

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

2020 –	Associate Professor , Colleges of Science & Engineering, Psychology Department, USC Aiken
2014 – 2020	Assistant Professor, Colleges of Science & Engineering, Psychology Department, USC Aiken
2013 – 2014	Instructor, Department of Psychology, University of California Davis

USC AIKEN COURES TAUGHT

UNDERGRADUATE

Cognitive Processes
 Cognitive Processes Lab
 Neurobiology of Stress
 Neuroscience
 Neuroscience Lab
 Psychological Statistics
 Psychological Statistics Lab
 Psychopharmacology
 Reflective Capstone Experience

GRADUATE

Graduate Neuroscience

RESEARCH

Introduction to Psychological Research
 Intermediate Psychological Research
 Advanced Psychological Research
 Graduate Independent Research
 Graduate Thesis

PUBLICATIONS

Peer Reviewed Publications (^ denotes graduate student author, *denotes undergraduate student author)

Jelsone-Swain, L., McCommon, S.A.*, Turk, B.*, **Roach, A.**, (2023). Acetaminophen changes Mu rhythm power related to pain empathy, *Neuropsychologia*, <https://doi.org/10.1016/j.neuropsychologia.2023.108544>

Chandler, D. A.^, **Roach, A. E.**, Ellison, A., Husid-Burton, E.*, & Jelsone-Swain, L. (2022). The Relationship of Executive Function and Alpha Band Activity During the Eriksen Flanker Task: An EEG Study. *International Journal of Psychophysiology*, 108, 57-69. <https://doi.org/10.1016/j.ijpsycho.2022.09.010>

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. *Journal of ECT*. https://journals.lww.com/ectjournal/Abstract/9000/Repetitive_Transcranial_Magnetic_Stimulation_for.99073.aspx

- 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.
https://www.researchgate.net/publication/302462734_Chronic_Stress_Regulation_of_Emotion_and_Functional_Activity_of_the_Brain

Manuscripts in preparation

- Roach, A. E.**, Using high-definition transcranial direct current stimulation (HD-tDCS) to alter pain perception: A review paper.
- Roach, A. E.** & Lindsey, M.[^], "Nonpharmacological pain management therapies: A review paper."

GRANTS / HONOR / AWARDS

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|--------------------|--|
| 2024 | HAS Travel Award(\$2000) |
| 2024 | Nominated for HAS University Service Award |
| 2023 | Summer Scholars Institute (SSI) Faculty Mentor. <i>Noninvasive brain stimulation: Nonpharmacological interventions for pain management: An HD-tDCS study (A. Roach, \$5000; H. Chassereau, \$3000)</i> |
| 2023 | HAS Travel Award recipient, USC Aiken (\$883) |
| 2021 – 2022 | HAS University Service Award recipient |
| 2023 | Connections Grant Faculty Mentor. <i>Pet the Pain Away</i> (M. Lindsey, \$1000) |
| 2020 | Summer Scholars Institute (SSI) Faculty Mentor. <i>Noninvasive brain stimulation and its role in reducing anxiety: An HD-tDCS study (A. Roach, \$5000; K. Jones, \$3000)</i> |
| 2019 – 2020 | HAS Excellence in Scholarship nominee |
| 2020 | Biomedical Research Excellence (INBRE) Primer Faculty Mentor. <i>Effects of noninvasive brain stimulation on inhibitory control part II: An HD-tDCS study (K. Jones, R. Till, D. Daniels, \$2000)</i> |
| 2019 | AAUP Summer Institute Scholarship (\$1000) |
| 2019 | Psi Chi Summer Mamie Phipps Clark Diversity Graduate Research Grant Faculty Mentor. <i>Can anodal high definition transcranial direct current stimulation (HD-tDCS) over the left V-5 improve reading ability?</i> (A. Prince, \$1346) |
| 2019 | Summer Scholars Institute (SSI) Faculty Mentor. <i>Using noninvasive brain stimulation to promote neural plasticity: An HD-tDCS study (A. Roach, \$4000; D. Daniels, \$3000)</i> |
| 2019 | Mini-Magellan Scholar Faculty Mentor. <i>Using noninvasive brain stimulation: An HD-tDCS study (D. Daniels, \$750)</i> |
| 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**)
- 2016** Biomedical Research Excellence (INBRE) Primer Faculty Mentor. *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

- 2020 – 2022: Stephan Albrecht, "Quality of life as a predictor of ADHD symptom severity" – **defended May, 2022**
- 2019 – 2022: Nikki Major, "Emotion regulation and childhood trauma" – **defended August 2022**
- 2018 – 2020: Ashlan Prince, "Can anodal high-definition transcranial direct current stimulation (HD-tDCS) over the left V-5 improve reading ability?"
- 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

Jessalyn Good
Zane Repp
Jamie Glass
Jonathan Burton
Matthew Nelson

Lauren Baroni
Kinsey King
Emily Siebach
Kayla Tamas
Brandon Hill

Destiny Willis
Collytte Cederstrom
Amanda Cocchiara
Kirsten Shirley Arnett
Laney Dezanet

SERVICE***Professional***

2024	<i>NSF Panel Reviewer</i>	NSF Grant Review Panel
2023 – 2024	<i>Ad Hoc Reviewer</i>	Southeastern Psychological Association (SEPA) 70 th Annual Meeting
2019 – 2022	<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

2021 – 2024	<i>USC Aiken FA Chair</i>	System Faculty Leadership Council of Chairs
2021 – 2024	<i>USC Aiken FA Chair</i>	System Faculty Leadership Council
2021 – 2022	<i>USC Aiken Rep.</i>	USC System Presidential Candidate Search Committee
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

2021 – 2024	<i>Chair</i>	Faculty Assembly
2021 – 2022	<i>Chair</i>	Investiture of Chancellor Heimmermann
2021 – 2022	<i>USC Aiken FA Chair</i>	University Budget and Planning Committee
2021 – 2022	<i>Ex officio</i>	Faculty Advisory Committee
2021 – 2022	<i>Ex officio</i>	University Planning Committee
2021 – 2022	<i>Ex officio</i>	Faculty Welfare Committee
2020 – 2021	<i>Vice Chair</i>	Faculty Assembly
2020 – 2021	<i>Chair</i>	University Planning Committee
2020 – 2021	<i>Faculty Member</i>	Faculty Welfare Committee
2019 – 2020	<i>Faculty Member</i>	Advancing Inclusion and Belonging Strategic Plan Task Force
2019 – 2020	<i>Secretary</i>	QEP Planning Strategic Plan Task Force
2019 – 2020	<i>QEP Member</i>	QEP Task Force Survey Development Subcommittee
2019 – 2020	<i>Secretary</i>	Courses & Curricula Committee
2019 – 2020	<i>Secretary, Chair-elect</i>	University Planning Committee
2019 – 2020	<i>Faculty Member</i>	Assistant Director of Student Life-Diversity Initiatives Search Committee
2018 – 2019	<i>Chair</i>	Graduate Advisory Council
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 – 2018	<i>Faculty Member</i>	HAS Excellence in Teaching Subcommittee
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
2016 – 2017	<i>Secretary</i>	Graduate Advisory Council
2016 – 2017	<i>Secretary</i>	Library Committee
2016 – 2017	<i>Faculty Member</i>	HAS Scholarly Activity Subcommittee
2015 – 2016	<i>Faculty Member</i>	Library Committee
2014 – 2021	<i>Faculty Member</i>	Interdisciplinary Studies Advisory Committee, Behavioral Sciences
2014 – 2021	<i>Faculty Member</i>	Interdisciplinary Studies Assessment Subcommittee
2014 – 2021	<i>Faculty Member</i>	Interdisciplinary Studies Outreach and Recruitment Subcommittee
2014 – 2015	<i>New Faculty Member</i>	New Faculty Orientation Committee
2014 – 2015	<i>External Dept. Member</i>	School of Nursing Search Committee

College of Science & Engineering

2020 – 2021	<i>Department Rep.</i>	Recruitment/Retention/Progression/Engagement (RRPE)
2018 – 2021	<i>Department Rep.</i>	STEM Friday Committee
2019 – 2020	<i>Department Rep.</i>	AAC&U Transforming STEM conference, Chicago, IL

Psychology Department

2022 – 2023	<i>Chair</i>	Psychology Search Committee (Psychology)
2021 – 2022	<i>Department Member</i>	Undergraduate Program Assessment
2020 – 2021	<i>Department Member</i>	Psychology Search Committee (Developmental)
2020 – 2021	<i>Department Member</i>	Psychology Search Committee (Clinical)
2019 – 2020	<i>Department Member</i>	Psychology Search Committee (Clinical)
2019 – 2020	<i>Faculty Volunteer</i>	USC Aiken Family Fund
2018 –	<i>Department Member</i>	Social Media & Marketing
2017 – 2018	<i>Department Member</i>	Psychology 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>	Psychology Search Committee (Social)
2014 –	<i>Faculty Co-Advisor</i>	Neuroscience Club
2014 – 2019	<i>Webmaster</i>	Psychology Department Website

PROFESSIONAL AFFILIATIONS

2024 –	Society for the Teaching of Psychology (STP)
2022 –	American Psychological Association (APA)
2022 –	South Carolina Academy of Sciences (SCAS)
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)
2004 –	Cognitive Neuroscience Society (CNS)
2019– 2020	Association of Military Surgeons of the United States (AMSUS)
2009 – 2022	Society for Neuroscience (SfN)
2013 – 2015	Organization for Human Brain Mapping (OHBM)
2011 – 2014	International Society to Advance Alzheimer Research and Treatment (ISTAART)

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. (cancelled due to COVID-19).
- Roach, A. E.** Neuromodulatory effects and therapeutic applications of noninvasive brain stimulation. STEM in the Alley. 2019.
- 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)

- Lindsey, M. *, & **Roach, A.E.** Pet the Pain Away 31st Annual Meeting of the Cognitive Neuroscience Society (CNS), Toronto, ON, Canada. 2024.
- Lindsey, M. *, & **Roach, A.E.** Pet the Pain Away 69rd Annual Meeting of the Southeastern Psychological Association (SEPA), New Orleans, LA. 2023.
- Keaton, O. *, & **Roach, A.E.** COVID-19 and its Effects on Executive Function, Mood, and Anxiety. 30th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA. 2023.
- Lindsey, M. *, & **Roach, A.E.** Pet the Pain Away, USC Aiken 17th Annual Scholar Showcase, Aiken, SC. 2023.
- Waggoner, A. *, & **Roach, A.E.** Comorbidity of Anxiety and Depression and the Impact on Cognitive Control Dysfunctions: A Review. USC Aiken 14th Annual Scholar Showcase, Aiken, SC. 2020.
- Jones, K. *, & **Roach, A.E.** Noninvasive Brain Stimulation and Its Role in Reducing Anxiety: An HD-tDCS Review. USC Aiken Summer Scholars Institute Summer Symposium, Aiken, SC. 2020.
- 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 (VASCOD), 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 (VASCOD). 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

- 2024** Associate for Behavioral and Cognitive Therapies Conference (ABCT)
- 2024** CETL Masters Teaching Series – OER Resources attendee and presenter
- 2023** CETL Certificate of Completion: Master Teacher Series – Psychology Department
- 2022** COPLAC Women in STEM Summer Institute 2022, UNC Asheville, North Carolina
- 2021** USC CTE Certificate of Completion: Teaching Toward Inclusive Excellence (TTIE)
- 2020** Hawkes Learning webinar: Strategies for Cultural Inclusion in Online and F2F Classrooms
- 2020** Hawkes Learning webinar: Teaching Math Courses Online with Group Work
- 2020** Hawkes Learning webinar: Integrity in STEM Online Testing
- 2020** Hawkes Learning webinar: Communication and Organization -- Keys to Online Learning
- 2020** Hawkes Learning webinar: Strategies to Transform Face-to-Face Courses and Tutoring Services to an Online or Hybrid Format
- 2020** Hawkes Learning webinar: Balanced Discourse: Amplifying Voices in the Online Discussion Forum
- 2020** Hawkes Learning webinar: Keeping Online Students Engaged with Rguroo's Data Visualization Tools
- 2020** USC CTE webinar: Self & Peer Assessment in Blackboard
- 2020** USC CTE webinar: Advanced Blackboard Grade Center
- 2020** USC CTE webinar: Blackboard Tests & Test Proctoring
- 2020** USC CTE webinar: Hands-on Collaborate Small Group Session
- 2020** Society for Neuroscience webinar: COVID-19, the Brain, and Mental Health: Weighing the Direct and Indirect Effects
- 2020** Respondus Training Team webinar: Respondus 4.0 and the Test Bank Network: Quickly Create Online Exams
- 2020** Respondus Training Team webinar: LockDown Browser & Respondus Monitor- Prevent Cheating During Online Exams
- 2020** COPLAC July 2020 webinar: Engaging Students through Remote Learning to Create a Liberal Arts Educational Experience
- 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