

CURRICULUM VITAE
ALEXANDRA E. ROACH

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EDUCATION

2014	PhD	Psychology/Cognitive Neuroscience	University of California Davis Supervisor: Charles DeCarli, MD, FAAN Dissertation: <i>Vascular Risk Factors and Neuroimaging Correlates to Age-related Cognitive Decline in Healthy Older Adults</i>
2007	MS	Experimental Psychology	Western Washington University, Bellingham, WA Supervisor: Ira Hyman Jr., PhD Master's Thesis: <i>The Recency Effect is Caused by Cue Overload: Category-based Retrieval Diminishes Recency Effect</i>
1994	BA	American/Latin American Studies	Pomona College, Claremont, CA Thesis Advisor: Miguel Tinker-Salas, PhD Thesis: <i>Economic and Political Development of Mexico</i>

ACADEMIC APPOINTMENT

2014 –	Assistant Professor, Colleges of Science & Engineering, Psychology Department, USC Aiken
2013 – 2014	Instructor, Department of Psychology, University of California Davis

USC AIKEN COURES TAUGHT

2019 – 2020	Graduate Neuroscience, Psychological Statistics, Psychological Statistics Lab, Psychopharmacology, Reflective Capstone Experience
2018 – 2019	Graduate Neuroscience, Psychological Statistics, Psychological Statistics Lab, Neuroscience, Neuroscience Lab
2017 – 2018	Graduate Neuroscience, Quantitative Analysis, Quantitative Analysis Lab, Cognitive Processes, Cognitive Processes Lab, Neurobiology of Stress
2016 – 2017	Cognitive Processes, Cognitive Processes Lab, Quantitative Analysis Lab, Psychopharmacology, Cognitive Processes, Cognitive Processes Lab, Neuroscience, Neuroscience Lab
2015 – 2016	Cognitive Processes, Cognitive Processes Lab, Quantitative Analysis in the Behavioral Sciences, Quantitative Analysis Lab, Neuroscience, Neuroscience Lab, Graduate Neuroscience
2014 – 2015	Cognitive Processes, Cognitive Processes Lab, Quantitative Analysis in the Behavioral Sciences, Quantitative Analysis Lab, Neuroscience, Neuroscience Lab, Graduate Neuroscience

PUBLICATIONS**Peer Reviewed Publications (^ denotes graduate student author)**

- Roach, A. E.**, Hines, C., Stafford, J., & Mooney, S. R. (2020). Repetitive transcranial magnetic stimulation (TMS) for treatment-resistant depression in Active Duty Service Members improves depressive symptoms. *In press Journal of ECT*.
- Arnett, K.^, **Roach, A. E.**, Elzy, M., & Jelsone-Swain, L. (2018). Childhood Emotional Invalidation and Right Hemispheric Mu Suppression During a Pain Empathy Task: An EEG Study. *Social Neuroscience*.
<https://doi.org/10.1080/17470919.2018.1441905>
- Maillard, P., Fletcher, E., **Roach, A. E.**, Lockhart, S. N., Reed, B., Mungas, D., DeCarli, C., Carmichael, O. (2014). White matter hyperintensities and their penumbra lie along a continuum of injury in the aging brain. *Stroke*, *45*, 1721-6.
<https://doi.org/10.1161/STROKEAHA.113.004084>
- Lockhart, S. N., **Roach, A. E.**, Luck, S. J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. (2014). White matter hyperintensities are associated with visual search behavior independent of generalized slowing in aging. *Neuropsychologia*, *52*, 93-101.
<https://doi.org/10.1016/j.neuropsychologia.2013.10.011>

- Lockhart, S. N., Mayda, A. V., **Roach, A. E.**, Fletcher, E., Carmichael, O., Maillard, P., Schwarz, C. G., Yonelinas, A. P., Ranganath, C., & DeCarli, C. (2012). Episodic memory function is associated with multiple measures of white matter integrity in cognitive aging. *Frontiers in Human Neuroscience*. <https://doi.org/10.3389/fnhum.2012.00056>
- He, J., Wong, V. S. S., Fletcher, E., Maillard, P., Lee, D. Y., Iosif, A., Singh, B., Martinez, O., **Roach, A. E.**, Lockhart, S. N., Beckett, L., Mungas, D., Farias, S. T., Carmichael, O., DeCarli, C. (2012). The contributions of MRI-based measures of grey matter, white matter hyperintensity, and white matter integrity to late-life cognition. *American Journal of Neuroradiology*. 33, 1797-803. <https://doi.org/10.3174/ajnr.A3048>

Invited Book Chapters

- Ragen, B.J., **Roach, A. E.**, & Chollack, C. (2016). Chronic stress, regulation of emotion and functional activity of the brain. Ed. Fink, G. *Stress Concepts and Cognition, Emotion and Behavior*. Elsevier. doi:10.1016/B978-0-12-800951-2.00029-7

Manuscripts in Preparation (* denotes undergraduate student author)

- Roach, A. E.**, *Nall, H., & *Seremak, J. Systolic blood pressure as a predictor of performance on inhibitory control task but not working memory task.
- Roach, A. E.**, Lockhart, S. N., Carmichael, O., & DeCarli, C. Diabetes mellitus and white matter integrity are associated with inhibitory control performance independent of age in cognitively normal older adults

GRANTS / HONOR / AWARDS

- 2020** Biomedical Research Excellence (INBRE) Primer Faculty Mentor
Effects of noninvasive brain stimulation on inhibitory control part II: An HD-tDCS study (K. Jones, R. Till, D. Daniels, **\$2000**)
- 2019** AAUP Summer Institute Scholarship (**\$1000**)
- 2019** Psi Chi Summer Mamie Phipps Clark Diversity Graduate Research Grant Faculty Mentor
Can anodal high definition transcranial direct current stimulation (HD-tDCS) over the left V-5 improve reading ability? (A. Prince, **\$1346**)
- 2019** Summer Scholars Institute (SSI) Faculty Mentor
Using noninvasive brain stimulation to promote neural plasticity: An HD-tDCS study (D. Daniels, **\$7000**)
- 2019** Mini-Magellan Scholar Faculty Mentor
Using noninvasive brain stimulation: An HD-tDCS study (D. Daniels, **\$750**)
- 2018 – 2019** HAS University Service Award nominee
- 2019** 15th Annual Faculty Staff Appreciation Night – Honored faculty member
- 2018** Magellan Scholar Faculty Mentor in collaboration with Exercise Science (Dr. Parr)
The Effect of Indoor versus Outdoor Exercise on Mood. (M. Bookstaver, **\$2500**)
- 2018** HAS Travel Award recipient, USC Aiken (**\$710**)
- 2018** ASPIRE III, Co-PI: *Wireless Physiological Sensors to Explore the Pathophysiology and the Effects of Innovative Treatments for Traumatic Stress, Head Injuries and Emotional Dysregulation in Military Veterans, Student Athletes and Adults with ADHD: Out of the Laboratory and into the Field* (**\$67,606.95**)
- 2018** Magellan Scholar Faculty Mentor in collaboration with Dr. Swain
The Effect of Acetaminophen on Mu Suppression During a Pain Empathy Task: an EEG Study (S. McCommon, **\$2750**)
- 2018** Summer Scholars Institute (SSI) Faculty Mentor
An investigation into the neuroscience of emotion-processing using noninvasive brain stimulation: An HD-tDCS study (M. Rodriguez, **\$4000**)
- 2017 – 2018** HAS Excellence in Teaching Award nominee
- 2018** HAS Travel Award recipient, USC Aiken (**\$1200**)
- 2018** Biomedical Research Excellence (INBRE) Extension Faculty Mentor
An investigation into the neuroscience of emotion processing using noninvasive brain stimulation (M. Rodriguez, **\$5000**)
- 2018** Biomedical Research Excellence (INBRE) Primer Faculty Mentor

- Effects of Anxiety on Inhibitory and Attentional Control* (K. Thomas, **\$2000**)
- 2018** Biomedical Research Excellence (INBRE) Primer Faculty Mentor
The Effects of Vascular Risk Factors on Inhibitory Control in Cognitively Healthy Young Adults
(J. Seremak, **\$2000**)
- 2017** Biomedical Research Excellence (INBRE) Primer Faculty Mentor
Effects of High Definition Transcranial Direct Current Stimulation on Inhibitory Control (M. Rodriguez, **\$2000**)
- 2017** Research Initiative for Summer Engagement (RISE) Award Recipient, USC Columbia (**\$6000**)
Efficacy of transcranial magnetic stimulation (TMS) for pharmacoresistant major depressive disorder (MDD) in active duty military personnel
- 2016** Biomedical Research Excellence (INBRE) Primer Faculty Mentor
Effects of Diabetes on Working Memory (T. Coleman, **\$1500**)
Diabetes and Inhibitory Control (B. Hall, **\$1500**)
- 2015** Research Initiative for Summer Engagement (RISE) Award Recipient, USC Columbia (**\$5997.11**)
Diabetes influences inhibitory control performance independent of age in cognitively normal older adults.
- 2015** Early Career Research Award Finalist, Southeastern Psychological Association (SEPA) 61st Annual Meeting
- 2015** HAS Travel Award recipient, USC Aiken (**\$2000**)
- 2012** Social Sciences Dean's Doctoral Fellowship for Excellence Award, UC Davis (**\$2000**)
- 2012** Alzheimer's Association International Conference Student Volunteer Travel Fellowship Award
- 2012** Interdisciplinary Graduate & Professional Student Symposium Honorable Mention, UC Davis
- 2012** NIMH Interdisciplinary Behavioral Science Center Annual Conference Travel Award
- 2011** Alzheimer's Association Young Scientist Award – Full Award (co-author)
- 2011** Alzheimer's Association Young Scientist Award – Honorable Mention
- 2009** Graduate Student Association Travel Award, UC Davis
- 2009 – 2014** Golden Key International Honor Society (GPA: 3.99)

MASTER'S THESIS MENTORING

Chair

- 2019 – present: Nikki Major, "Emotion regulation and childhood trauma: A high definition transcranial direct current stimulation (HD-tDCS) study."
- 2018 – present: Ashlan Prince, "Can anodal high definition transcranial direct current stimulation (HD-tDCS) over the left V-5 improve reading ability?"
- 2018 – present: Emily Whetsel, "Social Learning Theory and Childhood Emotional Invalidation"
- 2018 – 2019: Yen Chun (Mimi) Lee, "Taking you to your happy place- the effects of VR on mood and anxiety disorders as a potential therapy"
- 2017 – 2019: Jordan Cox. "The Implications of Obsessive Compulsive Disorder (OCD)" – **defended December, 2019**
- 2016 – 2019: Jesse Light Weber. "The Impact of Emotion Regulation Strategies on Negative Affect and Working Memory Capacity" – **defended January, 2019**
- 2016 – 2017: Breana McSwain. "The Effects Anxiety has on Attentional Bias and Working Memory" – **defended December, 2017**

Committee Member

- 2019 – present: Kinsey King. "Helicopter Parenting and the effects on emotional invalidation"
- 2019 – present: Collytte Cederstrom. "Anxiety, Attention, and Cell Phone Addiction"
- 2018 – present: Jamie Glass. "Perceptions of Masculinity"
- 2017 – 2019: Emily Siebach. "PTSD: the Effects of Chronic Stress on Combat Veterans" – **defended April, 2019**
- 2016 – 2018: Amanda Cocchiara. "The Impact of Transcranial Magnetic Stimulation on Refractory Depression and Sleep Disturbance in Service Members" – **defended August, 2018**
- 2016 – 2018: Jonathan Burton. "Feedback Related Negativity in Depression: an EEG Study" – **defended December, 2018**
- 2016 – 2018: Kayla Tamas. "Your Biological Clock is Ticking": Examining Stigma of Childless Men and Women – **defended May, 2018**
- 2015 – 2017: Kirsten Shirley Arnett. "The Relationship of Empathy and Cold-Heartedness with Perceived Childhood Emotional Abuse and Mu Rhythm Oscillation During a Pain Perception Task: An EEG Study" - **defended April, 2017**
- 2015 – 2016: Matthew Nelson. "Reinstatement of Second Order Fear" - **defended May, 2016**

SERVICE

Professional

2019 – 2020	<i>Secretary</i>	American Association of University Professors (AAUP), USC Aiken Chapter
2019 –	<i>Ad Hoc Reviewer</i>	Social Neuroscience (impact factor 2.738)
2018 – 2019	<i>Member</i>	AAUP, USC Aiken Chapter
2018 – 2019	<i>Article Editor</i>	SAGE Open "Anodal transcranial direct current stimulation (tDCS) over the left DLPFC improves emotional regulation"
2018	<i>Invited Reviewer</i>	Oxford University Press, Behavioral Neuroscience Textbook, Eighth Edition
2018 –	<i>Ad Hoc Reviewer</i>	Neurobiology of Aging (impact factor 5.153)
2017 –	<i>Ad Hoc Reviewer</i>	NeuroImage (impact factor 5.835)
2017 –	<i>Ad Hoc Reviewer</i>	Journal of Alzheimer's Disease (impact factor 3.731)
2017 –	<i>Ad Hoc Reviewer</i>	Dementia and Geriatric Cognitive Disorders (impact factor 3.511)
2016 –	<i>Ad Hoc Reviewer</i>	PLoS ONE (impact factor 2.806)

University of South Carolina System

2018 – 2020	<i>USC Aiken Fellow</i>	USC System Academic Leadership Fellow Program
2019	<i>Past Recipient Reviewer</i>	ASPIRE III Reviewer (Spring 2019)
2019	<i>USC Aiken Reviewer</i>	Magellan Scholar Reviewer (Spring 2019)
2017	<i>USC Aiken Reviewer</i>	Magellan Scholar Reviewer (Fall 2017)
2017	<i>USC Aiken Reviewer</i>	Magellan Scholar Reviewer (Spring 2017)
2016	<i>USC Aiken Reviewer</i>	Magellan Scholar Reviewer (Fall 2016)

USC Aiken

2019	<i>Faculty Member</i>	Advancing Inclusion and Belonging Strategic Plan Task Force
2019	<i>Secretary</i>	QEP Planning Strategic Plan Task Force
2019	<i>QEP Member</i>	QEP Task Force Survey Development Subcommittee

USC Aiken Invited

2019 –	<i>Faculty Member</i>	Assistant Director of Student Life-Diversity Initiatives Search Committee
2018	<i>Dept. Representative</i>	STEM Friday Committee, CSE
2017 – 2018	<i>External Dept. Member</i>	Colleges of Science & Engineering Math Search Committee
2017 – 2018	<i>Faculty Member</i>	Chancellor's Task Force on Diversity, Inclusion, and Belonging
2017 – 2018	<i>Faculty Member</i>	Chancellor's Task Force on Student Development & Co-Curricular Planning Subcommittee
2014 – 2015	<i>New Faculty Member</i>	New Faculty Orientation Committee
2014 –	<i>Faculty Member</i>	Interdisciplinary Studies Advisory Committee, Behavioral Sciences
2014 –	<i>Faculty Member</i>	Interdisciplinary Studies Assessment Subcommittee
2014 –	<i>Faculty Member</i>	Interdisciplinary Studies Outreach and Recruitment Subcommittee
2014 – 2015	<i>External Dept. Member</i>	School of Nursing Search Committee

USC Aiken Faculty Assembly - Elected

2019 – 2020	<i>Faculty Member</i>	Courses & Curricula Committee (C&C)
2019 – 2020	<i>Secretary, Chair-elect</i>	University Planning Committee (UPC)
2018 – 2019	<i>Chair</i>	Graduate Advisory Council (GAC)
2018 – 2019	<i>Faculty Member</i>	University Planning Committee
2017 – 2018	<i>Chair</i>	Library Committee
2017 – 2018	<i>Chair-elect</i>	Graduate Advisory Council
2017	<i>Faculty Member</i>	HAS Excellence in Teaching Subcommittee
2016 – 2017	<i>Secretary</i>	Graduate Advisory Council
2016 – 2017	<i>Secretary</i>	Library Committee
2016	<i>Faculty Member</i>	HAS Scholarly Activity Subcommittee
2015 – 2016	<i>Faculty Member</i>	Library Committee

Psychology Department

2019 – 2020	<i>Department Member</i>	Colleges of Science & Engineering Search Committee (Clinical)
2019 –	<i>Faculty Volunteer</i>	USC Aiken Family Fund
2018 –	<i>Department Member</i>	Social Media & Marketing
2017 – 2018	<i>Department Member</i>	Colleges of Science & Engineering Search Committee (Developmental)
2016 – 2017	<i>Chair</i>	Colleges of Science & Engineering Psychology Department Chair Selection

2014 – 2018	<i>Department</i>	Psychology Department Undergraduate & Graduate Assessment
2014 – 2015	<i>Department Member</i>	Colleges of Science & Engineering Psychology Search Committee (Social)
2014 –	<i>Faculty Advisor</i>	Neuroscience Club
2014 – 2019	<i>Webmaster</i>	Psychology Department Website

PROFESSIONAL AFFILIATIONS

2019 – 2020	Association of Military Surgeons of the United States (AMSUS)
2018 –	American Association of University Professors (AAUP)
2017 –	National Research Mentoring Network (NRMN)
2015 –	Psi Chi International Honors Society in Psychology
2014 –	Southeastern Psychological Association (SEPA)
2013 – 2015	Organization for Human Brain Mapping (OHBM)
2011 – 2014	International Society to Advance Alzheimer Research and Treatment (ISTAART)
2009 –	Society for Neuroscience (SfN)
2004 –	Cognitive Neuroscience Society (CNS)

INVITED TALKS

- Roach, A. E.** A closer look at the impact of vascular risk factors on cognition. Wake Forest University School of Medicine, Winston-Salem, NC, 2020.
- Roach, A. E.** The Science Behind Biological Sex. USC Aiken Intercurricular Enrichment (ICE), 2019.
- Hatchett, A., & **Roach, A. E.** Love Your Lungs. USC Aiken Intercurricular Enrichment (ICE), 2019.
- Bruzina, D., **Roach, A. E.**, & Murphy, R. Neurolinguistics of swearing. USC Aiken Intercurricular Enrichment (ICE), 2017.
- Roach, A. E.** What happens to the brain as you age? USC Aiken Intercurricular Enrichment (ICE), 2015.
- Roach, A. E.**, Lockhart, S. N., & DeCarli, C. The effect of white matter hyperintensities on inhibitory control in cognitively normal older adults. Award seminar given 6/28/11 at Alzheimer’s Association Researchers’ Symposium, Stanford University, 2011.
- Roach, A. E.** The effect of retrieval strategy on recency. 8th annual meeting of Northwest Cognition and Memory (NOWCAM). University of British Columbia, Vancouver, BC, 2006.
- Roach, A. E.** The effect of retrieval strategy on the recency effect. 2nd annual meeting of Psychfest. Western Washington University, Bellingham, WA, 2006.

CONFERENCE PRESENTATIONS (*denotes undergraduate author, ^ denotes graduate student author, all are posters unless otherwise stated)

- Jones, K.*, Till, R.*, Daniels, D.* & **Roach, A.E.** Effects of high definition transcranial direct current stimulation on inhibitory control: An HD-tDCS study. USC Aiken College of Science and Engineering Science on Tap, Pacer Alley Annex, Aiken, SC. 2020.
- Daniels, D.* & **Roach, A. E.** Effects of high definition transcranial direct current stimulation on inhibitory control. USC Aiken Summer Scholars Institute Summer Symposium, Aiken, SC. 2019.
- Rodriguez, M.* & **Roach, A. E.** Effects of high definition transcranial direct current stimulation on inhibitory control. USC Aiken College of Science and Engineering Science on Tap, Pacer Annex, Aiken, SC. 2019.
- Seremak, J.*, Nall, H.* & **Roach, A. E.** The effects of vascular risk factors on inhibitory control in cognitively healthy young adults. USC Aiken College of Science and Engineering Science on Tap, Pacer Annex, Aiken, SC. 2019.
- Thomas, K.* & **Roach, A. E.** Anxiety, inhibitory control and attentional control using virtual reality technology. 65th Annual meeting of Southeastern Psychological Association (SEPA), Jacksonville, FL. 2019.
- Rodriguez, M.* & **Roach, A. E.** Effects of high definition transcranial direct current stimulation on inhibitory control. 48th Annual Meeting of the Society for Neuroscience (SfN), San Diego, CA. 2018.
- Rodriguez, M.* & **Roach, A. E.** An investigation into the neuroscience of emotion-processing using noninvasive brain stimulation: An HD-tDCS study. USC Aiken Summer Scholars Institute Summer Symposium, Aiken, SC. 2018.
- Franklin, N.* & **Roach, A. E.** Understanding the perception and experience of diversity. 11th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2018.

- Nall, H.* & **Roach, A. E.** Vascular risk factors for diabetes in late adolescents and young adults, an assessment of working memory. 25th Annual Meeting of the Cognitive Neuroscience Society (CNS), Boston, MA. 2018.
- Nall, H.* & **Roach, A. E.** Comparing working memory function in young adults with and without vascular risk factors of diabetes. USC Neuroscience Retreat, Columbia, SC. 2018.
- Nall, H.* , Seremak, J.* & **Roach, A. E.** Vascular risk factors and diabetes in late adolescents and young adults, an assessment of working memory. Oral presentation presented at the 11th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2018.
- Nall, H.* , Seremak, J.* , & **Roach, A. E.** Vascular risk factors for diabetes in late adolescents and young adults, an assessment of working memory. Discover USC. Columbia, SC. 2018.
- Rodriguez, M.* & **Roach, A. E.** An Investigation into the Neuroscience of Emotion-processing Using Noninvasive Brain Stimulation: An HD-tDCS Study. 11th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2018.
- Seremak, J.* & **Roach, A. E.** The effects of vascular risk factors on inhibitory control in cognitively healthy young adults. Oral presentation presented at the USC Neuroscience Retreat, Columbia, SC. 2018.
- Seremak, J.* , Nall, H.* & **Roach, A. E.** The effects of vascular risk factors on inhibitory control in cognitively healthy young adults. 11th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2018.
- Seremak, J.* & **Roach, A. E.** The effects of vascular risk factors on inhibitory control in cognitively healthy young adults. 25th Annual Meeting of the Cognitive Neuroscience Society (CNS), Boston, MA. 2018.
- Thomas, K.* & **Roach, A. E.** Vascular risk factors and the effects of anxiety on inhibitory and attentional control using virtual reality (VR) technology. 11th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2018.
- Rodriguez, M.* & **Roach, A. E.** Effects of high definition transcranial direct current stimulation (HD-tDCS) on inhibitory control. SC INBRE Science Symposium, Columbia, SC. 2017.
- Shirley, K.^ , **Roach, A. E.**, Elzy, M., & Jelson-Swain, L. Childhood emotional invalidation and right hemispheric involvement during a pain empathy task: An EEG study. 8th Annual Meeting of the Society for Social Neuroscience (S4SN), Washington DC. 2017.
- Cocchiara, A.^ , Hines, C., Bartocci, A., Raintree, J., Waelti, K., Agius, M., Huff, J., **Roach, A. E.**, Stafford, J., & Mooney, S.R. Efficacy of routine TMS for refractory depression in Active Duty Service Members in a DoD outpatient behavioral health clinic. 9th Annual Meeting of the Military Health System Research Symposium (MHSRS), Kissimmee, FL. 2017.
- Rodriguez, M.* & **Roach, A. E.** Effects of high definition transcranial direct current stimulation (HD-tDCS) on inhibitory control. 10th Annual Scholar Showcase, University of South Carolina Aiken. Aiken, SC. 2017.
- Coleman, T.* & **Roach, A. E.** Is working memory vulnerable to vascular risk factors or diabetes? Discover USC. Columbia, SC. 2017.
- Coleman, T.* & **Roach, A. E.** Is working memory vulnerable to vascular risk factors or diabetes? 63rd Annual Meeting of the Southeastern Psychological Association (SEPA), Atlanta, GA. 2017.
- Hall, B.* & **Roach, A. E.** Effects of vascular risk factors like diabetes on inhibitory control. 63rd Annual Meeting of the Southeastern Psychological Association (SEPA), Atlanta, GA. 2017.
- Roach, A. E.**, Lockhart, S. N., & DeCarli, C. The role of vascular risk factors in age-related inhibitory control deficit. Hilton Head, SC: 61st Annual Meeting of the Southeastern Psychological Association (SEPA), 2015. Paper presented for Early Career Research Award Finalist session.
- Roach, A. E.**, Lockhart, S. N., DeCarli, C. Vascular risk factors influence performance on inhibitory control tasks more than age in healthy elders. 22nd Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, CA. 2015.
- Roach, A. E.**, Lockhart, S. N., Carmichael, O., DeCarli, C. Diabetes mellitus and white matter integrity are associated with inhibitory performance on Stroop, Flanker, and Go-NoGo paradigms in cognitively normal older adults. Society for Neuroscience (SfN), San Diego, CA. 2013.
- Lockhart, S. N., **Roach, A. E.**, Luck, S.J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. Age and white matter injury are associated with hyperactivation during cue-guided spatial search. Society for Neuroscience (SfN), San Diego, CA. 2013.
- Roach, A. E.**, Lockhart, S. N., Carmichael, O., DeCarli, C. Effects of diabetes mellitus and white matter hyperintensities on Stroop and Flanker inhibitory control in cognitively normal older adults. International Society of Behavioral and Cognitive Vascular Disorders (VASCOG), Toronto, Canada. 2013.
- Hyman, I. E., Jr., **Roach, A. E.**, & Drivdahl, S. The updating function of autobiographical memory: Keeping the self located in time, place, and relationships. Paper presented at the meeting of Society for Applied Research in Memory and Cognition (SARMAC). Rotterdam. 2013.

- Lockhart, S. N., **Roach, A. E.**, Luck, S. J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. White matter hyperintensities are associated with hyperactivation independent of age during cue-guided spatial search. International Society of Behavioral and Cognitive Vascular Disorders (VASCOG). Toronto, Canada. 2013.
- Roach, A. E.**, Lockhart, S. N., DeCarli, C. Effects of age and vascular risk factors on performance during three inhibitory control paradigms in cognitively normal older adults. 20th annual meeting of the Cognitive Neuroscience Society (CNS), San Francisco, CA. 2013.
- Lockhart, S. N., **ROACH, A. E.**, Luck, S. J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. White matter injury is associated with visual search behavior independent of generalized slowing in aging. 20th annual meeting of the Cognitive Neuroscience Society (CNS), San Francisco, CA. 2013.
- Roach, A. E.**, Lockhart, S. N., He, J., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C., & Carmichael, O. Heterogeneity of functional connectivity reductions in normal cognitive aging. University of California Davis Alzheimer's Disease Center First Annual Research Symposium, Sacramento, CA. 2012.
- Lockhart, S. N., **Roach, A. E.**, Luck, S. J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. White matter injury is associated with visual search behavior in aging. University of California Davis Alzheimer's Disease Center First Annual Research Symposium, Sacramento, CA. 2012.
- Roach, A. E.**, Lockhart, S. N., He, J., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C., & Carmichael, O. Heterogeneity of functional connectivity reductions in normal cognitive aging. Bay Area Memory Meeting (BAMM), Davis, CA. 2012.
- Lockhart, S. N., **Roach, A. E.**, Luck, S. J., Geng, J., Beckett, L., Carmichael, O., DeCarli, C. White matter injury is associated with visual search behavior in aging. Bay Area Memory Meeting (BAMM), Davis, CA. 2012.
- Lockhart, S. N., **Roach, A. E.**, He, J., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C., & Carmichael, O. Heterogeneity of functional connectivity reductions in normal cognitive aging. Alzheimer's Association International Conference (AAIC), Vancouver, BC. 2012. (Abstract in *Alzheimer's & Dementia*, 8(S), P701–P702).
- Lockhart, S. N., **Roach, A. E.**, He, J., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C., & Carmichael, O. Heterogeneity of functional connectivity reductions in normal cognitive aging. Alzheimer's Imaging Consortium (AIC), Vancouver, BC. 2012. (Abstract in *Alzheimer's & Dementia*, 8(S), P68)
- Roach, A. E.**, Lockhart, S. N., He, J., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C., & Carmichael, O. Brain changes in normal aging: less volume, more noise. UC Davis Interdisciplinary Graduate and Professional Symposium, Davis, CA. 2012.
- Lockhart, S. N., Mayda, A. V., **Roach, A. E.**, Fletcher, E., Carmichael, O., Maillard, P., Schwarz, C. G., Yonelinas, A. P., Ranganath, C., DeCarli, C. White Matter Injury and Aging Brain Networks: New Methods and Findings. UC Davis Interdisciplinary Graduate and Professional Symposium, Davis, CA. 2012.
- Roach, A. E.**, Lockhart, S. N., Schwarz, C. G., Fletcher, E., DeCarli, C. The effect of white matter integrity on inhibitory control in cognitively normal older adults. Determinants of Executive Function & Dysfunction, NIMH Interdisciplinary Behavioral Science Center, Boulder, CO. 2012.
- Roach, A. E.**, Lockhart, S. N., Schwarz, C. G., Fletcher, E., DeCarli, C. The effect of white matter integrity on inhibitory control in cognitively normal older adults. Program No. 194.06. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience (SfN), 2011. Online.
- Roach, A. E.**, Lockhart, S. N., He, J., Carmichael, O., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C. Age-related differences in functional connectivity and structural brain measures. Alzheimer's Association Researchers' Symposium, Stanford, CA. 2011.
- Roach, A. E.**, Lockhart, S. N., Schwarz, C. G., Fletcher, E., DeCarli, C. The effect of white matter hyperintensities on inhibitory control in cognitively normal older adults. Alzheimer's Association Researchers' Symposium, Stanford, CA. 2011.
- Roach, A. E.**, Lockhart, S. N., Schwarz, C. G., Fletcher, E., DeCarli, C. The effect of white matter hyperintensities on inhibitory control in cognitively normal older adults. International Society of Behavioral and Cognitive Vascular Disorders (VASCOG), Lille, France. 2011.
- Lockhart, S. N., **Roach, A. E.**, He, J., Carmichael, O., Fletcher, E., Maillard, P., Schwarz, C. G., DeCarli, C. Age-related differences in functional connectivity and structural brain measures. Program No. 196.08. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience (SfN), 2011. Online.

- Lockhart, S. N., Mayda, A. V., **Roach, A. E.**, Fletcher, E., Carmichael, O., Maillard, P., Schwarz, C. G., Yonelinas, A. P., Ranganath, C., DeCarli, C. White matter injury is associated with episodic memory function independent of age and microstructural changes. International Society of Behavioral and Cognitive Vascular Disorders (VASCOG), Lille, France. 2011.
- Lockhart, S. N., Mayda, A. B. V., **Roach, A. E.**, Fletcher, E., Carmichael, O., DeCarli, C. Episodic memory function is associated with multiple measures of white matter integrity. Program No. 504.8. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience (SfN), 2010. Online.
- Roach, A. E.**, DeCarli, C. The effect of white matter hyperintensities on executive control in cognitively normal older adults. Program No. 676.13. 2009 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience (SfN), 2009. Online.
- Mayda, A. B. V., Lockhart, S. N., **Roach, A. E.**, DeCarli, C. Dorsolateral prefrontal cortex dysfunction associated with white matter hyperintensities in normal aging. Program No. 676.22. 2009 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience (SfN), 2009. Online.
- Roach, A. E.**, Steckley, R., & Carter, C. Conflict related adjustments of cognitive control in Schizophrenia and individuals at increased genetic risk for the illness. 15th annual meeting of the Cognitive Neuroscience Society (CNS), San Francisco, CA. 2008.
- Roach, A. E.** & Hyman, I. E., Jr. Retrieval strategy affects long-term recency in memory for college courses. 47th annual meeting of the Psychonomic Society, Houston, TX. 2006.
- Roach, A. E.** & Hyman, I. E., Jr. Strength of long-term recency is dependent upon retrieval strategy. 7th annual meeting of Northwest Cognition and Memory (NOWCAM). Western Washington University, Bellingham, WA. 2005.

DEVELOPMENT: RESEARCH / PROFESSIONAL / PERSONAL

- 2019** AAC&U Transforming STEM conference, Chicago, IL
- 2019** American Association of University Professors (AAUP) Summer Institute, Chicago, IL
- 2019** SC EPSCoR Academic Skills and Leadership Workshop, SC INBRE Network, USC School of Medicine
- 2019** Workshop: Graphics in R for Research and Publication, 65th Annual meeting of Southeastern Psychological Association (SEPA), Jacksonville, FL
- 2019** Webinar: Shifting the Campus Culture: Moving from Transactional Academic Advising to Transformational Holistic Student Success Coaching by Southern Utah University.
- 2019** Harassment & Discrimination Prevention Course
- 2019** Diversity: Inclusion in the Modern Workplace Course
- 2018** SC EPSCoR Academic Leadership & Career Development Workshop, SC INBRE Network, USC School of Medicine
- 2017** Diversity Workshop with Juan Johnson, USC Aiken
- 2017** Writing Intensive Workshop, USC Aiken
- 2017** Critical Inquiry Summer Institute, USC Aiken
- 2016** SC EPSCoR Academic Leadership & Career Development Workshop, SC INBRE Network, USC School of Medicine
- 2016** Department of Defense (DoD) Level 1 Anti-terrorism Awareness Training, Red Cross, Fort Gordon, GA
- 2013** Statistical Methods Workshop: Introduction to Social Network Analysis Using R and Statnet (April). Two-day workshop covering network data manipulation and visualization, statistical testing and social network analysis, and exponential random graph models
- 2013** *Certificate*: Seminar on Learner-Centered Teaching (August-September), Center for Excellence in Teaching and Learning. Six-session workshop series designing courses, activities, and assessments to enhance student learning.
- 2013** *Certificate*: Seminar on Powerful Pedagogy: Using Research-Supported Methods to Teach Effectively (January - March), Center for Excellence in Teaching and Learning. Six-session workshop series developing and improving teaching effectiveness, integrating technology, active learning, student motivation, and assessment.
- 2008** 5th Annual EEGLab Workshop: Swartz Center for Computational Neuroscience, University of California San Diego
- 2007** ERP Boot Camp: Steven J Luck and the Center for Mind and Brain (CMB), UC Davis, Supported by a grant from the National Institute of Mental Health (NIMH)
- 2007** fMRI Workshop for SPM5: Translational Cognitive and Affective Neuroscience Lab and CMB collaborative
- 2006** fMRI Visiting Fellowship: one-week course through MGH/MIT/HMS Martinos Center

IN THE MEDIA

News Channel 6, WJBF EXTRA: Mobile Dementia, 2015 TV interview with News Anchor John Hart, <http://wjbf.com/2015/05/06/wjbf-extra-mobile-dementia> (accessed August 2015). Transcript available.

PAST RESEARCH LABORATORIES

- 2008 – 2014** **Imaging of Dementia & Aging Laboratory**, UC Davis Center for Neuroscience, Davis, CA
Graduate Student Researcher, PI: Charles DeCarli, MD, Director of UC Davis Alzheimer’s Disease Center
- acquired functional and structural MRI, design and administered behavioral paradigms and neuropsychological assessments of a young and elderly population ranging from normal cognition to mild cognitive impairment
 - analyzed functional connectivity, white matter integrity and structural connectivity, correlated neuroimaging data with cognitive and neuropsychological measures
- 2006 – 2008** **Translational Cognitive & Affective Neuroscience Lab**, UC Davis Imaging Research Center, Sacramento, CA
Post-Graduate Researcher for Cameron Carter, MD, Director of the Imaging Research Center
<https://carterlab.ucdavis.edu/people>
- acquired, processed and analyzed behavioral, fMRI, & EEG data collected from patients with schizophrenia and their family members, patients with bipolar disorder, and non-clinical controls
 - administered non-patient Structured Clinical Interviews (SCID) for DSM-IV-R, neuropsychological assessments, and patient past-week symptom ratings
- 2004 – 2006** **Memory Lab**, Western Washington University, Bellingham, WA
Graduate Student Researcher, PI: Ira Hyman, PhD
- managed data collection, assisted with experimental design
 - oversaw and mentored undergraduate students