, K. and **Caplan, J. B.** (2014). The relationship between memory for associations and memory for constituent order. *Society for Mathematical Psychology*, Quebec City, QC.
- Wianda, E., **Caplan, J. B.** and Ross, B. (2014). Neuromagnetic oscillations in working memory processes. *International Conference on Biomagnetism*, Halifax, NS.
- Ober, I., Madan, C. R., Chen, Y. Y. and **Caplan, J. B.** (2014). The Feedback Related Negativity may reflect changes in reward expectancy in learning of large sets of item values. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Kato, K. and **Caplan, J. B.** (2014). Memory for pairings and constituent-orders of verbal associations. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Sahadevan, S. S., Chen, Y. Y. and **Caplan, J. B.** (2014). The peg list method can support memory for associations. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Chen, Y. Y. and **Caplan, J. B.** (2014). Alpha desynchronization explains individual variability in recognition-memory but theta synchronization does not. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Liu, Y. S. and **Caplan, J. B.** (2014). Memory judgements of relative order and chunking. *Banff Annual Seminar in Cognitive Science*, Banff, AB.

- Kang, P. K., Bottomley, M. and **Caplan, J. B.** (2014). Alpha and anxiety. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Chen, Y. Y. and **Caplan, J. B.** (2014). Alpha, but not theta, oscillations explain individual-variability in event-related potentials linked to memory-outcome. *Cognitive Neuroscience Society*, Boston, MA, USA.
- Cruikshank, L. C., **Caplan, J. B.** and Singhal, A. (2014). ERP markers of perception and action reveal that the magnitude of delay matters for memory-guided reaching. *Cognitive Neuroscience Society*, Boston, MA, USA.
- Chen, Y. Y. and **Caplan, J. B.** (2013). Theta and alpha reactivating at retrieval to produce good recognition memory. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.
- Madan, C. R., Fujiwara, E., Gilliam, S. E. and **Caplan, J. B.** (2013). Enhanced memory due to reward value: Explicit memory effects may be mediated by attention, but implicit memory effects are not. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.
- Madan, C. R. and **Caplan, J. B.** (2013). Enhanced association-memory due to imagery, but without enhanced engagement of the hippocampus. *Canadian Association for Neuroscience*, Toronto, ON, Canada.
- Chen, Y. Y. and **Caplan, J. B.** (2013). Memory encoding and retrieval oscillations are related. *Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Cruikshank, L. C., **Caplan, J.B.** and Singhal, A. (2013). Lateralization of the N170 for actions that engage the ventral visual stream. *Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Madan, C. R., **Caplan, J. B.**, Fujiwara, E. and Sommer, T. (2013). Emotional arousal disrupts associative learning: Evidence from simultaneous fMRI and eyetracking. *Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Madan, C. R. and **Caplan, J. B.** (2012). Does imageability enhance memory for associations by increasing hippocampal engagement? *Federation of European Neuroscience Societies Forum of Neuroscience*, Barcelona, Spain.
- Cruikshank, L.C., Caplan, J.B., and Singhal, A. (2012). Neural correlates of perception during actions requiring memory. *Canadian Association for Neuroscience*, Vancouver BC, Canada.
- Chen, Y. Y., Lithgow, K., Hemmerich, J. A. and **Caplan, J. B.** (2012). Is what goes in what comes out? Encoding and retrieval ERP in recognition memory are related. *Cognitive Neuroscience Society*, Chicago IL, USA.

- Cruikshank, L., **Caplan, J. B.** and Singhal, A. (2012) Human electrophysiological reflections of the recruitment of perceptual processing during actions that engage memory. *Cognitive Neuroscience Society*, Chicago IL, USA.
- **Caplan, J. B.**, Chan, M. and Liu, Y. S. (2012). Oscillations and memory for order: support for the theta/gamma hypothesis. *Cognitive Neuroscience Society*, Chicago IL, USA.
- Cruikshank, L., **Caplan, J. B.**, and Singhal, A. (2012). Human electrophysiological reflections of the recruitment of perceptual processing during actions that engage memory. *Cognitive Neuroscience Society*, Chicago IL, USA.
- **Caplan, J. B.** (2011). Grid cells and place cells as proof-of-principle for convolution-based association-memory in the medial temporal lobe. *International Conference on Memory*, York, UK.
- Liu, Y. and **Caplan, J. B.** (2011). Relative order memory is accessed differently depending on instruction. *International Conference on Memory*, York, UK.
- Madan, C. R., Fujiwara, E. and **Caplan, J. B.** (2011) Reward value separately enhances implicit and explicit memory. *International Conference on Memory*, York, UK.
- Cruikshank, L., Singhal, A., Hueppelsheuser, M. and **Caplan, J. B.** (2011). The perceptual demands of delayed action are reflected by increased mu suppression during movement. *Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Chen, Y. Y., Lithgow, K., Hemmerich, J. and **Caplan, J. B.** (2011). The relationship between ERPs at encoding and retrieval of memory *Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Burton, R. L., Dixon, R. A., Lek, I. and **Caplan, J. B.** (2011). Qualitatively similar associative interference across the lifespan. *International Neuropsychological Society*, Boston, MA, USA.
- Masuda, T., Hioki, K., **Caplan, J. B.**, and Ito, K. (2011). Event-related potential (ERP). activation during recognition of visual images: implications for cross-cultural research. *Society for Personality and Social Psychology*, San Antonio, TX, USA.
- Burton, R. L. and **Caplan, J. B.** (2010). Associative Facilitation in AB/AC Learning. *Psychonomic Society*, St. Louis, MO, USA.

- Liu, Y., Chan, M. and **Caplan, J. B.** (2010). Instruction determines the error pattern in relative order judgments. *The 7th International Conference on Cognitive Science*, Beijing, China.
- **Caplan, J. B.** (2010). The convolution operation for associative memory: (nearly) found in the brain. *Society for Mathematical Psychology*, Portland, OR, USA.
- Madan, C. R., and **Caplan, J. B.** (2010). Model-mechanisms for effects of item- on association-memory in paired-associate learning. *Society for Mathematical Psychology*, Portland, OR, USA.
- Liu, Y., Chan, M. and **Caplan, J. B.** (2010). Instruction determines the error pattern in relative order judgments. *Society for Mathematical Psychology*, Portland, OR, USA.
- **Caplan, J. B.** and Rehani, M. (2010). Order within associations as a test of association-memory models. *Computational Neuroscience*, San Antonio, TX, USA.
- Madan, C. R. and **Caplan, J. B.** (2010). A systematic exploration of model-mechanisms for interactions between item- and association-memory. *Organization for Computational Neuroscience*, San Antonio, TX, USA.
- Liu, Y., Chan, M. and **Caplan, J. B.** (2010). Judgments of relative order: mechanisms underlying subspan and supraspan lists. *Cognitive Science Society*, Portland, OR, USA.
- Madan, C. R., Lau, S. M., Fujiwara, E. and **Caplan, J. B.** (2010). Emotion and association-memory. *Cognitive Science Society*, Portland, OR, USA.
- Cruikshank, L., **Caplan, J. B.**, and Singhal, A. (2010) Theta synchronizes as mu desynchronizes during sensorimotor behavior. *Organization for Human Brain Mapping*, Barcelona, Spain.
- Cruikshank, L., Singhal, A., and **Caplan, J. B.** (2010). Event-related potential (ERP). reflections of perceptual requirements during the planning of delayed action. *Vision Sciences Society*, Naples FL, USA.
- Liu, Y., Chan, M. and **Caplan, J. B.** (2010). Judgments of relative order: mechanisms underlying subspan and supraspan lists. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.
- Madan, C. R., Lau, C. S. M., **Caplan, J. B.**, and Fujiwara, E. (2010). Emotion does not always enhance contextual-memory. *Context and Episodic Memory Symposium*, Philadelphia, PA, USA.



- Cruikshank, L., **Caplan, J. B.** and Singhal, A. (2010) Theta synchronizes as mu desynchronizes during sensorimotor behavior. *Cognitive Neuroscience*, Montreal, QC, Canada.
- Legge, E. L., Ng, E. and **Caplan, J. B.** (2009). Virtual, relatively unfamiliar environments and the Method of Loci: significantly worse or equivalent to traditional approaches? *Psychonomic Society*, Boston, MA, USA.
- Liu, Y., Chan, M. and **Caplan, J. B.** (2009). Judgments of relative order: bridging findings from subspan to supraspan lists. *Joint Meeting of the Society for Mathematical Psychology and the European Mathematical Psychology Group*, Amsterdam, Netherlands.
- Madan, C. R. and **Caplan, J. B.** (2009). Influence of single-item properties on cued recall in distributed memory models. *Society for Mathematical Psychology*, Amsterdam, Netherlands.
- Madan, C. R., Lau, S. M., **Caplan, J. B.** and Fujiwara, E. (2009). Emotion selectively impairs associative memory. *Organization for Computational Neuroscience*, Berlin, Germany.
- Madan, C. R., Lau, S. M., **Caplan, J. B.** and Fujiwara, E. (2009). Emotionality impairs memory for associations. *Cognitive Science Society*, Amsterdam, Netherlands.
- Hughes, A. M., Whitten, T., Dickson, C. T. and **Caplan, J. B.** (2009). Detecting cognitively relevant oscillations across species and brain states. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Ng, E., Legge, E. L. and **Caplan, J. B.** (2009). The method of loci and the structure of verbal memory. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Chan, M., Liu, Y., Ross, B., Earle, G. and **Caplan, J. B.** (2009). Effects of instruction on memory judgments of order. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Rehani, M. and **Caplan, J. B.** (2009). Associative interference in human memory. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Madan, C. R., Lau, C. S. M., **Caplan, J. B.** and Fujiwara, E. (2009). Emotion hinders relational learning. *Banff Annual Seminar in Cognitive Science*, Banff, AB.
- Cruikshank, L., **Caplan J. B.** and Singhal, A. (2009). Human theta: A neural mechanism for sensorimotor integration? *Banff Annual Seminar in Cognitive Science*, Banff, AB.

- Madan, C. R., Lau, S. M., **Caplan, J. B.** and Fujiwara, E. (2009). Emotion hurts intentional association learning with a concurrent advantage for item learning. *Emotion pre-conference to the Society for Personality and Social Psychology Annual Meeting*. Tampa, FL, USA.
- Madan, C. R., Glaholt, M. and **Caplan, J. B.** (2008). The Effects of Single-Item Properties on Association Learning. *Society for Mathematical Psychology*, Washington, DC, USA.
- Chan, M., and **Caplan, J. B.** (2008). Judgments of relative order in short lists: multiple strategies are available, depending on wording of instructions. *Society for Mathematical Psychology*, Washington, DC, USA.
- Rehani, M. and **Caplan, J. B.** (2008). Associative interference makes memory for pairs more like memory for lists. *Society for Mathematical Psychology*, Washington, DC, USA.
- Chan, M., and **Caplan, J. B.** (2008). Memory judgments of relative order in short lists: multiple strategies are available, depending on wording of instructions. *Cognitive Science Society*, Washington, DC, USA.
- Rehani, M. and **Caplan, J. B.** (2008). The Influence of Associative Interference on Cued Recall of Word Pairs. *Cognitive Science Society*, Washington, DC, USA.
- Madan, C. R., Glaholt, M. and **Caplan, J. B.** (2008) Associative Symmetry Generalizes to Asymmetric Pairs. *Cognitive Science Society*, Washington, DC, USA.
- Talmi, D., Anderson, A. K., **Caplan, J. B.**, Riggs, L., and Moscovitch, M. (2007). Does emotion recruit top-down attention networks to enhance sensory processing? *Organization for Human Brain Mapping*, Chicago, IL, USA.
- **Caplan, J. B.**, Talmi, D., Richards, B. and Moscovitch, M. (2006). A SIMPLE explanation of the long-term recency effect in amnesia. *Society for Mathematical Psychology*, Vancouver, BC, Canada.
- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2006). Human theta oscillations associated with effective study of structured information. *Computational Neuroscience*, Edinburgh, Scotland.
- **Caplan, J. B.**, De Rosa, E. and McIntosh, A. R. (2005). Basal-forebrain dependent versus independent networks for successful resolution of proactive interference. *Computational Neuroscience*, Madison, WI, USA.

- **Caplan, J. B.**, De Rosa, E. and McIntosh, A. R. (2005). Basal-forebrain dependent versus independent networks for successful handling of proactive interference. *Organization for Human Brain Mapping*, Toronto, ON, Canada.
- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2005). EEG activity related to successful encoding of associative and order information. *Society for Cognitive Neuroscience*, New York, NY, USA.
- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2004). Encoding processes underlying effective cued recall of pairs versus lists. *Society for Neuroscience*, San Diego, CA, USA.
- **Caplan, J. B.**, Glaholt, M. G. and McIntosh, A. R. (2004). Unifying memory for associations and lists. *Society for Mathematical Psychology*, Ann Arbor, MI, USA.
- **Caplan, J. B.**, Glaholt, M. G., Picton, T. W. and McIntosh, A. R. (2004). Unifying memory for associations and lists using cognitive theory, behavioural testing and brain activity. *Computational Neuroscience*, Baltimore, MD, USA.
- **Caplan, J. B.**, Madsen, J. R., Schulze-Bonhage, A., Aschenbrenner-Scheibe, R., Newman, E. L. and Kahana, M. J. (2003). Human theta oscillations during sensorimotor integration and spatial learning. *Organization for Human Brain Mapping*, New York, NY, USA.
- **Caplan, J. B.**, Madsen, J. R., Schulze-Bonhage, A., Aschenbrenner-Scheibe, R., Newman, E. L. and Kahana, M. J. (2002). Human theta oscillations related to virtual exploratory behavior. *Society for Neuroscience*, Orlando, FL, USA.
- **Caplan, J. B.** (2002). Isolation: a unifying account of paired-associates and serial learning. *Society for Mathematical Psychology*, Oxford, OH, USA.
- **Caplan, J. B.**, Madsen, J. R., Newman, E. L. and Kahana, M. J. (2002). Oscillations related to exploration and not resting alpha. *Computational Neuroscience*, Chicago, IL, USA.
- **Caplan, J. B.**, Madsen, J. R., Fried, I., Newman, E. L. and Kahana, M. J. (2002). Human theta oscillations during virtual taxi driving. *Society for Cognitive Neuroscience*, San Francisco, CA, USA.
- **Caplan, J. B.**, Madsen, J. R., Newman, E. L. and Kahana, M. J. (2001). Oscillatory correlates of exploratory and goal-seeking behavior in humans. *Society for Neuroscience*, San Diego, CA, USA.

- **Caplan, J. B.** and Kahana, M. J. (2001). Probing serial recall. *Society for Mathematical Psychology*, Providence, RI, USA.
- **Caplan, J. B.**, Kahana, M. J., Raghavachari, S. and Madsen, J. R. (2000). Detection and analysis of task-dependent theta oscillations in humans. *Computational Neuroscience*, Brugge, Belgium.
- Raghavachari, S., Kahana, M.J., Rizzuto, D., **Caplan, J. B.**, Kirschen, M., Madsen, J. and Lisman, J. (1999). The Sternberg task evokes theta oscillations in human intracranial recordings. *Society for Neuroscience*, Miami, FL, USA.
- **Caplan, J. B.**, Kahana, M.J., Sekuler, R., Kirschen, M., and Madsen, J. R. (1999). The role of theta oscillations in human spatial cognition: Evidence from intracranial recordings. *Society for Neuroscience*, Miami, FL, USA.
- Madsen, J.R., Kirschen, M., **Caplan, J. B.**, Sekuler, R., and Kahana, M.J. (1999) Task-related theta activity from intracranial recordings during virtual maze navigation. *Congress of Neurological Surgeons*, Boston, MA, USA.
- Kahana, M. J. Sekuler, R., **Caplan, J. B.**, Kirschen, M. & Madsen, J. (1999). Task dependence of human theta oscillations during virtual maze navigation. *Computational Neuroscience*, Pittsburgh, PA, USA.
- Kahana, M. J., Sekuler, R., Madsen, J.R., Kirschen, M., **Caplan, J. B.** (1998). Wayfinding in virtual environments: Behavioral and Electrophysiological effects of optic flow and distinctive visual landmarks. Abstract 408.3. *Society for Neuroscience*, Los Angeles, CA, USA.
- Benson, R. R., **Caplan, J. B.**, Hodgson, J. M., Bekken, K. E., Rosen, B. R. and Sutton, J. P. (1997). Weight-space mapping of fMRI language tasks. *Human Brain Mapping*, Düsseldorf, Germany.
- Sutton, J. P., **Caplan, J. B.** and Bandettini, P. A. (1996). fMRI evidence of nested networks associated with motor tasks. *Human Brain Mapping*, Boston, MA, USA.