

Curriculum vitae

BARTLETT D. MOORE IV

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Interests and Objectives	<p>My professional interests lie in revealing and delineating select aspects of biological information processing. Specifically, I am concerned with those cognitive and systems-level events that underlie mammalian vision, including those occurring in cortical and subcortical regions. I currently pursue these interests drawing from anatomical, physiological, behavioral, and computational methods. My desire is to eventually establish a laboratory that would enable me to continue making contributions to the psychological and neuroscience communities through teaching and research.</p>
Education	<p>2002 - present University of California, Davis Davis, California, USA Ph.D: Neuroscience (expected) Advisor: Dr. W. Martin Usrey, Ph.D.</p> <ul style="list-style-type: none"> • My studies focus on the visual neurosciences with specialization in the physiology of information processing. • I conduct <i>in vivo</i> single and pair unit recordings in the central visual pathway of ferret, cat and primate. <p>1997 - 2001 Hampshire College Amherst, Massachusetts, , USA BA: Cognitive Science (May 2001) Thesis Advisor: Dr. Neil Stillings, Ph.D.</p> <ul style="list-style-type: none"> • My studies concentrated on the Cognitive Sciences with a special focus on visual cognition. • I tailored my curriculum to include neuroscience courses at Smith, Mt.Holyoke, and Amherst Colleges. • My senior thesis involved spatial frequency analysis of the face-specific N170 evoked response potential. • I played a major role in the construction and initial management of Hampshire's electroencephalography lab.
Additional Training	<p>2006 – Fellow, NIH Vision Science Training Grant. Principal Investigator: Dr. John S. Werner, School of Medicine, Department of Ophthalmology & Vision Science, University of California, Davis.</p> <p>2006 – Fellow, McDonnell Summer Institute in Cognitive Neuroscience. Course Directors: Drs. Michael Gazzaniga, Andrew Schwartz and Jason Mattingley June 27-July 7, Dartmouth College, New Hampshire.</p> <p>2004 – Fellow, <i>European Summer School on Visual Neuroscience: from spikes to awareness</i>. Course Directors: Drs. Jochen Braun, Frank Bremmer and Karl Gegenfurtner. September 3-15, Schloss Rauischholzhausen, Germany</p> <p>2003 – Fellow, Mathematics and Biology Summer Workshop—<i>From Neuron to Network: biophysically based functional models</i>. Course Directors: Drs. Lee Segel, Hanna Parnas. July 27-August 8, Santa Fe Institute, Santa Fe, New Mexico.</p> <p>2003 – Cold Spring Harbor Advanced Course—<i>Structure, Function and Development of the Visual System</i>. Course Directors: Drs. W. Marty Usrey, Kimberly McAllister. June 4-June 17, Cold Spring Harbor Laboratory, New York</p>

<p>Teaching Experience*</p>	<p>2006 – Systemic Physiology (NPB 101). Assistant to Drs. W. Martin Usrey and William DeBello, Department of Neurobiology, Physiology and Behavior, University of California, Davis.</p> <p>2005 – Neurobiology (NPB 100). Assistant to Dr. Mitchell Sutter, Department of Neurobiology, Physiology and Behavior, University of California, Davis.</p> <p>2003 – Neurobiology (NPB 100). Assistant to Dr. Mitchell Sutter, Department of Neurobiology, Physiology and Behavior, University of California, Davis.</p> <p>1999 –Minds, Brains and Intelligent Behavior: an introduction to cognitive science. Assistant to Dr. Joseph Cruz, School of Cognitive Science, Hampshire College, Amherst, Massachusetts.</p> <p style="text-align: right;"><i>* References from former students can be made available upon request</i></p>
<p>Abbreviated Employment Overview</p>	<p>2001 & 2002 Los Alamos National Laboratory Los Alamos, New Mexico, USA Technical Area 3, Group P-21, Biophysics Supervisor: Dr. Garret Kenyon, Ph.D.</p> <p>Research Assistant, activities included:</p> <ul style="list-style-type: none"> • Analysis of a computational model of inner retinal dynamics • Data analysis using custom written Matlab software • Outspoken participation in the weekly P-21 (Biophysics) Journal Club <p>2001-2002 University of Texas Medical School Houston, Texas, USA Department of Neurobiology and Anatomy Supervisor: Dr. David Marshak, Ph.D.</p> <p>Research Assistant, activities included:</p> <ul style="list-style-type: none"> • Development and testing of a computational model of retinal ganglion cell oscillatory activity • Anatomical reconstruction of human retinal circuitry from serial electron micrographs • Outspoken participation in the weekly UT Medical School Vision Science Journal Club • Presentation of my findings to the Association for Research in Vision and Ophthalmology (ARVO) <p>Summer 2000 University of Louisville Louisville, Kentucky, USA Department of Psychological and Brain Sciences Developmental Neuropsychology Lab Supervisor: Dr. Dennis Molfese, Ph.D.</p> <p>Research Assistant, activities included:</p> <ul style="list-style-type: none"> • ERP collection from special human populations with dense array EEG (special populations included children and adults with Williams Syndrome, and normal neonatal infants) • Preliminary data analysis, including offline waveform averaging and initial statistical analysis. • Additional computer oriented duties (Literature searches, desktop publishing, etc.) • Various self-initiated laboratory tours in the Department of Psychological and Brain Sciences

<p>Articles</p>	<p>Moore IV, BD (2006) <i>Speed Selectivity in V1: A Complex Affair</i>. Journal of Neuroscience, 26(29):7543-4.</p> <p>Moore IV, BD, Alitto, HJ, Usrey, WM. (2005) <i>Orientation tuning, but not direction selectivity, is invariant to temporal frequency in primary visual cortex</i>. Journal of Neurophysiology, 94(2):1336-45.</p> <p>Kenyon, GT, Moore IV, BD, Jeffs, J, Stephens, G, Travis, BJ, Theiler, J, Marshak, D. (2003). <i>A Model of High Frequency Oscillations in Retinal Ganglion Cells</i>. Visual Neuroscience, 20(5):465-80.</p> <p>Kenyon, GT, Moore IV, BD, Jeffs, J, Theiler, J, Travis, BJ, Marshak, D. (2003). <i>Firing Correlations Improve Detection of Moving Bars</i>. Neural Networks; Proceedings of the International Joint Conference on Neural Networks, Volume 2:1274-1279.</p> <p>Moore IV, BD. (2001) <i>Behavioral and Electrophysiological Correlates of Face Processing: An ERP study</i>. Division III Examination, Harold F. Johnson Library Center; Hampshire College Amherst, MA. Advisors were Dr. Neil Stillings and Dr. Joanna Morris.</p>
<p>Talks and Posters</p>	<p>Moore IV, BD, Usrey, WM. (2007). <i>Quantitative analysis of visual plasticity in the adult LGN</i>. 2007 Computational and Systems Neuroscience Meeting (COSYNE), March 2007 (submitted).</p> <p>Moore IV, BD, Usrey, WM. (2006). <i>Rapid plasticity of visual responses in the lateral geniculate nucleus and consequences for cortical processing</i>. Society for Neuroscience Annual Meeting, Atlanta, Georgia, October 2006; Program No. 545.7.</p> <p>Moore IV, BD, Alitto, HJ, Usrey, WM. (2004). <i>Orientation tuning, but not direction selectivity, is invariant to temporal frequency in primary visual cortex</i>. Society for Neuroscience Annual Meeting, New Orleans, Louisiana, November 2004; Program No. 410.12.</p> <p>Moore IV, BD, Alitto, HJ, Usrey, WM. (2004) <i>The influence of stimulus temporal frequency on orientation and direction selectivity in V1 neurons</i>. Vision Sciences Society (VSS) Annual Meeting. Sarasota, Florida. <i>Journal of Vision</i>, 4(8), 274a.</p> <p>Moore IV, BD, Jeffs, J, Theiler, J, Travis, BJ, Kenyon, GT, and Marshak, D. (2003). <i>Firing Correlations Improve Detection of Moving Bars</i>. International Joint Conference on Neural Networks (IJCNN), Portland, Oregon.</p> <p>Moore IV, BD, Jeffs, J, Travis, BJ, Kenyon, G, and Marshak, D. (2002). <i>The Intensity of Moving Bars is Encoded More Efficiently by Firing Correlation than by Firing Rate</i>. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Fort Lauderdale, Florida, <i>Investigative Ophthalmology & Vision Science</i>, 43(4), 4767/B736.</p>
<p>Select References</p>	<p>Dr. Joseph H. Cruz, Associate Professor of Philosophy, Chair, Program in Cognitive Science, Williams College. jcruz@williams.edu (413) 597-2484</p> <p>Dr. Dennis Molfese, Professor of Psychology, Dean, Department of Psychological and Brain Sciences, University of Louisville. dmolfese@louisville.edu (502) 852-6775</p> <p>Dr. David Marshak, Professor of Anatomy, Department of Neurobiology and Anatomy, University of Texas Medical School, Houston. david.w.marshak@uth.tmc.edu (713) 500-5597</p> <p>Dr. Neil Stillings, Professor of Psychology, Dean, School of Cognitive Science, Hampshire College, Amherst, MA. nstillings@hampshire.edu (413) 559-5139</p> <p>Dr. W. Martin Usrey, Assistant Professor, Section of Neurobiology, Physiology, and Behavior, University of California, Davis. wmusrey@ucdavis.edu (530) 754-5468</p>