

WILLIAM R SHIRER

780 WELCH ROAD, SUITE 201 • PALO ALTO, CA 94304

(650) 724-3225 • SHIRER @ STANFORD.EDU

EDUCATION

2013 - 2017	Stanford University <i>Doctor of Medicine</i>	School of Medicine
2009 - 2013	University of California at Berkeley <i>Post Baccalaureate Health Professions Program</i> <ul style="list-style-type: none">• GPA: 4.0 (science)	Extension School
2004 - 2008	Boston College <i>Bachelor of Arts, magna cum laude</i> <ul style="list-style-type: none">• Phi Beta Kappa• Arts and Sciences Honors Program• Psychology Honors Program• Honors thesis, "Mood as a context for affective learning," Advised by Dr. Barrett• GPA: 3.87 (3.92 major)	College of Arts and Sciences

RESEARCH EXPERIENCE

2009 – 2013	Stanford University - Functional Imaging in Neuropsychiatric Disorders Lab <i>Lab Manager (2010-2013), Research Assistant (2009-2010)</i> <ul style="list-style-type: none">• Examined how neural networks in patients with neuropsychiatric disorders change longitudinally and differ from healthy controls. In separate studies, we examined patients suffering from Alzheimer's disease and other dementias, Parkinson's disease, Depression, OCD, Renal Failure, and Multiple Sclerosis.• Collected MRI and fMRI data with GE 3.0T Scanners, and analyzed the data using Matlab, SPM, and FSL.• Trained research assistants, medical students, post-doctoral fellows, and collaborators in MRI/fMRI analyses.• Organized and maintained (1) a linux server containing >30 TB of HIPAA-protected data, (2) a lab wiki with >200 pages of evolving lab knowledge and protocols, (3) a lab website, and (4) study-specific databases.• Managed administrative functions, such as (1) payments and reimbursements, (2) maintenance of IRB protocols, (3) recruitment of new research assistants, and (4) coordination of events.	PI: Michael Greicius, MD
2008 – 2009	Harvard University - Moral Cognition Lab <i>Neuroimaging Technician</i> <ul style="list-style-type: none">• Researched the neural mechanisms underlying moral decisions.• Collected MRI and fMRI data with Siemens 3.0T scanners at both the Harvard Center for Brain Sciences and Massachusetts General Hospital.• Quality checked fMRI data for movement and other irregularities.	PI: Joshua Greene, PhD
2008 – 2009	Tufts University - Spatial Cognition Lab <i>Research Assistant</i> <ul style="list-style-type: none">• Responsible for the overall management, design, scheduling, and data collection for multiple research efforts.• Managed a team of undergraduate research assistants.• Researched how arousal influences cognitive performance.• Investigated how adaptive scaffolding of working memory tasks influences learning.• Lead an eye tracking study investigating how emotion regulation influences perception.• Developed experiments using SuperLab and analyzed data using SPSS.	PI: Holly Taylor, PhD
2005 – 2008	Boston College - Interdisciplinary Affective Sciences Lab <i>Honors Student</i> <ul style="list-style-type: none">• Used psychophysiological equipment to investigate context effects in emotion learning.• Examined how individuals' emotional states influence their perception of faces.• Analyzed data for an eye tracking study on how affect influences perception of faces.• Developed experiments using EPrime, and coded and analyzed data using SPSS.	PI: Lisa Feldman Barrett, PhD

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WORK EXPERIENCE

2005 – Present	United States Army Reserves <i>Captain (2011-present), First Lieutenant (2009-2011), Second Lieutenant (2008-2009), Cadet (2005-2008)</i>	Medical Service Corps
	<ul style="list-style-type: none">• <i>2011-present</i>: Aide-de-Camp to Brigadier General Daniel J. Dire, Deputy Commander of the 807th Medical Command. Responsible for evaluating subordinate units, coordinating with hospital and brigade commanders, and representing BG Dire at various events.• <i>2009-2011</i>: Patient Administrative Officer for A Company, 352nd Combat Support Hospital (CSH). Responsible for evaluating the quality of patient care, and developing criteria for such an evaluation.• <i>2008-2009</i>: Executive Officer for the 852nd Medical Detachment. Responsible for 45 medics, nurses, and support personnel.• <i>2008</i>: Distinguished Military Graduate, ranked among the top 20% of Officers commissioned into the Army.• <i>2006</i>: Attended US Army Airborne School and received Parachutist qualification.• <i>2008-present</i>: Qualified as a Combat Life Saver, and proficient in advanced first aid techniques.	
2007 – 2008	Boston College Department of Psychology <i>Teaching Assistant, Cognitive Psychology</i>	Jeanne Sholl, PhD
	<ul style="list-style-type: none">• Designed online quizzes to assess students' comprehension of the material.• Tutored students and held review sessions one week before each examination or large assignment.• Proctored the midterm and final examinations.	
2006 – 2008	Boston College Office of Residential Life <i>Resident Assistant</i>	Directors: Judette Tobes & Eduardo Diaz
	<ul style="list-style-type: none">• Supervised a diverse residential community of 44 residents in Walsh Hall and 155 residents in Vanderslice Hall.• Upheld university standards by enforcing safety and substance use policies in the residence halls, and establishing a community of respect where residents were expected to appreciate diversity.	

RELEVANT ACTIVITIES

2006 – 2008	Psi Chi, Boston College Chapter <i>President (2007-2008), Treasurer (2006-2007)</i>	National Honor Society for Psychology
	<ul style="list-style-type: none">• Increased membership on campus by 250% in one semester (from 26 to 97 members).• Implemented a new program by which the faculty in the Psychology Department can better identify and select new research assistants for their laboratories.	

HONORS AND AWARDS

2011	Reserve Components Achievement Medal	US Army
2008	Phi Beta Kappa	National Honor Society
2008	Combat Life Saver	US Army
2008	Global War on Terrorism Service Medal	US Army
2008	National Defense Service Medal	US Army
2008	Army Service Ribbon	US Army
2008	Distinguished Military Graduate	US Army
2008	Army Physical Fitness Badge	US Army
2006 – 2008	Undergraduate Research Fellowship (six awards)	Boston College
2007 – 2008	Psychology Honors Program	Boston College
2007	Olmstead Foundation Travel Grant – Brazil and the Amazon Rainforest	US Army
2006	Psi Chi	National Honor Society for Psychology
2006	Alpha Sigma Nu	Jesuit National Honor Society
2005 – 2008	Full-Tuition Scholarship	US Army
2004 – 2008	Arts and Sciences Honors Program	Boston College
2004 – 2008	Dean's List, First Honors (eight awards)	Boston College

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PUBLICATIONS

Shirer, WR, Damoiseaux, JS, & Greicius, MD (Preparation). Functional Connectivity Correlates of Cognition in Healthy Aging.

Kerchner, GA, **Shirer, WR**, Bernstein, JD, & Greicius, MD (Preparation). Hippocampal CA1 Atrophy Correlates with Default Mode Network Connectivity in Alzheimer's Disease.

Shirer, WR, Jiang, HJ, & Greicius, MD (Submitted). Optimization of Resting-State fMRI Analysis Pipelines for Enhanced Signal-to-Noise Ratio, Test-Retest Reliability and Group Discrimination.

Parvizi, J, Rangarajan, V, Desai, N, **Shirer, WR**, & Greicius, MD (Submitted). The Will to Persevere Induced by Electrical Stimulation of the Human Cingulate Gyrus.

White, MD, **Shirer, WR**, Molfino, MJ, Tenison, C, Damoiseaux, JS, & Greicius, MD (In Press). Disordered Reward Processing and Functional Connectivity in Trichotillomania. *Journal of Psychiatric Research*.

Damoiseaux, JS, Seeley, WW, **Shirer, WR**, Coppola, G, Karydas, A, Miller, BL, Kramer, J, & Greicius, MD (2012). Gender Modulates the APOE ϵ 4 Effect in Healthy Older Controls: Convergent Evidence from Functional Brain Connectivity and Spinal Fluid Tau Levels. *The Journal of Neuroscience*, 32(24), 8254-62.

Shirer, WR, Ryali, S, Rykhlevskaia, E, Menon, V, & Greicius, MD (2011). Decoding Subject-Driven Cognitive States with Whole-Brain Connectivity Patterns. *Cereb Cortex*, 22, 158-165. ***Cover Article**

Ford, BQ, Tamir, M, Brunye, TT, **Shirer, WR**, Mahoney, CR, & Taylor, HA (2010). Keeping Your Eyes on the Prize: Anger and Visual Attention to Threats and Rewards. *Psychological Science*, 21, 1098-1105.

BOOK CHAPTERS

Habas, C, **Shirer, WR**, & Greicius, MD (2012). Delineation of Cerebrocerebellar Networks with MRI Measures of Functional and Structural Connectivity. In M. Manto, D. Gruol, J. Schmahmann, N. Koibuchi, & F. Rossi (Eds.) *Handbook of the Cerebellum and Cerebellar Disorders*.

ABSTRACTS

Kerchner, GA, **Shirer, WR**, Bernstein, JD, & Greicius, MD (2013). Hippocampal CA1 Atrophy Correlates with Default Mode Network Connectivity in Alzheimer's Disease. *Alzheimer's Association International Conference*. Boston, MA.

Shirer, WR, Jiang, HJ, & Greicius, MD (2013). Optimization of rs-fMRI data for Enhanced SNR, Test-Retest Reliability and Group Discrimination. *Org Hum Brn Mapp*. Seattle, WA.

Shirer, WR, Damoiseaux, JS, & Greicius, MD (2013). Functional Connectivity Correlates of Cognition in Healthy Aging. *Org Hum Brn Mapp*. Seattle, WA.

Kerchner, GA, **Shirer, WR**, Bernstein, JD, & Greicius, MD (2013). Hippocampal CA1 Atrophy Correlates with Default Mode Network Connectivity in Alzheimer's Disease. *Org Hum Brn Mapp*. Seattle, WA.

Martucci, KT, Bagarinao, E, Johnson, KA, **Shirer, WR**, Greicius, MD, MAPP Research Network Authors, & Mackey, S (2013). Altered Functional Connectivity in Chronic Pelvic Pain: Dual Regression Analysis of Brain Resting State fMRI. *Org Hum Brn Mapp*. Seattle, WA.

Martucci, K, Barad, M, **Shirer, WR**, Greicius, MD, Mackey, S (2013). Altered Resting State Network Activity in Complex Regional Pain Syndrome. *American Pain Society*, New Orleans, LA.

Rittman, T, Ghosh, B, **Shirer, WR**, Greicius, MD, & Rowe, J (2012). Beyond the default mode network: resting state connectivity and motor networks in PSP and CBD dementias. *Org. Hum Brn Mapp*, Beijing, CH.

Damoiseaux, JS, Seeley, WW, **Shirer, WR**, Coppola, G, Karydas, A, Miller, BL, Kramer, J, & Greicius, MD (2011). Gender Modulates the APOE ϵ 4 Effect in Healthy Older Controls: Convergent Evidence from Functional Brain Connectivity and Spinal Fluid Tau Levels. *American Academy of Neurology*, New Orleans, LA.

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Poston, K, **Shirer, WR**, Menon, V, & Greicius, MD (2011). Dopaminergic Modulation of Resting State Networks in Parkinson's Disease. *American Academy of Neurology*. Honolulu, HI.

Shirer, WR, Ryali, S, Rykhlevskaia, E, Menon, V, & Greicius, MD (2010). Classification of Self-Driven Cognitive States with Functional Connectivity. *Organization for Human Brain Mapping*, Barcelona, Spain.

Ford, BQ, Tamir, M, Brunye, TT, **Shirer, WR**, Mahoney, CR, & Taylor, HA (2010). The Angry Spotlight: The Effects of Anger on Selective Attention to Threats and Reward. *Society for Personality and Social Psychology Conference*, Las Vegas, NV.

Mahoney, CR, Brunye, TT, Lieberman, HR, **Shirer, WR**, Augustyn, JS, & Taylor, HA (2009). Caffeine-Induced Physiological Arousal Facilitates Global Attentional Focus. *Society for Neuroscience Conference*. Chicago, IL.

Ford, BQ, **Shirer, WR**, Brunye, TT, Mahoney, CR, Taylor, HA, & Tamir, M (2009). The Angry Spotlight: Selective Visual Attention to Rewards in Anger. *Tufts University Neuroscience of Emotion Conference*. Medford, MA.

Shirer, WR, Mahoney, CR, Brunye, TR, & Taylor, HA (2009). Back to Square One: Development of an Adaptive Scaffold for Spatial and Verbal Working Memory. *Association for Psychological Science Conference*. San Francisco, CA.

Shirer, WR, Bliss-Moreau, E, & Barrett, LF (2008). Mood as a Context for Affective Learning. *Psychology Undergraduate Research Conference at Boston College*. Chestnut Hill, MA.

INVITED TALKS

Shirer, WR (2012). Analysis of Resting-State fMRI data with Dual Regression. Stanford Systems Neuroscience and Pain Lab, Stanford, CA. <https://stanford.webex.com/stanford/ldr.php?AT=pb&SP=MC&rID=63633812&rKey=7d791beadb457dfb>

UNPUBLISHED WORK

Shirer, WR (2008). Mood as a Context for Affective Learning. Unpublished Honors Thesis. Boston College. On file with the Boston College Arts and Sciences Honors Department.

SKILLS

Microsoft Office software

Adobe Photoshop

SuperLab

SPSS

Unix

MATLAB

SPM

FSL

MRICron

Siemens MR Scanners

GE MR Scanners

Parachutist (US Army Airborne)

Arabic Language (intermediate)