

Amy E. Ramage, Ph.D.

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Education

Post-doctoral Fellowship, 2007-2009, Neuroscience Imaging, Research Imaging Institute, University of Texas Health Science Center San Antonio

Ph.D. 2001, Speech-Language Pathology and Cognitive Psychology, University of Arizona, Tucson, AZ

M.S. 1995, Speech-Language Pathology University of Arizona, Tucson, AZ

B.S. 1993 Speech and Hearing Sciences (summa cum laude), Texas Tech University, Lubbock, TX

Academic Appointments

- Assistant Professor, Department of Communication Sciences and Disorders, University of New Hampshire, Durham, NH 2016-present
- Part-Time Faculty, Department of Psychology, Trinity University, San Antonio, TX 2014-2016
- Instructor, Department of Psychiatry and the Research Imaging Institute, University of Texas Health Science Center San Antonio, San Antonio, TX. 2009-2016
- Post Doctoral Fellowship, Neuroscience Imaging University of Texas Health Science Center San Antonio, San Antonio, TX. Mentor: Peter T. Fox. 2007-2009
- Instructor San Diego State University, San Diego, CA. Taught undergraduate course in Anatomy and Physiology of the Speech Mechanism, the graduate course in Neuroscience of Communication Disorders, and provided clinical supervision of graduate students with patients having neurogenic communication disorders. 2002-2004
- Instructor, American Indian Training Program, Coordinator, University of Arizona, Department of Speech and Hearing Sciences, Tucson, AZ. Details: Supervised, taught and tutored graduate students in the American Indian Training Program in the Department of Speech and Hearing Sciences at the University of Arizona. This involved providing speech-language-hearing services to children at the Pascua Yaqui Head Start, the Bureau of Indian Affairs (BIA) elementary school and the BIA Hospital on the Pascua Yaqui and Tohono O'Odham reservations. 1996-1999

Certification and Licensure

- Speech Language Pathologist, State of Texas Board of Examiners for Speech-Language Pathology and Audiology 2007-2016
- Speech Language Pathologist, State of California 2002-2006

Associations/Memberships

- American Speech-Language-Hearing Association
- Society for the Neurobiology of Language
- Organization for Human Brain Mapping
- Academy for Neurogenic Communication Disorders and Sciences

Teaching Experience

- Aphasia in Adults (COMM 904), graduate, University of New Hampshire
- Cognitive Communication Disorders (COMM 913), graduate, University of New Hampshire
- Applied Neurology for the SLP (COMM 891), graduate, University of New Hampshire
- Organic Pathologies (COMM 630), undergraduate, University of New Hampshire
- Introduction to Neuroscience, Undergraduate students, Trinity University
- Advisor for Honor's College Theses – undergraduate students at the University of Texas at San Antonio
- Neuroimaging Lecture series, PGY4 Psychiatry residents, University of Texas Health Science Center at San Antonio
- Neuroscience of Communication Disorders, Graduate students, San Diego State University
- Anatomy and Physiology of the Speech Mechanism, Undergraduate students, San Diego State University
- Supervisor for clinical services, Graduate students, San Diego State University
- Aphasia and Other Communication Disorders, Graduate students, Northern Arizona University
- Clinical Observation and Analysis, Undergraduate students, University of Arizona
- Neurogenic Communication Disorders, Graduate students, University of Arizona, AZ

Clinical Experience

- Director and Clinical Supervisor for the Aphasia Clinics at the San Diego State University Communication Disorders Clinics, San Diego, CA Fall, 2003-
Summer, 2004
- Clinical Supervisor for the Aphasia Research Center Aphasia Clinic, University of Arizona, Tucson, AZ 1997-2001
- Per diem speech-language pathologist at the Corondelet St. Joseph's Hospital and Northwest Medical Center, Tucson, AZ 1998-2000
- Clinical Supervisor for students in the American Indian Training Program at the University of Arizona; supervisions sites at the Bureau of Indian Affairs 1996-1999

hospital at the Tohono O'Odham reservation and at the Pasqua Yaqui Head
Start on the Pasqua Yaqui reservation.

- University Medical Center, Speech-Language Pathologist, Tucson, AZ 1995-1997
- Clinical Fellowship Year, supervised by Nancy Helm-Estabrooks, Ph.D., and Sherril Howard, CCC-SLP, at the University of Arizona, the Southern Arizona Speech Center and the University Medical Center Hospital, Tucson, AZ 1995

Professional Development

- Writing Academy, University of New Hampshire
- UP-2-NIH Research Development program, University of New Hampshire
- Brain Connectivity Workshop, Montreal
- Course on Statistical Parametric Mapping, Zurich and collaborating on projects combining SPM and BrainMap
- Gordon Research Conference, Brain Energy, Metabolism and Blood Flow
- Mathematics in Brain Imaging, Institute for Pure and Applied Math, University of California at Los Angeles

Service

- Research Coordinator, Department of CSD, UNH
- CSD department liaison to Hamel Center for Undergraduate Research, UNH
- CSD department liaison to the University Honors Program, UNH
- Tenure-track professor search committees
- Undergraduate Program Curriculum Committee, University of New Hampshire, CSD Department
- Active participant in "Art and Neuroscience", a course offering and potential after-school and teacher training approach to improving children's ownership of their education through understanding their own learning while exploring creativity. (http://smartsa.org/SMART/Education/Pages/Art_&_Neuroscience_2012.html)
- International Editorial Consultant for several peer reviewed journals: *PLOS One*, *NeuroImage*, *Brain Structure and Function*, *Brain and Behavior*, *Biological Psychiatry*, *Human Brain Mapping*, *Journal of Speech, Language, and Hearing*, *Movement Disorders*

Research Grants

- UNH Collaborative Research Excellence (CoRE) Initiative, Pilot Research Grant, Head 9/2014-8/2018
Injury Prevention in Youth Sports. Status: Complete. Total Costs: \$25,000
- DOD, Fox (PI). Role: Co-Investigator, Neuroimaging Core for the STRONG STAR Consortium for Alleviating PTSD. Status: Complete. % Effort: 65. Total Costs: \$240,000 annually.

- DOD. Robin (Sub-award PI). Role: Co-Investigator, iSCORE Neuroimaging of treatment effects of CBT in mild traumatic brain injury. Status: Complete. % Effort: 30. Total Costs: \$557,435 9/2014-8/2016
- R03 AA20823, NIH/NIAAA. Role: **Principal Investigator**. Initiating Substance Use in Adolescence: Associations with rCBF. Status: Complete. % Effort: 25. Total Costs: \$99,000.00. Grant Detail: The project will take advantage of the unique opportunity to investigate adolescents prior to or at the early stages of substance use to identify brain-based biomarkers associated with initiation of use, the severity of use and the trajectory of use over time, and the impact of use on the developing brain. 9/2011-8/2014
- Dept. of Army/USAMRAA. Donald A. Robin (PI). Role: Co-Investigator. Investigation of Chronic Pain Following Brain Injury. Status: Complete. % Effort: 17. Total Costs: \$852,302.00. Grant Detail: The project will use fMRI while participants are resting quietly and during the application of mild nailbed pressure to study chronic pain following traumatic brain injury. 7/2010-6/2014
- R01 MH087493-01, NIH/NIMH. Walss-Bass (PI). Role: Co-Investigator. Immune System & Genetic Modulation of Brain Development and Behavior in Adolescence. Status: Complete. % Effort: 17. Grant Detail: The goal of the study is to investigate genes involved in regulation of the inflammatory response during the adolescent developmental period, in order to detect early signs of abnormal brain development and behavior. 6/2010-5/2014
- DOD W81XWH-08-2-0112. Fox (PI). Role: Co-investigator, STRONG STAR Neuroimaging Core. Status: Complete. % Effort: 40. Total Costs: \$4,236,105.00. 9/2008-3/2014

Research Publications

Abstracts:

- Ramage, AE, Walss-Bass, C., Olvera, RL, Williamson, DE. Inflammatory markers, distal and proximal stress, and gender affect cortico-limbic regional cerebral blood flow in adolescence. 2013, May. (Biological Psychiatry).
- Williamson, DE, Ramage, AE, Girotti, M, Morilak, DA, Olvera, RL, Walss-Bass, C. Stress induced increases in inflammation are associated with white matter integrity and increased depressive symptoms in adolescent males. Biological Psychiatry Annual Meeting, San Francisco, CA 6/13 (co-author).
- Ramage AE, Lin, AL, Olvera, RL, Fox, PT, & Williamson, DE. Regional cerebral blood flow and initiation of substance use during adolescence. 2013 May. (Biological Psychiatry).
- Ramage AE, Olvera RL, Lin A, Williamson DE. Altered Resting rCBF in the Default Mode Network Associated with Pre-clinical Symptoms in Adolescents with Familial Loading for Depression 2011 May. (Biological Psychiatry).

- Olvera RL, Glahn, DC, Null, M, Ramage AE, Williamson DE. A Voxel Based Morphometry (VBM) Study of Adolescent Offspring with High Family Loading for Major Depressive Disorder 2010 May. p. 144S. (Biological Psychiatry; vol. 67, no. 9).
- Williamson DE, Olvera RL, Ramage AE, Fox PT, Kochunov P. Attenuated White Matter Integrity is Associated with Increased Depressive Symptoms in Adolescents: Evidence from the Teen Alcohol Outcomes Study (TAOS) 2010 May. p. 243S. (Biological Psychiatry; vol. 67, no. 9).

Book Chapters:

- Ramage AE, Kiran S, Robin DA. Has imaging advanced the science in aphasiology: A critical review of neuroimaging research in acquired adult language disorders In: Ingham RJ. Neuroimaging in Communication Sciences and Disorders. San Diego, CA: Plural Publishing Inc.; 2008. p. 155 - 192.
- Robin DA, Jacks A, Ramage AE. The neural substrates of apraxia of speech as uncovered by brain imaging: A critical review In: Ingham RJ. Neuroimaging in Communication Sciences and Disorders. San Diego, CA: Plural Publishing Inc.; 2008. p. 129 - 154.
- Ramage AE, Holland AL. Language in Normal Aging and Age-Related Neurological Disorders In: F. Boller and S. Cappa. Handbook of Neuropsychology. San Diego, CA: Elsevier Science Publishers.; 2001.

Journal Articles:

- **Ramage, A.E.**, Myers, J., Sahl, C.Z., Kinney, E., Robin, D.A., & Swartz, E. (submitted). Combining cumulative head impact burden and cognitive-emotional-social status for *in vivo* observations in American youth football. *Frontiers of Neurology – Neurotrauma*.
- Vanasse, T.J., Franklin, C., Salinas, F.S., **Ramage, A.E.**, Calhoun, V.D., Robinson, P.C., Peterson, A.L., Mintz, J., Litz, B.T., Young-McCaughan, S., Resick, P., Fox, P.T., and the STRONG STAR Consortium (submitted). A resting-state network profile of combat trauma and post-traumatic stress disorder. *NeuroImage Clinical*.
- Abdallah, C.G., Averill, C.L., **Ramage, A.E.**, Averill, L.A., Alkin, E., Nemati, S., Krystal, J.H., Resick, P., Roache, J.D., Young-McCaughan, S., Peterson, A.L., Fox, P.T., and the STRONG STAR Consortium. (in press). Reduced salience and enhanced central executive connectivity following PTSD treatment. *Chronic Stress*.
- Abdallah, C. G., Averill, C. L., **Ramage, A. E.**, Averill, L. A., Goktas, S., Nemati, S., ... Fox, P. T.; and the STRONG STAR Consortium. (in press). Salience network disruption in US Army soldiers with PTSD. *Chronic Stress*.
- **Ramage, A.E.**, Tate, D.F., New, A.L., Lewis, J.L., & Robin, D.A. (2019). Effort and Fatigue-related functional connectivity in mild traumatic brain injury. *Frontiers in Neurology*, 9, 1-11. doi: 10.3389/fneur.2018.01165
- New, A.L., **Ramage, A.E.**, Robin, D.A., & Tate, D.F. (2016) Neural Correlates of Sense of Effort in Active Duty Military Members with Mild Traumatic Brain Injury. *Neurology*, 86(16 Supp.), P4-052.
- **Ramage, A.E.**, Litz, B., Resick, P.A., Woolsey, M.D., Dondanville, K.A., Young-McCaughan, S., Borah, A.M., Borah, E.V., Peterson, A.L., Fox, P.T., and the STRONG STAR Consortium (2016). Neurophysiology

associated with danger-based and non-danger-based traumas in posttraumatic stress disorder. *Social Cognitive and Affective Neuroscience*. Advance online publication. doi:10.1093/scan/nsv102.

- **Ramage, A.E.**, Lin, A.L., Olvera, R.L., Fox, P.T., & Williamson, D.E. (2015). Regional cerebral blood flow and initiation of substance use during adolescence. *Drug & Alcohol Disorders*.
- Smallwood, R. F., Laird, A. R., **Ramage, A. E.**, Parkinson, A. L., Lewis, J., Clauw, D. J., et al. (2013). Structural brain anomalies and chronic pain: a quantitative meta-analysis of gray matter volume. *The Journal of Pain : Official Journal of the American Pain Society*, 14(7), 663–675.
- Lewis, J. D., Wassermann, E. M., Chao, W., **Ramage, A. E.**, Robin, D. A., & Clauw, D. J. (2013). Central sensitization as a component of post-deployment syndrome. *NeuroRehabilitation*, 31(4), 367–372.
- **Ramage, A. E.**, Laird, A. R., Eickhoff, S. B., Acheson, A., Peterson, A. L., Williamson, D. E., et al. (2013). A coordinate-based meta-analytic model of trauma processing in posttraumatic stress disorder. *Human Brain Mapping*, 34(12), 3392–3399.
- **Ramage AE**, Fox PT, Brey RL, Narayana S, Cykowski MD, Naqibuddin M, Sampedro M, Holliday SL, Franklin C, Wallace DJ, Weisman MH, Petri M. Neuroimaging evidence of white matter inflammation in newly diagnosed systemic lupus erythematosus. *Arthritis Rheum* 2011 Oct;63(10):3048-3057.
- Kochunov, P., **Ramage, A. E.**, Lancaster, J. L., Robin, D. A., Narayana, S., Coyle, T., et al. (2009). Loss of cerebral white matter structural integrity tracks the gray matter metabolic decline in normal aging. *Neuroimage*, 45(1), 17–28.
- Plante E, Gutmann M, **Ramage AE**, Magloire J. Processing Narratives for Verbatim and Gist Information by Adults with Language Learning Disabilities: A Functional Neuroimaging Study *Learning Disabilities Research & Practice* 2006 Feb;21(1):61-76.
- Murray LL, **Ramage AE**, Hopper T. Memory impairments in adults with neurogenic communication disorders. *Semin Speech Lang* 2001 Jan;22(2):127-136.
- Holland AL, **Ramage AE**. Thinking outside the (black) box. *Brain Lang* 2000 Jan;71(1):93-95.
- Murray LL, **Ramage AE**. Assessing the executive function abilities of adults with neurogenic communication disorders. *Semin Speech Lang* 2000 Jan;21(2):153-167.
- Beeson PM, **Ramage AE**. Drawing from experience: The development of alternative communication strategies *Topics in Stroke Rehabilitation* 2000;7:10-20.
- **Ramage A**, Bayles K, Helm-Estabrooks N, Cruz R, Ramage AE. Frequency of perseveration in normal subjects. *Brain Lang* 1999 Feb;66(3):329-340.
- Helm-Estabrooks N, **Ramage AE**, Bayles K, Cruz R. Perseverative Behavior in Fluent and Nonfluent Aphasic Adults *Aphasiology* 1998;12(7/8):329-340.