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# BRADLEY R. BUCHSBAUM

## EDUCATION

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1998 - 2003	University of California, Irvine	Irvine, CA
<i>PhD, Department of Cognitive Sciences</i>		
Dissertation title: Speak, Memory: fMRI Investigations of the Functional Organization of Short-term Memory in Music, Speech, and Sign Language		
1997 - 1998	Columbia University	New York, NY
One year Computer science program. C, C++, Java		
1992 - 1997	University of California, Santa Barbara	Santa Barbara, CA
<i>BS, Department of Psychology</i>		
Specialized in Bio-psychology		

## WORK EXPERIENCE

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2005 - present	Helen Wills Neuroscience Institute	Berkeley, CA
<i>Post-doctoral Research Fellow</i>		
Advisor: Mark D'Esposito, M.D.		
2003 - 2005	National Institutes of Health	Bethesda, MD
<i>Post-doctoral Research Fellow</i>		
▪ Advisor: Karen Berman, M.D.		
1999-2003	UC Irvine	Irvine, CA
<i>Post-Graduate Researcher/Teaching Assistant</i>		
▪ Advisor: Gregory Hickok, Ph.D.		
1997 - 1998	Mt. Sinai, Neuroscience PET laboratory	New York, NY
<i>Research Assistant</i>		
Advisor: Monte Buchsbaum, M.D.		

## TEACHING/MENTORING EXPERIENCE

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2005-present	University of California, Berkeley	Berkeley, CA
Mentored graduate students in D'Esposito Lab.		
Supervised undergraduate student research assistants.		
1998-2003	University of California, Irvine	Irvine, CA
<i>Teaching Assistant</i>		
Introduction to Statistics, Cognitive Neuropsychology, Language and the		

#### PROFESSIONAL MEMBERSHIPS

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Cognitive Neuroscience Society

Human Brain Mapping

Society for Neuroscience

#### COMPUTER LANGUAGES

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Java, R: fluent

Lisp, C, Python, Perl: working knowledge

#### PRESENTATIONS

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November, 2007. "Neural mechanisms of auditory-verbal sequence learning." at the Society for Neuroscience meeting, San Diego, Ca.

August 2006. 3<sup>rd</sup> annual Bay Area Memory Meeting. "Repetition suppression and reactivation in short-term recognition memory." Stanford, CA

October 2006. Slide presentation: "Repetition suppression and reactivation in short-term recognition memory." at the Society for Neuroscience meeting, Atlanta, Georgia

June 2006: Friday Cognitive Seminar at Stanford University, "The search for the phonological store". Stanford, CA

November 2005: Slide Presentation at Society for Neuroscience: "Modality and serial position effects in auditory-verbal short-term memory", Washington, DC

October 2005: Branch Talk at the Clinical Brain Disorders Branch, NIMH, "Dorsal and ventral streams in auditory-verbal short-term memory." Bethesda MD

August 2005: 2<sup>nd</sup> annual Bay Area Memory Meeting: "An fMRI study of serial position effects in a Sternberg item-recognition task", Davis, CA

September 20004: NIMH Scientific Retreat: "Short-term Memory and the Auditory Echo." Gettysburg, PA

#### AWARDS RECEIVED

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2004 – National Institutes of Health Fellows Award for Research

Excellence (FARE), \$1000 travel grant

2004 – Selected to present “Short-Term memory and the Auditory Echo” at annual NIMH retreat

2002 – Award for best second-year talk, Laboratory for Cognitive Brain Research, UC Irvine.

## PUBLICATIONS

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Hazlett EA, Buchsbaum MS, Haznedar MM, Singer MB, Germans MK, Schnur DB, Jimenez EA, **Buchsbaum BR**, Troyer BT. Prefrontal cortex glucose metabolism and startle eyeblink modification abnormalities in unmedicated schizophrenia patients. *Psychophysiology*. 1998 35(2):186-98.

**Buchsbaum, BR.**, Hickok, G., Humphries, C. Role of Left Posterior Superior Temporal Gyrus in Phonological Processing for Speech Perception and Production. *Cognitive Science*. 2001 25:663-678.

Humphries, C., Tomlinson, K., **Buchsbaum, BR.**, Hickok, G. Role of Anterior Temporal Cortex in Auditory Sentence Comprehension: An fMRI Study. *Neuroreport*, 2001 12:1749-1752.

Gaser C, Nenadic I, **Buchsbaum BR**, Hazlett EA, Buchsbaum MS. Deformation-based morphometry and its relation to conventional volumetry of brain lateral ventricles in MRI. *Neuroimage*. 2001 13(6 Pt 1):1140-5.

Buchsbaum MS, Hollander E, Haznedar MM, Tang C, Spiegel-Cohen J, Wei TC, Solimando A, **Buchsbaum BR**, Troyer BT. Effect of Fluoxetine on regional cerebral metabolism in autistic spectrum disorders: a pilot study. *International Journal of Neuropsychopharmacology*. 2001 4(2):119-25.

Hickok G, **Buchsbaum BR**, Humphries C, Muftuler T. Auditory-motor interaction revealed by fMRI: speech, music, and working memory in area Spt. *Journal of Cognitive Neuroscience*. 2003 15(5):673-82.

Hickok G and **Buchsbaum BR**. Commentary on “Working memory retention systems: a state of activated long-term memory”. *Behavioral and Brain Sciences*. 2003 26(6).

Gaser C, Nenadic I, **Buchsbaum BR**, Hazlett EA, Buchsbaum MS. Ventricular enlargement in schizophrenia related to volume reduction of the thalamus, striatum, and superior temporal cortex. *American Journal of Psychiatry*. 2004 Jan;161(1):154-6

Koenigsberg HW, Buchsbaum MS, **Buchsbaum BR**, Schneiderman JS, Tang CY, New A, Goodman M, Siever LJ. Functional MRI of visuospatial working memory in schizotypal personality disorder: a region-of-interest analysis. *Psychological Medicine*. 2005 35(7):1019-30.

Lehrer DS, Christian BT, Mantil J, Murray AC, **Buchsbaum BR**, Oakes TR, Byne W, Kemether EM, Buchsbaum MS. Thalamic and prefrontal

FDG uptake in never medicated patients with schizophrenia. *American Journal of Psychiatry*. 2005 162(5):931-8.

**Buchsbaum BR**, Olsen RK, Koch PF, Kohn P, Kippenhan JS, Berman KF. Reading, Hearing and the Planum Temporale. *Neuroimage*. 2005 24(2):444-54.

**Buchsbaum BR**, Greer S, Chang W, Berman KF. Meta-analysis of Neuroimaging Studies of the Wisconsin Card Sort and Component Processes. *Human Brain Mapping*. 2005 25(1):35-45.

**Buchsbaum BR**, Pickell B, Love T, Hatrak M, Bellugi U, Hickok G. Neural Substrates for Verbal Working Memory in Deaf Signers: fMRI Study and Lesion Case Report. *Brain and Language*. 2005 95(2):265-272.

**Buchsbaum BR**, Olsen RK, Koch PF, Berman KF. Human dorsal and ventral auditory streams subserve rehearsal-based and echoic processes during verbal working memory. *Neuron*. 2005 48(4):687-97.

Buchsbaum MS, **Buchsbaum BR**, Chokron S, Tang C, Wei TC, Byne W. Thalamocortical circuits: fMRI assessment of the pulvinar and medial dorsal nucleus in normal volunteers. *Neuroscience Letters*. 2006 404(3):282-7.

Buchsbaum MS, Friedman J, **Buchsbaum BR**, Chu KW, Hazlett EA, Newmark R, Schneiderman JS, Torosjan Y, Tang C, Hof PR, Stewart D, Davis KL, Gorman J. Diffusion Tensor Imaging in Schizophrenia. *Biological Psychiatry*. 2006 60:1181-7.

Buchsbaum MS, **Buchsbaum BR**, Hazlett EA, Haznedar MM., Newmark R, Tang CY, Hof PR. **Relative glucose metabolic rate higher in white matter in patients with schizophrenia.** *American Journal of Psychiatry*. 2007 164:1072-81.

**Buchsbaum BR** and D'Esposito M. **Short-Term and working memory systems.** In J. Byrne, Ed.: *Learning and Memory: A Comprehensive reference*. Elsevier. (in press).

**Buchsbaum BR** and D'Esposito M. (in press). **The search for the phonological store: From loop to convolution.** *Journal of Cognitive Neuroscience*. (in press).

### **Submitted**

**Buchsbaum B.R.** and D'Esposito M. Repetition suppression and reactivation in short-term recognition memory.

Sarpal D., **Buchsbaum BR**, Kohn PD, Kippenhan JS, Mervis CB, Morris C, Meyer-Lindenberg A, and Berman KF. A genetic model for understanding higher-order visual object processing: functional interactions

of the ventral visual stream in Williams Syndrome.

*In Preparation*

**Buchsbaum B.R.** and Berman K.F. Spanning the divide between short- and long-term memory during auditory continuous recognition: smooth transition or sheer cliff?

**Buchsbaum BR**, Badre D, D'Esposito M. Antero-posterior gradients in functional connectivity between the frontal and temporal cortices.

**Buchsbaum BR**, Finn AS, Ye D, Castro C, Hudson Kam CL, D'Esposito M. Auditory-verbal sequence learning: an fMRI investigation of the Hebb repetition effect.

**REFERENCES**

Karen F. Berman, Chief, Section on Integrative Neuroimaging, NIMH, NIH

Mark D'Esposito, Professor, Helen Wills Neuroscience Institute, University of California, Berkeley

Gregory Hickok, Professor, Laboratory for Cognitive Brain Research, University of California, Irvine