

Julia M. Stephen, Ph.D.

Professional Address

The Mind Research Network
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Education History

Doctor of Philosophy in Physics
July 1997
University of Minnesota
Minneapolis, MN

Bachelors of Science in Physics and Mathematics, *summa cum laude*
May 1992
Northern Michigan University
Marquette, MI

Employment History

The Mind Research Network, Albuquerque, NM

2009 – present	MEG Core Director
2016 – present	Professor of Translational Neuroscience
2009 – 2016	Associate Professor of Translational Neuroscience
2007 – 2009	Research Scientist

University of New Mexico, Albuquerque, NM

2012 - present	Adjunct Associate Professor , Dept. of Neurosciences
2007 - 2012	Adjunct Research Assistant Professor , Dept. of Neurosciences
2004 - 2007	Assistant Professor , Department of Radiology
2000 - 2004	Research Assistant Professor , Department of Radiology
1997 - 2000	Postdoctoral Fellow , Department of Radiology, MEG Research

University of Minnesota, Minneapolis, MN

1994 - 1997	Research Assistant – Complex correlation analysis of MEG data
1995 - 1997	Mentor Teaching Assistant – Mentored physics teaching assistants
Summer '95, '96	Introductory Lab Developer – Developed undergraduate physics labs
1992 - 1995	Teaching Assistant – Taught introductory physics labs.

Minnesota Medical Research Foundation, Minneapolis, MN

Summer 1994	Scientist Assistant – Performed complexity analysis of electromyography time series.
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Michigan State University, East Lansing, MI

Summer 1991

Research Experience for Undergraduates Intern

Professional recognition, honors

Young Investigator Award, NCDEU Conference, Hollywood, FL, 2013.

Young Scientist Fellowship to 11th International Conference on Biomagnetism, 1998.

Outstanding Teaching Assistant, School of Physics and Astronomy, University of Minnesota, 1997.

Committee on Institutional Cooperation (CIC)/Women in Science and Engineering (WISE) travel grant recipient, 1997.

U.S. Department of Education/Graduate School/Phyllis St. Cyr Freier Fellowship recipient, 1992 - 1993.

Outstanding Graduating Senior, Physics Department, Northern Michigan University, 1992.

Outstanding Graduating Senior, Department of Mathematics and Computer Science, Northern Michigan University, 1992.

John R. Ogren Physical Sciences Prize for Outstanding Graduate in Chemistry or Physics, 1992.

Outstanding junior-level mathematics major, 1990.

Original research in refereed journals

1. Heinrichs-Graham E, Taylor BK, Wang YP, **Stephen JM**, Calhoun VD, Wilson TW. Parietal oscillatory dynamics mediate developmental improvement in motor performance. *Cerebral Cortex*, In press.
2. Beauchamp K, Lowe J, Schrader R, Shrestha S, Aragon C, Moss N, **Stephen J**, Bakhireva L. Self-Regulation and emotional reactivity in infants with prenatal exposure to opioids and alcohol. *Early Human Dev*, In press.
3. Wang J, Xiao L, Wilson TW, **Stephen JM**, Calhoun VD, Wang YP. Examining brain maturation during adolescence using graph Laplacian learning based Fourier transform. *J Neurosci Methods*. 2020 May 15;338:108649.
4. Kassani PH, Xiao L, Zhang G, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Causality based Feature Fusion for Brain Neuro-Developmental Analysis. *IEEE Trans Med Imaging*. 2020, In press
5. Taylor BK, Embury CM, Heinrichs-Graham E, Frenzel MR, Eastman JA, Wiesman AI, Wang YP, Calhoun VD, **Stephen JM**, Wilson TW. Neural oscillatory dynamics serving abstract reasoning reveal robust sex differences in typically-developing children and adolescents. *Dev Cogn Neurosci*. 2020 42:100770.
6. Badura-Brack AS, Mills MS, Embury CM, Khanna MM, Klanecky Earl A, **Stephen JM**, Wang YP, Calhoun VD, Wilson TW. Hippocampal and parahippocampal volumes vary by sex and traumatic life events in children. *J Psychiatry Neurosci*. 2020 Feb 20;45(3):190013.

7. Coffman B, Candelaria-Cook F, **Stephen JM**. Unisensory and multisensory response in fetal alcohol spectrum disorders (FASD): Effects of spatial congruence. *Neuroscience* 2020, 430:34-46.
8. Borna A, Carter TR, Colombo AP, Jau YY, McKay J, Weisend M, Taulu S, **Stephen JM**, Schwindt PDD. Non-invasive functional brain imaging with an OPM-based magnetoencephalography system. *PlosOne* 2020, 15(1):e0227684.
9. Cai B, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Improved estimation of dynamic connectivity from resting-state fMRI data. *Proc SPIE 10949, Medical Imaging 2019: Image Processing*, In Press.
10. Rahaman MA, Mathalon D, Lee HJ, Jiang W, Mueller BA, Andreassen O, Agartz I, Sponheim SR, Mayer AR, **Stephen J**, Jung RE, Turner JA, Canive J, Bustillo J, Calhoun VD, Gupta CN, Rachakonda S, Chen J, Liu J, van Erp TGM, Potkin S, Ford J. N-BiC: A Method for Multi-Component and Symptom Biclustering of Structural MRI Data: Application to Schizophrenia. *IEEE Trans Biomed Eng.* 2020 67(1):110-121
11. Cai B, Zhang G, Hu W, Zhang A, Zille P, Zhang Y, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP A GICA-TVGL framework to study sex differences in resting state fMRI dynamic connectivity. *J Neurosci Methods* 2020, 332:108531.
12. Xiao L, Wang J, Kassani PH, Zhang Y, Bai Y, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Multi-graph learning based brain functional connectivity analysis in fMRI data. *IEEE Trans Med Imaging* 2020, 39(5):1746-1758.
13. **Stephen JM**, Shrestha S, Yakes Jimenez E, Williams SM, Ortega A, Cano S, Leeman L, Bakhireva LN. Disparities in breastfeeding outcomes among women with opioid use disorder. *Acta Paediatr.* 2020,109(5):1064-1066.
14. Faghiri A, **Stephen JM**, Wang YP, Wilson TW, Calhoun VD. Brain development includes linear and multiple nonlinear trajectories: A cross-sectional resting-state functional magnetic resonance imaging study. *Brain Connect* 2019, 9(10):777-788.
15. Faghiri A, **Stephen JM**, Wang YP, Wilson TW, Calhoun VD. Using gradient as a new metric for dynamic connectivity estimation from resting fMRI data. *IEEE ISBI* 2019. 1805-1808.
16. Candelaria-Cook FT, Schendel ME, Ojeda CJ, Bustillo JR, **Stephen JM**. Reduced parietal alpha power and psychotic symptoms: Test-retest reliability of resting-state magnetoencephalography in schizophrenia and healthy controls. *Schizophr Res* 2020, 215:229-240.
17. Cai B, Zhang G, Hu W, Zhang A, Zille P, Zhang Y, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Refined measure of functional connectomes for improved identifiability and prediction. *Human Brain Mapp* 2019, 40(16):4843-4858.
18. Zhang G, Cai B, Zhang A, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Estimating Dynamic Functional Brain cConnectivity with a Sparse Hidden Markov Model. *IEEE Trans Med Imaging* 2020, 39(2):488-498.
19. Zhang A, Cai B, Hu W, Jia B, Liang F, Wilson TW, **Stephen JM**, Calhoun VD, Wang YP. Joint Bayesian-incorporating estimation of multiple Gaussian graphical models to study

- brain connectivity development in adolescence. *IEEE Trans Med Imaging* 2020, 39(2):357-365.
20. Xiao L, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. A Manifold Regularized Multi-Task Learning Model for IQ Prediction from Two fMRI Paradigms. *IEEE Trans Biomed Eng.* 2020, 67(3):796-806.
 21. Mills MS, Embury CM, Klanecky AK, Khanna MM, Calhoun VD, **Stephen JM**, Wang YP, Wilson TW, Badura-Brack AS. Traumatic Events Are Associated with Diverse Psychological Symptoms in Typically-Developing Children. *J Child Adolescent Trauma* 2019, In press.
 22. Gao L, Grebogi C, Lai Y-C , **Stephen J**, Zhang T, Li Y, Ren H, Li D, Wang J, Schelter B, Sommerlade L. Quantitative Assessment of Cerebral Connectivity Deficiency and Cognitive Impairment in Children with Prenatal Alcohol Exposure. *Chaos* 2019, 29(4):041101.
 23. Iraj A, Deramus TP, Lewis N, Yaesoubi M, **Stephen JM**, Erhardt E, Belger A, Ford JM, McEwen S, Mathalon DH, Mueller BA, Pearlson GD, Potkin SG, Preda A, Turner JA, Vaidya JG, van Erp TGM, Calhoun VD. The spatial chronnectome reveals a dynamic interplay between functional segregation and integration. *Hum Brain Mapp.* 2019 40(10):3058-3077. PMID: 30884018.
 24. Agcaoglu O, Wilson TW, Wang YP, **Stephen J**, Calhoun VD. Resting state connectivity differences in eyes open versus eyes closed conditions. *Hum Brain Mapp.* 2019 40(8):2488-2498 PubMed PMID: 30720907.
 25. Embury CM, Wiesman AI, Proskovec AL, Mills MS, Heinrichs-Graham E, Wang YP, Calhoun VD, **Stephen JM**, Wilson TW. Neural dynamics of verbal working memory processing in children and adolescents. *Neuroimage.* 2019 Jan 15;185:191-197. PMID: PMC6289659.
 26. Bakhireva LN, Holbrook BD, Shrestha S, Leyva Y, Ashley M, Cano S, Lowe J, **Stephen JM**, Leeman L. Association between prenatal opioid exposure, neonatal opioid withdrawal syndrome, and neurodevelopmental and behavioral outcomes at 5-8 months of age. *Early Hum Dev.* 2019 Jan;128:69-76. PMID: PMC6348117.
 27. Trevarrow M, Kurz M, McDermott TJ, Wiesman A, Mills MS, Wang YP, Calhoun VD, **Stephen J**, Wilson TW. The Developmental Trajectory of Sensorimotor Cortical Oscillations. *NeuroImage* 2019, 184:455-461.
 28. Chen J, Calhoun VD, Lin D, Perrone-Bizzozero NI, Bustillo JR, Pearlson GD, Potkin SG, van Erp TGM, Macciardi F, Ehrlich S, Ho BC, Sponheim SR, Wang L, **Stephen JM**, Mayer AR, Hanlon FM, Jung RE, Clementz BA, Keshavan MS, Gershon ES, Sweeney JA, Tamminga CA, Andreassen OA, Agartz I, Westlye LT, Sui J, Du Y, Turner JA, Liu J. Shared Genetic Risk of Schizophrenia and Gray Matter Reduction in 6p22.1. *Schizophr Bull.* 2019 Jan 1;45(1):222-232. PMID: PMC6293216.
 29. Cai B, Zhang G, Zhang A, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP, Capturing Dynamic Connectivity from Resting State fMRI using Time-Varying Graphical Lasso. *IEEE Trans Biomed Eng.* 2019 In press.

30. Xiao L, **Stephen JM**, Wilson TW, Calhoun VD, Wang Y. Alternating Diffusion Map Based Fusion of Multimodal Brain Connectivity Networks for IQ Prediction. *IEEE Trans Biomed Eng*. 2018 66(8):2140-2151. PubMed PMID: 30507492.
31. Sanfratello L, Aine C, **Stephen J**. Neuroimaging investigations of dorsal stream processing and effects of stimulus synchrony in schizophrenia. *Psychiatry Res Neuroimaging* 2018, S0925-4927(17)30317-7. PMCID: PMC6252286.
32. Fang J, **Stephen J**, Wilson T, Calhoun VD, Wang YP. Detection of differentially developed functional connectivity patterns in adolescents based on tensor discriminative analysis. *IEEE ISBI* 2018. 10-14
33. Van Erp et al. Cortical Brain Abnormalities in 4474 Individuals With Schizophrenia and 5098 Control Subjects via the Enhancing Neuro Imaging Genetics Through Meta Analysis (ENIGMA) Consortium. *Biol Psychiatry* 2018, 84(9): 644-654.
34. Kabella DM, Flynn L, Peters A, Kodituwakku P, **Stephen JM**. Amplitude by Peak Interaction but No Evidence of Auditory Mismatch Response Deficits to Frequency Change in Preschool-Aged Children with Fetal Alcohol Spectrum Disorders. *Alcohol Clin Exp Res*. 2018, 42(8):1486-1492.
35. Cai B, Zille P, **Stephen JM**, Wilson TW, Calhoun VD, Wang YP. Estimation of Dynamic Sparse Connectivity Patterns From Resting State fMRI. *IEEE Trans Med Imaging* 2018, 37(5): 1224-1234.
36. Bakhireva LN, Shrestha S, Garrison L, Leeman L, Rayburn WF, **Stephen JM**. Prevalence of alcohol use in pregnant women with substance use disorder. *Drug Alcohol Depend* 2018, 187: 305-310.
37. Bakhireva LN, Lowe J, Garrison LM, Cano S, Leyva Y, Qeadan F, **Stephen JM**. Role of caregiver-reported outcomes in identification of children with prenatal alcohol exposure during the first year of life. *Pediatric Res* 2018, 2018 Sep;84(3):362-370. PMCID: PMC6239996
38. Heinrichs-Graham E, McDermott TJ, Mills MS, Wiesman AI, Wang YP, **Stephen JM**, Calhoun VD, Wilson TW. The lifespan trajectory of neural oscillatory activity in the motor system. *Dev Cogn Neurosci* 2018, 30:159-168.
39. Thoma RJ, Haghani-Tehrani P, Turner J, Bigelow R, Lewine JD, Clark VP, Yeo RA, **Stephen J**, Neuropsychological analysis of auditory verbal hallucinations. *Schizophrenia Res* 2018 192:459.
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41. Faghiri A, **Stephen JM**, Wang YP, Wilson TW, Calhoun VD. Changing brain connectivity dynamics: From early childhood to adulthood. *Human Brain Mapp* 2018, 39(3): 1108-1117.

42. **Stephen JM**, Flynn L, Kabella D, Schendel M, Cano S, Savage DD, Rayburn W, Leeman LM, Lowe J, Bakhireva LN. Hypersynchrony in MEG spectral amplitude in prospectively-identified 6-month-old infants prenatally exposed to alcohol. *NeuroImage: Clinical* 2018, 17:826-834. PMID: PMC5842663
43. Bolaños AD, Coffman BA, Candelaria-Cook FT, Kodituwakku P, **Stephen JM**. Altered Neural Oscillations During Multisensory Integration in Adolescents with Fetal Alcohol Spectrum Disorder, *Alcoholism Clinical Exp Research*, 2017 Dec;41(12):2173-2184. PMID: PMC5711625.
44. Borna A, Carter TR, Goldberg JD, Colombo AP, Jau YY, Berry C, McKay J, **Stephen J**, Weisend M, Schwindt PDD. A 20-channel magnetoencephalography system based on optically pumped magnetometers. *Phys Med Biol*. 2017 Nov 10;62(23):8909-8923. PMID: PMC5890515.
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46. Abrol A, Damaraju E, Miller RL, **Stephen JM**, Claus ED, Mayer AR, Calhoun VD. Replicability of time-varying connectivity patterns in large resting state fMRI samples. *Neuroimage*. 2017 163:160-176.
47. Thoma RJ, Meier A, Houck J, Clark VP, Lewine JD, Turner J, Calhoun V, **Stephen J**. Diminished auditory sensory gating during active auditory verbal hallucinations. *Schizophr Res*. 2017 188:125-131.
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49. Aine CJ, Bockholt HJ, Bustillo JR, Cañive JM, Caprihan A, Gasparovic C, Hanlon FM, Houck JM, Jung RE, Lauriello J, Liu J, Mayer AR, Perrone-Bizzozero NI, Posse S, **Stephen JM**, Turner JA, Clark VP, Calhoun VD. Multimodal Neuroimaging in Schizophrenia: Description and Dissemination. *Neuroinformatics*. 2017 15(4):343-364.
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51. Josef Golubic S, Aine CJ, **Stephen JM**, Adair JC, Knoefel JE, Supek S. MEG biomarker of Alzheimer's disease: Absence of a prefrontal generator during auditory sensory gating. *Hum Brain Mapp*. 2017 Oct;38(10):5180-5194. PMID: PMC5593799.
52. Zille P, Calhoun VD, **Stephen JM**, Wilson TW, Wang YP. Fused estimation of sparse connectivity patterns from rest fMRI. Application to comparison of children and adult brains. *IEEE Trans Med Imaging*. 2018 37(10):2165-2175.
53. Shrestha S, Jimenez E, Garrison L, Pribis P, Raisch DW, **Stephen JM**, Bakhireva LN. Dietary Intake Among Opioid- and Alcohol-Using Pregnant Women. *Subst Use Misuse*. 2017 Feb 22:1-10. PMID: PMC5607070.

54. Sanfratello L, Lundy SL, Qualls C, Knoefel JE, Adair JC, Caprihan A, **Stephen JM**, Aine CJ. Brain structure and verbal function across adulthood while controlling for cerebrovascular risks. *Hum Brain Mapp.* 2017 38(7):3472-3490.
55. Cetin MS, Houck JM, Rashid B, Agacoglu O, **Stephen JM**, Sui J, Canive J, Mayer A, Aine C, Bustillo JR, Calhoun VD. Multimodal classification of schizophrenia patients with MEG and fMRI data using static and dynamic connectivity measures. *Front Neurosci.* 2016, 10:466.
56. Houck, JM, Cetin MS, Mayer AR, Bustillo JR, **Stephen J**, Aine C, Canive J, Perrone-Bizzozero N, Thoma RJ, Brookes MJ, Calhoun VD. Magnetoencephalographic and functional MRI connectomics in schizophrenia via intra- and inter-network connectivity. *NeuroImage* 2016, 145(Pt A):96-106.
57. Gao L, Zhang T, Wang J, **Stephen J**. A pilot study on brain source localization and connectivity analysis with MEG responses to unilateral tactile stimuli in healthy children using normalized principal component analysis. *J Signal Processing Systems.* 87(2) pp 259–267.
58. Sanjuan PM, Poremba C, Flynn LR, Savich R, Annett RD, **Stephen J**. Association between theta power in 6-month old infants at rest and maternal PTSD severity: A pilot study. *Neurosci Lett* 2016, 630:120-6.
59. Thoma, RJ, Chaze C, Lewine JD, Calhoun VD, Clark VP, Bustillo J, Houck J, Ford J, Bigelow R, Wilhelmi C, **Stephen JM**, Turner JA. Functional MRI Evaluation of Multiple Neural Networks Underlying Auditory Verbal Hallucinations in Schizophrenia Spectrum Disorders. *Front Psychiatry* 2016, 7: 39.
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64. Bakhireva LN, Lowe JR, Gutierrez HL, **Stephen JM**. Ethanol, Neurodevelopment, Infant and Child Health (ENRICH) prospective cohort: Study design considerations. *Adv Pediatric Research* 2015 2:10.
65. Gao L, Sommerlade L, Coffman B, Zhang T, **Stephen JM**, Li D, Wang J, Grebogi C, Schelter B. Granger causal time-dependent source connectivity in the somatosensory network. *Sci Rep.* 2015 May 21;5:10399

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68. Cetin MS, Christensen F, Abbott CC, **Stephen JM**, Mayer AR, Cañive JM, Bustillo JR, Pearlson GD, Calhoun VD. Thalamus and posterior temporal lobe show greater inter-network connectivity at rest and across sensory paradigms in schizophrenia. *NeuroImage*, 2014 97:117-126.
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70. Coffman BA, Kodituwakku EL, Kodituwakku P, **Stephen JM**. Congenital Disinhibition: Dysfunctional cognitive control and risky decision making in adolescents with fetal alcohol spectrum disorders. *Alcoholism: Clin & Exp Res* 2014 38, 179A.
71. Aine CJ, Sanfratello L, Adair JC, Knoefel JE, Qualls C, Lundy SL, Caprihan A, Stone D, **Stephen, JM**. Characterization of a normal control group: Are they healthy? *NeuroImage*, 2014, 84:796-809.
72. Coffman BA, Hunter MA, Jones AP, Saxon HA, Kolodjeski K, Lockmiller B, Khan O, Collar T, **Stephen JM**, Clark VP. Using independent components analysis (ICA) to remove artifacts associated with transcranial direct current stimulation (tDCS) from electroencephalography (EEG) data: A comparison of ICA algorithms. *Brain Stimulation: Basic, Translational and Clinical Research*. 2014, 7(2):e6.
73. **Stephen JM**, Coffman BA, Stone DB, Kodituwakku P. Differences in MEG gamma oscillatory power during performance of a prosaccade task in adolescents with FASD. *Front Hum Neurosci* 2013, 7:900.
74. **Stephen JM**, Coffman B, Bustillo J, Jung R, Aine CJ, Calhoun VD. Using Joint ICA to link function and structure using MEG and DTI in schizophrenia, *NeuroImage*, 2013, 83:418-430.
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78. Aine CJ, Sanfratello L, Ranken D, Best E, MacArthur JA, Wallace T, Gilliam K, Donahue CH, Montano R, Bryant JE, Scott A, **Stephen JM**. MEG-SIM: A web portal for testing

- MEG analysis methods using realistic simulated and empirical data. *Neuroinform* 2012, 10(2):141-58.
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- Aine C, Supek S, Sanfratello L, Stephen J. Selection of Stimulus Parameters for Visual MEG Studies of Sensation and Cognition, In MEG-From Signals to Dynamic Cortical Networks (Eds. Selma Supek and Cheryl J. Aine), Springer Verlag, Heidelberg. 2014.
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Other writings and scholarly products

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- Stephen JM, Romero L, Zhang T, Okada Y. Auditory and Somatosensory Integration in Infants. D. Cheyne, B. Ross, G. Stroink and H. Weinberg (Editors). International Congress Series: New Frontiers in Biomagnetism: Proceedings of the 15th International Conference on Biomagnetism, Vancouver, BC Canada, August 21-25, 2006.
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- Huang M, Aine C, Weisend M, Stephen J, Meyer J, Christner R, Silveri J. "Pre- and Post-central Sulcal Sources Evoked by Stimulating the Median Nerve and Index Finger: Are Pre-central Sulcal Sources due to Passive Muscle Movement?" In Yoshimoto, T., Kotani, M., Kuriki, S., Karibe, H., Nakasato, N. (Eds.) *Recent Advances in Biomagnetism: Proceedings of the Eleventh International Conference on Biomagnetism*, Tohoku University Press, Sendai, Japan, 1999.
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- Invited Lectures**
- Stephen JM, Candelaria-Cook F, Bakhireva L, Hill D. Physiological effects displayed in children with prenatal alcohol exposure: implications for behavior. Invited Symposium Talk, 42nd Annual Conference Research Society on Alcoholism, Minneapolis, MN, June 22-26, 2019.
- Stephen J. Data-driven approaches to examine structure-function links. Biomag 2018 Satellite Meeting: Advances in Biomagnetic Signal Analysis. Philadelphia, PA, August 24-30, 2018.
- Stephen J. Data sharing at MRN. Biomag 2018 Biomag Satellite Meeting: MEG North America. Philadelphia, PA, August 24-30, 2018.
- Stephen J. Understanding developmental disorders in the context of brain networks: The interplay between sensory processing and cognition, 50 Years of MEG, Poros, Greece, April 21-22, 2018
- Stephen J. Alterations in brain function in children with prenatal alcohol exposure measured with MEG, Symposium invited speaker, 40th Annual Scientific Meeting of Research Society on Alcoholism, Denver, CO, June 2017.
- Stephen J. Alterations in brain function in children with prenatal alcohol exposure measured with MEG, Biomagnetic Sendai 2017: Joint conference for International Society on the Advancement of Clinical MEG. Symposium organizer and speaker, Sendai, Japan, May 2017.
- Stephen J. Keynote Speaker, A view of brain function in health and disease from a perceptual perspective. MEG North America NIH Workshop, November 1-2, 2016.

- Stephen J. Visual deficits in children with fetal alcohol spectrum disorder – implications for understanding normal development” International Conference on Biomagnetism, Seoul, S. Korea, October 2016.
- Stephen J. How do unisensory deficits impact response within a multisensory world? International Conference on Biomagnetism, Seoul, S. Korea, October 2016.
- Stephen J. Using Complementary Assessments of Structural and Functional Brain Connectivity to Gain Insights into Neurodevelopment,” SIAM Conference, Albuquerque, NM, May 26, 2016.
- Stephen J. Identifying atypical brain development based on altered timing: Insights from MEG, Plenary Talk – FASD Study Group Meeting, Research Society on Alcoholism Conference, San Antonio, TX, June 20, 2015.
- Stephen J. Cognitive Development and Mu rhythm Suppression in Term and Preterm Infants, Invited Talk, International Society of Developmental Psychobiology Conference Symposium, Washington, DC, November 2014.
- Stephen J. MEG-derived insights into the visual cortical network -- and beyond, Invited Talk, 2014 Multimodal Neuroimaging Training Program Symposium, Pittsburgh, PA, July 11, 2014.
- Stephen J. A Network Approach to Multimodal Imaging and Genetics in Schizophrenia: Strategies, Challenges, and Findings: Project 2. Workshop Talk, International Conference on Schizophrenia Research, April 2-6, 2011, Colorado Springs, CO.
- Stephen J. Studies in Autism Spectrum Disorders: Insights from Functional Neuroimaging Studies. Osher Series UNM Continuing Education. September 20, 2010.
- Stephen, J. Imaging Tools for Functional Analysis, Sunrise Minicourse, 50th Annual Meeting of the Teratology Society, Louisville KY, June 26-30, 2010.
- Stephen, J. Braeutigam S, Furlong PL, Ribary U, Roberts TPL, Virji-Babul N., Pediatric CNS Pathophysiology. Human Brain Development Symposium, 17th International Conference on Biomagnetism. Dubrovnik, Croatia, March 27- April 1, 2010.
- Stephen, J. Autism (Long-range connectivity). Invited Talk Human Brain Development Satellite 17th International Conference on Biomagnetism. Dubrovnik, Croatia, March 27- April 1, 2010.
- Stephen, J. Understanding development through the pediatric MEG system called babySQUID. MRN talk, May 2009.
- Stephen, J. Investigating Neurodevelopment. Presentation to NM Chapter of the International Women’s Forum, March 19, 2009.
- Stephen, J. Investigations into typical and atypical development using babySQUID. Brain and Behavior Initiative/BRAIN Seminar, UNM HSC, January 9, 2009.
- Stephen, J. COBRE Project 2 Update. Psychiatry Grand Rounds, UNM HSC December 19, 2008.
- Stephen, J. Investigations into Neurodevelopment Using the Pediatric MEG System Called babySQUID. Amazing Newborns Conference, Albuquerque, NM November, 12-14, 2008.
- Stephen, J. Studies in human brain development using babySQUID. Guest lecture Psychology Human Neurodevelopment Class, October, 23, 2008.

- Stephen, J. Investigations into Typical and Atypical Brain Development in Infants and Toddlers Using the Pediatric MEG System Called babySQUID, 16th International Conference on Biomagnetism, Sapporo, Japan, August 25-29, 2008.
- Stephen, J. Looking for a neurophysiological marker of Autism Spectrum Disorders in Infants and Toddlers, 3x5x5 event Signature Program in Child Health UNM HSC, May 15, 2008
- Stephen, J., How do we know when we have atypical development in infants and toddlers? MRN Board of Trustees Presentation, April 17, 2008
- Stephen, J., Functional Neuroimaging In Children: In Search Of An Early Marker For Autism, Southwest Conference on Disability, Albuquerque, NM, Oct. 3-5, 2007.
- Stephen, J., High Frequency Oscillations Associated with Epilepsy in Infants, Neurodevelopment Symposium, The MIND Institute, Albuquerque, NM, May 8-9, 2007.
- Stephen, J., Sensory Integration in Autism, Neurodevelopment Symposium, The MIND Institute, Albuquerque, NM, May 8-9, 2007.
- Stephen, J., Auditory and Somatosensory Integration in Infants, Contributed Talk, 15th International Conference on Biomagnetism. Vancouver, Canada August 21-25, 2006.
- Stephen, J., babySQUID Applications, Developmental Neurology and Pediatric Neuroimaging classes, Department of Psychology, University of New Mexico, March, November 2006.
- Stephen, J. & Phillips J, A Case Study: Cerebral Palsy, Neurology Grand Rounds Lecture, University of New Mexico, October 2005.
- Stephen, J., Clinical MEG, Functional Neuroimaging class, Department of Psychology, University of New Mexico, October 2005.
- Stephen, J., Earliest Visual Responses: MEG's Contributions, Invited Talk, 14th International Conference on Biomagnetism. Boston, MA, August 8-12, 2004.
- Stephen, J., Auditory and Visual Integration in Alzheimer's Disease. COBRE Seminar, University of New Mexico, July 2004.
- Stephen, J., Auditory and Visual Integration to Near and Far Stimulation. COBRE Seminar Series, University of New Mexico, May 2004.
- Stephen, J., MEG simulation studies related to epilepsy: What can MEG see and do? Mental Illness and Neuroscience Discovery Seminar, May 2004.
- Stephen, J., MEG simulation studies related to epilepsy: What can MEG see and do? Biophysics Seminar, Physics Department, University of New Mexico, March 2004.
- Stephen, J., MEG simulation studies related to epilepsy: What can MEG see and do? Neuroscience Seminar, University of New Mexico, December 2003.
- Stephen, J., MEG Simulation Study for Frontal Lobe Epilepsy. COBRE Seminar Series, University of New Mexico, October 2003.
- Stephen, J., A simulation study of frontal lobe epileptic spike localization using real background noise. COBRE Seminar Series, University of New Mexico, March 2002.
- Stephen, J., Progress in MEG language studies, Neurology Grand Rounds, University of New Mexico, November 2001.

- Stephen, J., A Magnetoencephalographic study of the response over the region of the auditory cortex to visual and auditory stimuli. Northern Michigan University, October 1997.
- Stephen, J., A Magnetoencephalographic study of the response over the region of the auditory cortex to visual and auditory stimuli. Biophysics Seminar, University of Minnesota, July 1997.
- Stephen, J., Implementation of Problem-solving Labs at the University of Minnesota. Physics Education Seminar, University of Washington, June 1997.
- Stephen, J., A Magnetoencephalographic study of the response over the region of the auditory cortex to visual and auditory stimuli. Biophysics Seminar, Los Alamos National Lab, June 1997.
- Stephen, J., Application of Fourier transform and cross correlation techniques to MEG data. Physics: 3516: Modern physics laboratory, University of Minnesota, April 1997.
- Stephen, J., A magnetoencephalographic study of correlations over the region of the auditory cortex in response to auditory and visual stimuli. Center for Magnetic Resonance Research Seminar, University of Minnesota, March 1997.
- Stephen, J., The ear and hearing. Guest lecture, Physics 1107: Introductory physics for premed majors, University of Minnesota, January 1997.
- Stephen, J., Flash/Click Correlations. Biophysics Seminar, University of Minnesota, October 1996.
- Stephen, J., The role of an experienced teaching assistant in TA orientation. Contributed talk, American Association of Physics Teachers Conference, College Park, MD, August 1996.

Abstracts and Presentations at Professional Meetings

- Stephen JM, Candelaria-Cook F, Bakhireva L, Hill D. Physiological effects displayed in children with prenatal alcohol exposure: implications for behavior. Poster Presentation, 42nd Annual Research Society on Alcoholism Scientific Meeting, June 22-26, 2019, Minneapolis, MN.
- Shrestha S, Rodriguez D, Leeman L, Stephen JM, Bakhireva LN. Utility of maternal and infant phosphatidylethanol in assessing late pregnancy alcohol exposure. Poster Presentation, 42nd Annual Research Society on Alcoholism Scientific Meeting, June 22-26, 2019, Minneapolis, MN.
- Shrestha S, Rodriguez D, Leeman L, Stephen JM, Bakhireva LN. Utility of maternal and infant phosphatidylethanol in assessing late pregnancy alcohol exposure. Poster Presentation, 42nd Annual Research Society on Alcoholism Scientific Meeting, June 22-26, 2019, Minneapolis, MN.
- Beauchamp KG, Shrestha S, Garrison LM, Lowe J, Stephen JM, Bakhireva LN. The Effects of Prenatal Stress on Postnatal Maternal Psychological Well-Being in Substance Using Populations. Poster Presentation. 59th Annual Teratology Society Meeting. June 22-26, 2019, San Diego, CA.
- Stephen JM, Flynn L, Kabella D, Cano S, Lowe JR, Bakhireva LN. Alpha asymmetry and the association with positive and negative affect in 6 month old infants with prenatal alcohol exposure. Poster presentation 21st International Conference on Biomagnetism, Philadelphia, PA, August 26-30, 2018.
- Solis I, Janowich J, Candelaria-Cook F, Wang YP, Wilson TW, Calhoun VD, Stephen JM Changes in resting state connectivity with and and the association with neuropsychological measures. Poster presentation 21st International Conference on Biomagnetism, Philadelphia, PA, August 26-30, 2018.
– **Mentoring Award Winner**

- Candelaria-Cook FT, Schendel M, Collishaw W, Hill D, Kodituwakku P, Stephen JM. MEG resting-state connectivity in children with fetal alcohol spectrum disorder. Poster presentation 21st International Conference on Biomagnetism, Philadelphia, PA, August 26-30, 2018.
- Candelaria-Cook FT, Schendel M, Ojeda CJ, Bustillo J, Stephen JM. Test-retest reliability of MEG resting-state data in schizophrenia. Poster presentation 21st International Conference on Biomagnetism, Philadelphia, PA, August 26-30, 2018.
- Kabella D, Flynn L, Cano S, Lowe JR, Bakhireva LN, Stephen JM. Reduced heart rate variability in associated with MEG spectral power in 6 month old infants with prenatal alcohol exposure. Poster presentation 21st International Conference on Biomagnetism, Philadelphia, PA, August 26-30, 2018. – **Student Travel Award Winner**
- Shrestha S, Lowe J, Cano S, Moss N, Aragon C, Stephen J, Bakhireva L. Association between moderate alcohol use in pregnancy and impaired self-regulation in infants at 6 months. Poster presentation New Mexico Public Health Association Annual Conference, Albuquerque, NM, March 2018.
- Bakhireva LN, Leyva Y, Qeadan F, Shrestha S, Cano S, Flynn L, Kabella D, Lowe J, Stephen JM. Effect of light-to-moderate prenatal alcohol exposure on infant growth trajectory during the first 6 months of life, Poster presentation, 41st Annual Research Society on Alcoholism Scientific Meeting, San Diego, CA. June 16-20, 2018.
- Stephen JM, Flynn L, Kabella D, Cano S, Lowe JR, Bakhireva LN. Alpha asymmetry and the association with positive and negative affect in 6 month old infants with prenatal alcohol exposure, Poster presentation, 41st Annual Research Society on Alcoholism Scientific Meeting, San Diego, CA. June 16-20, 2018.
- Pinner JFL, Hill DE, Stephen JM. Magnetoencephalography during a go/no-go paradigm differentiates children 8-12 years of age with fetal alcohol spectrum disorder from healthy controls. Poster presentation, 41st Annual Research Society on Alcoholism Scientific Meeting, San Diego, CA. June 16-20, 2018.
- Williams S, Shrestha S, Garrison L, Leeman L, Rayburn W, Stephen JM, Bakhireva LN. Prevalence of alcohol use in pregnant women with substance use disorder, Poster presentation, 41st Annual Research Society on Alcoholism Scientific Meeting, San Diego, CA. June 16-20, 2018.
- Kabella D, Flynn L, Cano S, Lowe JR, Bakhireva LN, Stephen JM. Reduced heart rate variability is associated with negative affect in 6 month old infants with prenatal alcohol exposure, Poster presentation, 41st Annual Research Society on Alcoholism Scientific Meeting, San Diego, CA. June 16-20, 2018.
- Mills MS, Embury CM, Robinson AM, Meredith CK, Manker BR, Khanna MM, Klanecky AK, Brown JR, Calhoun VD Stephen JM, Wang YP, Wilson TW. Number of traumatic life events are associated with psychological symptoms in a community sample of healthy children. 30th Annual Association for Psychological Science Meeting, San Francisco, CA May 24-27, 2018.
- Embury CM, Wiesman AI, Proskovec AL, Heinrichs-Graham E, Wang YP, Calhoun VD, Stephen JM, Wilson TW. Sex and developmental differences in the oscillatory dynamics serving visual working memory: a MEG study. Cognitive Neuroscience Society Meeting, San Francisco, CA, March 23-26, 2018.

- Beadle JN, Feenstra M, Heller AM, Calhoun VD, Stephen JM, Wang YP, Warren DE, Wilson TW. Neural correlates of loneliness in adolescence. Poster presentation Cognitive Neuroscience Society Meeting, San Francisco, CA, March 23-26, 2018.
- Solis I, Wang YP, Calhoun VD, Wilson TW, Stephen JM, Ciesielski KR, Relationship between visual cognitive flexibility and social interactions in typically developing children. Emerging Researchers National Conference in STEM. Feb 22-24, 2018, Washington, DC. **1st Place Oral Presentation Award**
- Kabella D, Flynn L, Peters A, Kodituwakku P, Stephen JM, Deficits in the auditory mismatch response in preschool children with FASD identified using MEG, *Alcoholism-Clinical and Experimental Research*, 41:132A-132A.
- Pinner JFL, Coffman BA, Bolanos A, Kodituakku PW, Stephen JM, Joint independent component analysis of brain structure and function in adolescents with FASD, *Alcoholism-Clinical and Experimental Research*, 41: 59A-59A.
- Cano S, L Garrison, Lowe J, Leeman L, Rayburn WF, Stephen JM, Bakhireva LN, Neurodevelopmental indices of prenatal alcohol exposure observed in 6-month old infants, *Alcoholism-Clinical and Experimental Research*, 41:58A-58A.
- Stephen JM, Pinner J, Bolanos A, Kodituwakku E, Kodituwakku P, Probing neurophysiological changes across the developmental spectrum due to prenatal alcohol exposure, *Alcoholism-Clinical and Experimental Research*, 41: 309A-309A.
- Stephen JM, Flynn L, Kabella D, Cano S, Savage D, Rayburn W, Leeman L, Lowe JR, Bakhireva LN, Altered mu rhythm reactivity in 6 month old infants prenatally exposed to alcohol and opioid maintenance therapy, *Alcoholism-Clinical and Experimental Research*, 41:219A-219A.
- Ashley M, Holbrook BD, Cano S, Lowe J, Stephen JM, Qeadan F, Leyva Y, Rayburn W, Leeman L, Bakhireva L, Effect of Neonatal Abstinence Syndrome on Neurodevelopmental Outcomes at Six Months of Age in Infants Born to Women on Medication-Assisted Treatment for Opioid Use Disorder *Birth Defects Research*, 109(9): 682-682.
- Jimenez EY, Yonke N, Leeman LM, Shrestha S, Cano S, Garrison L, Williams S, Stephen J, Bakhireva L, Disparities in Breastfeeding Outcomes Between Women Undergoing Medication-Assisted Treatment (MAT) for Substance Use Disorder (SUD) and Abstaining Controls, *The FASEB Journal*, 31(1 Suppl): 650.16-650.16.
- Stephen JM, Flynn L, Clifford C, VanMeter J, Cano S, Garrison L, Lowe J, Bakhireva LN. Alterations In Resting Meg Spectral Power In Infants Prenatally Exposed To Alcohol, *Alcoholism Clinical And Experimental Research*, 2016, 40, 212a.
- Bolanos AD, Coffman BA, Kodituwakku P, Stephen JM. Don't Look: Cerebellar And Cortical Activity During An Antisaccade Task In Adolescents With Fasd, *Alcoholism-Clinical And Experimental Research*, 2016, 40, 43a.
- Cano S, Mallawaarachchi I, Bishop S, Leeman L, Rayburn W, Savage D, Stephen J, Bakhireva L. Phosphatidylethanol In Newborn Dried Blood Spots As A Biomarker Of Prenatal Alcohol Exposure: What Is A Cut-Off?, *Alcoholism-Clinical And Experimental Research*, 2016, 40, 99a.

- Shrestha S, Jimenez EY, Cano S, Williams S, Stephen JM, Bakhireva LN. Folate, Iron, And Choline Intake In Pregnant Women With Substance Use Disorders, *Birth Defects Research Part A-Clinical And Molecular Teratology*, 2016, 106(5), 401.
- Stephen JM, Flynn L, Van Meter J, Lowe J, Bakhireva LN. Effects Of Opioid Maintenance Therapy On Infant Brain Development, *Birth Defects Research Part A-Clinical And Molecular Teratology*, 2016, 106(5), 396.
- Bolanos AD, Coffman BA, Pinner JFL, Kodituwakku P, Stephen JM. Magnetoencephalography study on multisensory integration in adolescents with fetal alcohol spectrum disorder. Poster accepted to be presented at the 45th Annual Society for Neuroscience National Meeting, Chicago, IL, October 2015
- Bolanos AD, Coffman BA, Pinner JFL, Kodituwakku P, Stephen JM. Magnetoencephalography study on multisensory integration in adolescents with fetal alcohol spectrum disorder. Oral presentation accepted to be presented at the Society for Advancement of Chicanos/Hispanics and Native American in Science (SACNAS) National Conference, Washington, D.C, October 2015.
- Annett RD, Savich RD, Romero L, Schendel M, Stephen JM. Mu-Rhythm Suppression Predicts Bayley Scales of Infant Development-III in 3-Month Term and Preterm Infants. Poster presented at 5th INS/ASSBI Pacific Rim Conference, Sydney Australia, July 1-5, 2015.
- Bolanos AD, Coffman BA, Pinner JFL, Kodituwakku P, Stephen JM, Multisensory Integration in Adolescents with a Fetal Alcohol Spectrum Disorder. Poster presented at the 38th Annual RSA Scientific Meeting, San Antonio, TX, June 2015.
- Stephen JM Coffman BA, Clifford C, Hood S, Aine CJ, Bustillo J, Canive J. Physiological Indicators of Multisensory Facilitation of Visual Responses in Schizophrenia. *American College of Neuropsychopharmacology 53rd Annual Meeting*. Phoenix, AZ, December 7-11, 2014.
- Cañive JM, Chen Y, Edgar JC, Howell B, Wootton C, Hunter MA, Stephen JM. M100 Amplitude and Oscillatory Activity as Markers of Abnormal Response to Auditory Paired Click Stimuli in Psychosis. *American College of Neuropsychopharmacology 53rd Annual Meeting*. Phoenix, AZ, December 7-11, 2014.
- Stephen JM, Coffman BA, Stone, D, Clifford C, Hood S, Aine C, Bustillo J. Physiological indicators of multisensory facilitation in schizophrenia, Poster Presentation Biomag Conference, Halifax, Nova Scotia, August 2014.
- Stephen JM, Zhang T, Romero L, Morales W, Coffman B, Stephens E, Savich R, Annett R. Mu rhythm suppression in term and preterm infants Poster Presentation Biomag Conference, Halifax, Nova Scotia, August 2014.
- Annett RD, Hartenberger C, Morales W, Romero LL, Savich RD, Stephens E. Stephen JM. Comparison of mu-rhythm suppression in term and preterm infants. Poster Presentation, *International Neuropsychological Society Meeting*, Seattle, WA, February 12-15, 2014.
- Coffman BA, Romero L, Kodituwakku EL, Kodituwakku P, Stephen JM. Latency of Primary Sensory Responses to Multisensory Stimuli in Adolescents with and without Fetal Alcohol Spectrum Disorders (FASD): Effects of Spatial Congruence, Poster Presentation Biomag Conference, Halifax, Nova Scotia, August 2014.
- Coffman BA, Kodituwakku EL, Kodituwakku P, Stephen JM. Congenital Disinhibition: Dysfunctional

cognitive control and risky decision making in adolescents with fetal alcohol spectrum disorders. Poster Presentation, Research Society on Alcoholism Conference, Bellevue, WA, June 21-25, 2014. **Student Merit Award Winner.**

- Coffman BA, Hunter MA, Jones AP, Saxon HA, Kolodjeski K, Lockmiller B, Khan O, Collar T, Stephen JM, Clark VP. Using independent components analysis (ICA) to remove artifacts associated with transcranial direct current stimulation (tDCS) from electroencephalography (EEG) data: A comparison of ICA algorithms. Poster Presentation, NYC Neuromodulation 2013 Conference, Nov. 22-23, 2013. **Best Poster Award.**
- Stephen JM, Coffman BA, Bustillo JR, Aine CJ, Calhoun VD. Joint ICA links MEG and DTI to cognitive outcome in schizophrenia, Poster Presentation, Human Brain Mapping, Seattle, WA, June 2013.
- Coffman BA, Romero L, Stone D, Bustillo J, Aine C, Stephen JM. Magnetoencephalography of multisensory (AV) responses in schizophrenia patients and healthy controls. Poster Presentation, Human Brain Mapping, Seattle, WA, June 2013.
- Stephen JM, Coffman BA, Stone, DB, Bustillo, J, Aine, CJ, Calhoun, VD. Using Magnetoencephalography to Probe the Multisensory Benefit in Patients with Schizophrenia, NCDEU Conference, Hollywood, FL, May 2013.
- Coffman BA, Stone D, Romero L, Kodituwakku EL, Kodituwakku PW, Stephen JM. Delayed auditory processing in adolescents with fetal alcohol spectrum disorders (FASD). *Alcoholism-Clinical and Experimental Research*, 37: 102A June 2013.
- Stephen JM, BA Coffman, D Stone, EL Kodituwakku, Kodituwakku P, Differences in MEG gamma band activity during performance of a prosaccade task in adolescents with FASD, *Alcoholism-Clinical and Experimental Research*, 37: 103A June 2013.
- Coffman BA, Stone DB, Kodituwakku EL, Kodituwakku PW, Stephen JM. Altered Functional Connectivity in Fetal Alcohol Spectrum Disorders (FASD): An Independent Components Analysis of Resting-State fMRI data. Poster presented at Society for Neuroscience Conference Oct. 2012.
- Coffman BA, Stone DB, Romero, L, Kodituwakku EL, Kodituwakku PW, Stephen JM. Auditory Processing Delays in Adolescents with Fetal Alcohol Spectrum Disorders. Poster Presentation, 18th International Conference on Biomagnetism, Paris, France, August 2012.
- Stephen JM, Coffman BA, Bustillo JR, Aine CJ, Calhoun VD. Exploring Connectivity in Schizophrenia using Joing ICA to Combine MEG and DTI. Poster Presentation, 18th International Conference on Biomagnetism, Paris, France, August 2012.
- Josef Golubić S, Aine CJ, Stephen JM, Caklovic L, Adair JC, Knoefel JE, Supek S. Prefrontal deficits in the M50 network correlate with neuropsychological function in dementia of the Alzheimer's type, 18th International Conference on Biomagnetism, Paris, France August 2012.
- Stephen JM, Kodituwakku EL, Romero L, Sharadamma N, Peters A, Coffman B, Kodituwakku P. Auditory Processing Delays in Preschool Children with Fetal Alcohol Spectrum Disorders. Poster Presentation, 18th International Conference on Biomagnetism, Paris, France, August 2012.
- Josef Golubic S, Aine CJ, Stephen JM, Adair JC, Knoefel JE, Supek S. Effects of neurodegeneration on the topology and dynamics of the M50 cortical network: An MEG study, World Congress on Medical Physics and Biomedical Engineering. Beijing, May 2012.

- Coffman BA, Kodituwakku P, Kodituwakku L, Romero L, Sharadamma N, Stephen JM. “Delayed Primary Visual Response in Adolescents with FASD: An investigation of Sensory Processing using MEG”, FASt Data Talk at the FASD Study Group Meeting at RSA June 2011.
- Stephen JM, Kodituwakku P, Kodituwakku L, Romero L, Peters A, Sharadamma N, Coffman B. Delays in auditory processing in preschool children with FASD identified using MEG. Poster Presentation RSA June 2011, Atlanta, GA.
- Stephen JM, The influence of unisensory deficits on multisensory integration in schizophrenia, Poster Presentation ICOSR April 2-6, 2011, Colorado Springs, CO.
- Stephen JM, A Network Approach to Multimodal Imaging and Genetics in Schizophrenia: Strategies, Challenges, and Findings: Project 2. Workshop Talk, ICOSR, April 2-6, 2011, Colorado Springs, CO.
- Stephen JM, Urrea L, Geeda A, Romero L, Gonzales A, Aine CJ, Bustillo J. Auditory and visual integration differences from left temporal cortex in schizophrenia. Society for Neuroscience Abstract 2010:264.3.
- Aine CJ, Sanfratello L, Ranken D, Best E, Wallace T, MacArthur JA, Gilliam K, Stephen JM. MEG-SIM Portal: Database of Realistic MEG Simulations for Assessing Functional Connectivity, Society for Neuroscience Abstract 2010:208.11
- Stephen JM, Urrea L, Geeda AR, Romero L, Aine CJ. Characterizing responses to auditory and visual integration in schizophrenia using MEG. Poster presentation. National IDEa Symposium of Biomedical Research Excellence (NISBRE), Bethesda, MD, June 16-18, 2010.
- Stone DB, Urrea L, Aine C, Clark VP, Stephen JM. Alterations in auditory processing and multisensory integration in schizophrenia patients revealed using EEG. Poster presentation. National IDEa Symposium of Biomedical Research Excellence (NISBRE), Bethesda, MD, June 16-18, 2010.
- Aine C, Sanfratello L, Stephen JM, Calhoun V. Image Analysis Core: Neural mechanisms of schizophrenia. Poster presentation. National IDEa Symposium of Biomedical Research Excellence (NISBRE), Bethesda, MD, June 16-18, 2010.
- Berchicci M, Zhang T, Romero L, Peters A, Annett R, Teuscher U, Bertollo M, Okada U, Stephen J, Comani S. Dependence of Mu-rhythm on age in children 1-12 months-old. Poster presentation. 17th International Conference on Biomagnetism March 28-April 1, 2010.
- Sanfratello L, Stephen JM, Ranken D, Best E, Wallace T, MacArthur J, Gilliam K, Aine CJ. MEG_SIM Portal: Reconstructions from Realistic Simulations of Sensory and Cognitive Processing. Poster at 17th International Conference on Biomagnetism March 28-April 1, 2010.
- Berchicci, et al. (2009). Characterization of Mu-rhythm in children aged 1-13 month-old, 7th Progress in Motor Control Conference, Marseille, France, July 23-25, 2009.
- Berchicci M, Zhang T, Romero L, Peters A, Annett R, Teuscher U, Bertollo M, Okada U, Comani S, Stephen J. (2009). Mu-rhythm detection in infants. 15th Annual Meeting of the Organization for Human Brain Mapping, San Francisco, CA, June 18-23, 2009.
- Stephen J, Zhang T, Hill D, Lopez B, Romero L, Peters A, Berchicci M, Okada Y. (2009) Increases in Coherence Index with Age in Neurotypical Children. 1st International Workshop on Perinatal Biomagnetism 2009, Chieti, Italy, April 4, 2009.

- Berchicci M, Zhang T, Romero L, Peters A, Annett R, Teuscher U, Bertollo M, Okada Y, Comani S, Stephen J. (2009). Characterization of mu-rhythm in children aged 3-9 month-old. 1st International Workshop on Perinatal Biomagnetism 2009, Chieti, Italy, April 4, 2009.
- Aine, C, Bryant J, Knoefel J, Adair J, Hart B, Donahue C, Montano R, Hayek R, Qualls C, Ranken D, Stephen J. Aging, Dementia, and Pathology: Different Strategies for Auditory Word Recognition. Talk at Society for Neuroscience Conference, Washington, D.C. Nov. 15-19, 2008.
- Stephen J, Romero L, Okada Y. Decreased latency with increasing age of the auditory and somatosensory multisensory integration response in infants measured with MEG. Poster at Society for Neuroscience Conference, Washington, D.C. Nov. 15-19, 2008.
- Supek, S, Golubic, S, Bryant, J, Donahue, C, Montano R, Adair J, Hart B, Knoefel J, Stephen J, Aine C. Neuromagnetic auditory activity reflects differences between normal aging, MCI and AD subjects: An oddball study. Poster at Biomag 2008 meeting, Sapporo, Japan, Aug 25-29, 2008.
- Aine, C, Best E, Ranken D, Bryant J, Donahue C, Bockholt J, Stephen J, Weisend M. (2008). Realistic Reconstructions of MEG Source Locations and Time in Visual Tasks. Poster at Biomag 2008 meeting, Sapporo, Japan, Aug 25-29.
- Aine, C, Bryant J, Knoefel J, Adair J, Hart B, Donahue C, Montano R, Hayek R, Qualls C, Ranken D, Stephen J. (2008). Aging, Dementia, and Pathology: Different Strategies for Auditory Word Recognition. Poster at Biomag 2008 meeting, Sapporo, Japan, Aug 25-29.
- Aine, C, Bryant J, Donahue C, Ranken D, Bockholt H, Stephen J and Weisend M. (2008). Realistic Reconstructions of MEG Source Locations and Time for Visual Tasks. Poster at 14th Annual Meeting of the Organization for Human Brain Mapping. Melbourne, Australia.
- Stephen JM, Hill D, Lopez B, Romero L, Okada Y. Exploring Brain Connectivity in Toddlers with Autism using the Pediatric MEG System called babySQUID. Poster Presentation Keystone Symposium Conference: Towards Identifying the Pathophysiology of Autistic Syndromes. Santa Fe, NM, February 24-28, 2008.
- Stephen JM, Atwood C, Pratt K, Okada Y. Development of Auditory and Somatosensory Integration in Infants. Poster presentation at 12th Annual Meeting of the Organization for Human Brain Mapping, Florence, Italy, June 11-15, 2006.
- Cheryl J. Aine, Chad C. Woodruff, Janice E. Knoefel, John C. Adair, David Hudson, Clifford Qualls, Sanja Kovacevic, Denise Padilla, Wayne Cobb, Blaine Hart, Julia M. Stephen. Failing Memories or Maturation of Strategies? Poster presented at Human Brain Mapping Conference, Toronto Canada, June 12-16, 2005.
- Stephen JM, Ranken D, Aine CJ, Hart B, Adair J, Knoefel J. Integration of near and far, auditory and visual stimuli. Poster presented at 14th International Conference on Biomagnetism, Boston, MA, August 8-12, 2004.
- Ranken D, Stephen JM, George JS. MUSIC Seeded multi-dipole MEG modeling using the constrained start spatio-temporal modeling procedure. Poster presented at 14th International Conference on Biomagnetism, Boston, MA, August 8-12, 2004.
- Stephen JM, Ranken D, Aine CJ, Weisend MP, Shih J. Differentiability of simulated hippocampal, parahippocampal and lateral temporal sources. Poster presented at 14th International Conference on Biomagnetism, Boston, MA, August 8-12, 2004.

- Aine CJ, Adair J, Knoefel J, Hudson D, Qualls C, Cobb W, Padilla D, Kovacevic S, Stephen J. Age-related effects of priming in auditory association cortex. Poster presented at 14th International Conference on Biomagnetism, Boston, MA, August 8-12, 2004.
- Aine CJ, Hudson D, Bustillo J, Lauriello J, Rowland L, Lenroot R, Kovacevic S, Stephen J. Impoverished working memory network in schizophrenia. Poster presented at 14th International Conference on Biomagnetism, Boston, MA, August 8-12, 2004.
- Stephen J, Ranken D, Aine C, Adair J, Knoefel J, Hudson D, Hart B. Effects of Aging on the Response to Near and Far, Auditory and Visual Stimuli, Poster presented at the International Multisensory Research Forum, June 1-5, 2004, Sitges, Spain.
- Aine C, Adair J, Knoefel J, Hudson D, Qualls C, Kovacevic S, Woodruff C, Lee R, Stephen J. MEG studies of cognition in healthy aging: Effects in the superior temporal gyrus. Presented at the 33rd Annual Meeting of the Society for Neuroscience, November 2003, New Orleans, LA.
- Stephen JM, Ranken D, Woodruff CC, Kovacevic S, Hudson D, Adair JC, Knoefel J, Qualls C, Aine CJ. Age-related changes to median nerve stimulation measured with MEG. Presented at the 9th International Conference on Functional Mapping of the Human Brain, June 19-22, 2003, New York, NY. Available on CD-Rom in NeuroImage, Vol. 19 (2), 2003.
- Kovacevic S, Stephen JM, Woodruff CC, Qualls C, Adair J, Hudson D, Knoefel J, Aine CJ. Aging Effects on Auditory Processing in an Oddball Task: An MEG Study. Presented at the 9th International Conference on Functional Mapping of the Human Brain, June 19-22, 2003, New York, NY. Available on CD-Rom in NeuroImage, Vol. 19 (2), 2003.
- Hudson D, Stephen JM, Adair J, Knoefel J, Qualls C, Kovacevic S, Woodruff CC, Aine CJ. Late Sustained Activity Evoked by Auditory Size Classification and Delayed Verbal Recognition Tasks: An MEG Study of Aging. Presented at the 9th International Conference on Functional Mapping of the Human Brain, June 19-22, 2003, New York, NY. Available on CD-Rom in NeuroImage, Vol. 19 (2), 2003.
- Woodruff C, Stephen J, Kovacevic S, Hudson D, Adair J, Knoefel J, Qualls C, Aine C. Comparison of Visual Responses in Young and Elderly Subjects in a Delayed Match to Sample Task. Presented at the 9th International Conference on Functional Mapping of the Human Brain, June 19-22, 2003, New York, NY. Available on CD-Rom in NeuroImage, Vol. 19 (2), 2003.
- Stephen JM, Shih JJ, Ranken D, Hudson D, Aine C. A simulation study of frontal lobe epileptic spike localization using real background noise. Poster, 13th International Conference on Biomagnetism, Jena Germany August 10-14, 2002.
- Ranken D, Best E, Stephen J, Schmidt D, George J, Wood C, Huang M. MEG/EEG forward and inverse modeling using MRIVIEW. Poster, 13th International Conference on Biomagnetism, Jena Germany August 10-14, 2002.
- Aine CJ, Stephen JM. Attention/memory primarily affects the magnitude, duration and synchrony of cortical sources localized during the 200-600 ms poststimulus interval. Talk, Society for Neuroscience Conference, November 2001.
- Stephen JM, Aine CJ, Christner R, Ranken D, Huang M, Best E. Differences in onset latencies of dorsal stream structures due to peripheral versus central visual field stimulation. Poster, Human Brain Mapping Conference 2001, June 10-14, 2001, Brighton, UK.

- Aine CJ, Stephen JM. Characterization of Cortical Response Profiles Evoked by Working Memory and Delayed Verbal Recognition Tasks using MEG. Poster presentation, Human Brain Mapping Conference 2001, June 10-14, 2001, Brighton, UK.
- Woodruff CC, Stephen JM, Aine CJ, Adair J. Spatiotemporal Characterization of Language Processing in the Brain Using Magnetoencephalography. Poster, Society for Cognitive Neuroscience, New York 2001.
- Ciesielski KT, Stephen JM, Lesnik PG; Aine CJ. Inhibitory brain subsystems in childhood OCD: MEG reveals hypoactivity of the anterior cingulate. Society for Neuroscience Conference 2000, Washington, D.C.
- Stephen JM, Aine CJ, Christner R, Huang M, Ranken D. "Visual areas identified in the frequency following response to alternating circular sinusoids," Poster, 12th International Conference on Biomagnetism, Espoo, Finland, August 2000.
- Stephen JM, Aine CJ, Christner RF, Ranken D, Huang M, Mosher JC, Leahy LM, "A study of the visual response to different temporal frequencies presented to parafoveal and peripheral visual fields using MEG," Poster, Fifth International Conference on Functional Mapping of the Human Brain, Düsseldorf, Germany, June 1999.
- Stephen J, et al. "Parietal and cingulate cortex activated in response to different auditory stimuli," Poster, 11th International Conference on Biomagnetism, Sendai, Japan, August 1998.
- Aine CJ, Huang M, Christner R, Stephen J, Meyer J, Silveri J, Weisend M. "R-MUSIC and Multistart Algorithms Reveal Multiple Cortical Regions of Activation in Response to Median and Tibial Nerve Stimulation," Poster, 11th International Conference on Biomagnetism, Sendai, Japan, August 1998.
- Huang M, Aine C, Weisend M, Stephen J, Meyer J, Christner R, Silveri J. "Pre- and Post-central Sulcal Sources Evoked by Stimulating the Median Nerve and Index Finger: Are Pre-central Sulcal Sources due to Passive Muscle Movement?" Poster, 11th International Conference on Biomagnetism, Sendai, Japan, August 1998.
- Stephen J, Aine CJ, Huang MX, Meyer J, Christner R, Silveri J, Weisend M. "Evidence of late auditory activity in response to tones using MEG," Poster, Fourth International Conference on Functional Mapping of the Human Brain, Montreal, Canada, June 1998.
- Aine CJ, Huang MX, Stephen J, Silveri J, Meyer J, Christner R. "Cingulate Cortex is Responsive to Simple Visual, Auditory and Somatosensory Stimulation: an MEG study," Poster, Fourth International Conference on Functional Mapping of the Human Brain, Montreal, Canada, June 1998.
- Stephen JM, Heller P. "The role of an experienced teaching assistant in TA orientation," Contributed talk, American Association of Physics Teachers Conference, College Park, MD, August 1996.
- Stephen JM, Broadhurst JH, Knuth KH, Schwartz BJ, "Determination of the nature of the connection between the auditory and visual cortex by measuring the response to a combined visual and auditory stimulus using a 37-SQUID biomagnetometer," Poster, Tenth International Conference on Biomagnetism, Santa Fe, NM, February 1996.

Membership in Professional Societies

Organization for Human Brain Mapping

International Society for the Advancement of Clinical MEG, Executive Committee Member: 2013-2017

Society for Neuroscience, Member, 2000-present.

Research Society on Alcoholism Member, 2013-present.

Sigma Xi, Student Member, 1991-1993, Member, 2000-2002.

American Physical Society, Student Member, 1992-1997.

American Mathematical Society, Student Member, 1990-1991

Phi Kappa Phi National Honor Society, inducted 1989.

Golden Key National Honor Society, inducted 1989; NMU Branch Treasurer 1990 - 1991

National Committees

1999-2000, US representative to Neuromag, MEG manufacturer based in Helsinki, Finland.

2010 – 2012, Health and Environmental Sciences Institute Working Group on Neuroimaging.

Other extramural professional activities

Associate Editor

Frontiers in Brain Imaging Methods 2020 - present

Review Editorial Board:

Frontiers in Brain Imaging Methods 2014 - 2020

Neuroinformatics

Ad hoc reviewer for scientific journals:

Journal of Neuroscience, Journal of Cognitive Neuroscience, Cerebral Cortex, NeuroImage, Neuroscience Research, Frontiers in Human Neuroscience, Vision Research, Epilepsia, International Journal of Psychophysiology, Clinical Neurology and Neurosurgery, Human Brain Mapping, Alcoholism: Clinical and Experimental Research, Neuroinformatics, Developmental Neuroscience, Attention, Perception and Psychophysics, Journal of Neurodevelopmental Disorders, Journal of Child Psychiatry and Psychology.

Reviewer for National Funding Organizations:

Ad hoc reviewer for NIH-BMIT Study Section - October 2005

Ad-hoc NIH Reviewer, Child Psychopathology and Developmental Disabilities (CPDD) Study Section February 2014 & February 2015.

Ad-hoc NIH Reviewer - 2014/10 ZRG1 BBBP-Y (04) Member Conflict: APDA – August 2014

Ad-hoc NIH Reviewer 2014/05 ZRG1 SBIB-Z (03) Member Conflict: Medical Imaging Investigations, March 2014

Ad-hoc NIH Reviewer 2015 2015/10 ZHD1 DSR-K (40) 1, August 2015.

Ad-hoc NIH Reviewer. Special Emphasis Panel/Scientific Review Group 2016/01 ZRG1 ETTN-H (55) R: Connectomes Related to Human Disease. November 2015.

Ad-hoc NIH Reviewer. Special Emphasis Panel/Scientific Review Group 2016/05 ZMH1 ERB-C (04) S: Baby Connectome. March 2016.

Ad-hoc NIH Reviewer. Special Emphasis Panel/Scientific Review Group 2016/05 ZHD1 DSR-H (NF) 1, P01 Application. April 2016.

Ad-hoc NIH Reviewer. Special Emphasis Panel/Scientific Review Group 2016/10 ZMH1 ERB-M (05), K99/R00. June 2016.

Ad-hoc NIH Reviewer, Special Emphasis Panel, P01 Application, August 2016.

Ad hoc reviewer for Azerbaijan-U.S. Bilateral Grants Program/U.S. Civilian Research & Development Foundation, November 2003.

Reviewer for Alzheimer's Association

Ad-hoc Reviewer, P01 application, NIAAA, October 2016.

Ad-hoc Reviewer, Special Emphasis Panel, NIMH K99/R00 February 2017

Ad-hoc Reviewer, Special Emphasis Panel, NIMH K99/R00 June 2017

Ad-hoc Reviewer, NOIT Study section, February 2018

Ad-hoc Reviewer, Special Emphasis Panel, NIMH K99/R00 March 2018 & June 2018

Ad-hoc Reviewer, ETTN(10) Study Section, November 2018.

Ad-hoc Reviewer, F03B Study Section Panel, June & October 2019

Ad-hoc Reviewer, CPDD Study Section Panel, October 2019

Ad-hoc Reviewer, F03B Study Section Panel, February & June 2020

Reviewer for International Funding Organizations:

External Reviewer, Italian Ministry of Health Annual Awards, October 2009, 2015.

Ad-hoc Reviewer, Israel Science Foundation, April 2016.

Ad-hoc Reviewer, European Science Foundation, May 2016.

MRC Peer Reviewer, UK, August 2013, January&Dec 2017

Veterans Administration – WOC appointment – 1997-2019; I maintained my VA appointment to facilitate research with VA collaborators – this includes submission of a pre-proposal for joint VA-DoD call for proposals to join the Consortium to Alleviate PTSD in collaboration with VA physician, Dr. Jose Canive, MD & R21 proposal with Dr. Gerrardo Villarreal, MD.

Pre-baccalaureate student and honors student mentoring

Iris Mims, School year 2001-2002, Volunteer research assistant, helped with preliminary data analysis for publication Stephen, et al. 2003.

Laura Kuning, Spring 2007, Mentored for Albuquerque Academy research month.

Xinhe Ruth Wang, Summer 2007, 2009, High School Research Volunteer. Fall 2010, Undergraduate work study student.

Katie Gilliam, Summer 2008, 2009, Undergraduate Student Research Associate.

Tony Zhang, Summer 2009, 2011 High School Research Volunteer.

Jason MacArthur, Jan 2009 – 2011, Undergraduate Student Research Associate, ECE Graduate Spring 2011.

Celeste Schwartz, 2011-2014.

Wendy Morales, Undergraduate Research Advisor, MRN Internship Course Spring 2012, McNair Research Opportunity Program, 2012-2014.

Alexandria Doerfler, Undergraduate Research Advisor, MRN Summer/Fall 2012.

Christopher Clifford, Undergraduate Research Advisor, MRN, Fall 2013- Summer 2016.

Alfredo Bolanos, PREP Scholar, MRN, Fall 2014-August 2016.

Jamal Cunningham, Undergraduate Research RA, Spring 2017-Current

Sara Munho, Undergraduate Summer Research Intern, 2017, 2018

Isabela Lopez, Undergraduate Summer Research Intern, 2017

Emily Cook, High School Summer Research Intern, 2017

Grace White, High School Summer Research Intern, 2017
Jachin Calhoun, High School Summer Research Intern, 2018
Derek Delgado, High School Research Intern, 2017-2018
Maricela Alaniz, High School Research Intern, 2017-2018
Ashlea Castleberry, Undergraduate Intern, 2018-2019
Matthew Voelkel, High School Research Intern, 2019
Spencer Goss, High School Research Intern, 2019
Kimberly Rogge-Obando, McNair Scholar, 2020
Theresah Napetey, Summer Intern 2020

Medical Student Mentoring

John Welker, Class of 2009
Elizabeth Elston, Class of 2010
Jenny Zhang, Class of 2014
Laura Urrea, Class of 2016
Amy Garcia, Class of 2020

Graduate student mentoring activities

Rebecca Montano, Research Assistant on Dr. Aine's Aging and Alzheimer's project. Mentored in MEG data acquisition and data analysis techniques, 2005 – 2006.
Christopher Donahue, Research Assistant on Dr. Aine's Aging and Alzheimer's project. Mentored in MEG data analysis techniques, 2005 – present.
Chad Woodruff, Research Assistant on Language project, Taught MEG data acquisition and data analysis techniques, 1999-2002.
Sanja Kovacevic, Research Assistant on Dr. Aine's Aging project. Mentored in matlab and MEG data analysis and acquisition techniques, 2000-2005.
David Hudson, Research Assistant on Dr. Aine's Aging project. Taught MEG data acquisition, paradigm development and data analysis techniques, 2000-2005.
Marika Berchicci, Graduate Research Assistant Advisor. Investigation of Mu-Rhythm Development in 3-9 month old children. 2008-2010.
Anil Reddy Geeda, Graduate Research Assistant Advisor. Connectivity Analysis in schizophrenia. 2010-2011. Master's thesis committee member. Graduated Dec. 2011.
David Stone, Graduate Research Assistant Advisor, Postdoctoral Advisor. Auditory and Visual Integration in schizophrenia using EEG and MEG. 2009-2013.
Brian Coffman, Graduate Research Assistant. Fetal alcohol in adolescents and Auditory/Visual Integration in schizophrenia using MEG. 2010-2014.
Christopher Clifford, Undergraduate Research Assistant, Using MEG/EEG to identify indicators of prenatal alcohol exposure in infants, 2013-2016.
John Pinner, Graduate Research Assistant, Fetal alcohol research associated with the P50 project. 2014-2019, Dissertation committee member.
Isabel Solis, Graduate Research Assistant, Developmental brain research associated with the DevCog study, 2015-present.
Jacki Janowich, Graduate Research Assistant, Developmental brain research associated with the DevCog study, 2015-2019.
Moriah Stern, Graduate Research Assistant, Developmental brain research associated with the DevCog study 2016-2018.

Danielle Kabella, Master's Student, Department of Anthropology, Research Associate ENRICH.
Saverio Bertollo, Master's Student, Exercise Physiology, Research Associate DevCog.
Ingrid Lane, Master's Student, Biomedical Engineering, 2019-present.
Zinia Pervin, PhD Student, Biomedical Engineering, 2019-present.

Classroom, laboratory teaching and tutoring

October 2017, 2018, 2019. Pediatric Psychiatry Fellows Seminar. Understanding the neurophysiological deficits in FASD using MEG.

May 2017, Developmental Neuroscience Psychology Class, Identifying atypical brain development based on altered timing: Insights from MEG, May 2017, Albuquerque, NM

Fall 2014-2018, Introduction to MEG, ECE Neuroimaging Class (Vince Calhoun), 3 classes.

Spring 2012, Guest Lecturer, "Why Timing Matters" Psychology Neural Basis of Cognitive Development Class, UNM Dept. Psychology.

Fall 2010. Guest Lecturer, "Using MEG to understand Neurodevelopment" Psychology Anxiety Disorders Classes, UNM Dept. Psychology.

Spring 2010. Guest Lecturer, Environmental toxin effects on brain development and Autism. UNM Psychology Class: Introduction to Functional Neuroimaging.

Fall 2008, 2009. Guest Lecturer, Studies in human brain development using babySQUID. UNM Psychology Human Neurodevelopment Class.

Spring 2007 – Team taught Radiation Therapy Physics for the Medical Physics master's program.

Fall 2006 – Team taught Radiation Physics for the Medical Physics master's program.

Spring 2006, 2007 – Taught MRI section of the Physics for Radiology Residents class, Physics for Cardiology Residents class and Introduction to Medical Imaging Class (ChNE 499).

2004 – 2007, Assist with teaching Physics for Radiology Residents class.

2001, Two day workshop on MEG, ~40 participants, Taught session on Experimental Design, Taught hands-on sessions on using MEGAN software and MEG data analysis. Albuquerque VA Medical Center.

1999, Spring Semester, Team taught Physics 501: Medical Physics and Brain Imaging, ~15 students, Taught Physics and Reconstruction techniques of Computed Tomography (CT), Single Photon Emission Computed Tomography (SPECT), and Positron Emission Tomography (PET), 4 lectures (4 weeks), University of New Mexico.

1995, 1996, Fall semester, Team taught CI5156: Techniques of Instruction - the first year teaching assistant training course, ~30 students. This course discussed active learning, cooperative groups, problem solving techniques, common physics alternative conceptions, and techniques for consistent grading. Taught various components divided evenly with three other instructors. University of Minnesota.

1995-1997, Introductory physics, 2 students, Tutoring, 1-2 sessions/week, University of Minnesota.

1992 – 1995, All quarters, Ph1041, Ph1042: Introductory physics, 15-21 students/quarter. Taught physics laboratories (2/week) and recitation sessions (2/week), University of Minnesota.

Curriculum Development

1995, 1996, Summer Semester, Introductory physics. Improved introductory physics laboratory experiments and manuals.

Teaching Relevant Coursework

Preparing Future Faculty, Grad8100: Teaching in Higher Education, University of Minnesota, 1997.

Physics 8950: Problems in Teaching and Higher Education, An introduction to collaborative grouping, problem-based, and inquiry-based teaching techniques. University of Minnesota, 1992.

Current Grant and Contract Funding

Project Title: 6/6 Planning for the healthy early development study

Principal Investigators: Ludmila Bakhireva, Lawrence Leeman, Julia Stephen

Percent Effort: 10%

Funding Organization: NIH

Dates: 9/30/19-3/31/2021

Amount: \$271,231 Annual Costs

Role: MPI

Project Title: Developmental Chronnectogenomics (DevCog): A Next Generation Framework for Quantifying Brain Dynamics and Related Genetic Factors in Childhood

Principal Investigators: Vince Calhoun, Julia Stephen, Tony Wilson, YuPing Wang

Percent Effort: 10%

Funding Organization: NSF

Dates: 8/1/15-7/31/2020

Amount: \$4,858,210

Role: co-Principal Investigator

Project title: Understanding neurophysiological deficits in response inhibition in children with FASD (Project 5 – PI Stephen)

Principal Investigator: Julia Stephen, PhD

Percent Effort: 18%

Funding Organization: NIH/NIAAA 1P50AA022534-06

Dates: 7/22/2019-6/30/2024

Amount: \$1,500,000 Annual Direct Costs

Role: Project PI

Project Title: Developmental multimodal imaging of neurocognitive dynamics (DEV-MIND)

Principal Investigator: Tony W Wilson, PhD

Percent Effort: 15%

Funding Organization: NIH/NIMH 1R01MH121101-01

Dates: 8/19/2019-5/31/2024

Amount: \$1,000,102

Role: coPI

Project Title: Examining the interplay between resting oscillations, novelty processing, and attention in PTSD

Principal Investigators: Pilar Sanjuan & Julia Stephen

Percent Effort: 12%

Funding Organization: NIH/NIMH R21MH118765-01A1

Dates: 7/1/19-6/30/2021

Amount: \$222,750 Annual Direct Costs

Role: MPI

Project Title: COBRE: Multimodal Data Acquisition Core

Principal Investigator: Julia Stephen, PhD

Percent Effort: 10%

Funding Organization: NIH/NCRR 1P20 RR021938-01A2

Dates: 5/1/2018-4/30/2023

Amount: \$191,285 Annual Direct Costs

Role: Core Director

Project Title: COBRE: Neural mechanisms of schizophrenia: Use of Multiple Tools to Examine Dysfunctions in Neural Integration

Principal Investigator: Vince Clark, PhD

Percent Effort: 10%

Funding Organization: NIH/NCRR 1P20 RR021938-01A2

Dates: 5/1/2018-4/30/2023

Amount: \$1,421, 200 Annual Direct Costs

Role: Project Mentor

Project Title: High-Definition Transcranial Direct Current Stimulation (HD-tDCS) for Sensory Deficits in Complex Traumatic Brain Injury

Principal Investigator: Davin Quinn, MD

Percent Effort: 2.5%

Funding Organization: Department of Defense

Dates: 10/1/2017-9/30/2021

Amount: \$3,076,212

Role: Co-I

Project Title: A wearable functional brain imaging system with full-head coverage and enhanced spatiotemporal resolution to study complex neural circuits in human subjects.

Principal Investigator: Peter Schwindt, PhD

Percent Effort: 5%

Funding Organization: NIH NIBIB/NINDS

Dates: 9/30/2019-8/31/2024

Amount: \$1,291,843 Annual Costs

Role: Co-I

Project Title: Improved spatial resolution in magnetoencephalography with an optically pumped magnetometer array

Principal Investigator: Peter Schwindt, PhD
Percent Effort: 5%
Funding Organization: NIH/NIGMS R01 EB13302
Dates: 9/30/2018-7/1/2020
Amount: \$320,000 Annual Direct Costs
Role: Co-I

Project Title: ENRICH-2: Stress-reactivity and self-regulation in infants with prenatal alcohol exposure

Principal Investigator: Ludmila Bakhireva, MD, PhD
Percent Effort: 10%
Funding Organization: NIH/NIAAA 2R01AA021771-06A1
Dates: 9/1/2018-8/30/2023
Amount: \$469,095 Annual Direct Costs
Role: Subaward PI, Co-I

Additional Support

Project Title: Development of infant brain MEG responses to social stimuli compared to ASD

Principal Investigator: Yu-Han Chen, PhD
Funding Organization: NIH/NIMH K01 MH108822
Dates: 9/15/2015-9/14/2019
Amount: \$176,278 Annual Direct Costs
Role: Consultant

Past Grant and Contract Funding

Project Title: Alcohol Research Training in Neurosciences
Principal Investigator: CF Valenzuela, MD, PhD
Funding Organization: NIH/NIAAA 2T32
Dates: 07/01/2013 - 06/30/2018
Amount: \$148,257 Annual Direct Costs
Role: Mentor for one predoctoral trainee (John Pinner, MS).

Project Title: Improved spatial resolution in magnetoencephalography with an optically pumped magnetometer array

Principal Investigator: Peter Schwindt, PhD
Percent Effort: 2.5%
Funding Organization: NIH/NIGMS 2R56EB013302-05
Dates: 4/1/2018 – 9/30/2019
Amount: \$320,000
Role: Co-I

Project Title: Characterization of Structural and Functional Deficits of Frontal Lobe Function in Children with FASD using MEG/EEG and DTI (Project 6 – coPI Stephen)

Principal Investigators: Daniel Savage
Percent Effort: 12%
Funding Organization: NIH/NIAAA 1P50AA022534-01
Dates: 7/1/2014-6/30/2019

Amount: \$1,500,000 Annual Direct Costs
Role: Project coPI

Project Title: Early Indices of Atypical Neurodevelopment Associated with Fetal Alcohol Exposure
Principal Investigators: Ludmila Bakhireva, Julia Stephen
Percent Effort: 25%
Funding Organization: NIH/NIAAA 1R01AA021771-01A1
Dates: 7/15/13-6/30/19 (NCE)
Amount: \$400,000 Annual Direct Costs
Role: Principal Investigator

Project Title: Assessing effects of prenatal alcohol exposure in young children
Principal Investigator: Julia M Stephen, PhD
Funding Organization: MRN Internal Award
Dates: January – October 2018
Amount: \$17,000+scans
Role: PI

Project Title: Preterm Infants' Mu Rhythm Suppression Evaluation Study (PrIMES)
Principal Investigator: Julia M. Stephen, PhD
Percent Effort: 25%
Funding Organization: NIH/NINDS 1R21 NS072729-01A1
Dates: 4/1/12-3/31/15
Amount: \$165,419 Annual Direct Costs
Role: Principal Investigator

Project Title: COBRE: Neural mechanisms of schizophrenia: Use of Multiple Tools to Examine Dysfunctions in Neural Integration
Principal Investigator: Vince Calhoun, PhD
Percent Effort: 10%
Funding organization: NIH/NCRR 1P20 RR021938-01A2
Dates: 9/1/13-5/30/18
Amount: \$1,421, 200 Annual Direct Costs
Role: Project PI

Project Title: Imaging the Development of Memory Strategies in Aging
Principal Investigator: Cheryl J. Aine, Ph.D.
Percent Effort: 10%
Funding organization: NIH/NIA R01AG029495-01A2
Dates: 9/1/08-8/31/15
Amount: \$383,274 Annual Direct
Role: Co-Investigator

Project Title: Schizophrenia Gating Deficit Mechanisms: Extending the Circuit
Principal Investigator: Jose Canive, MD
Percent Effort: 5%

Funding organization: NIH/NIMH
Dates: 5/1/14-12/31/14
Amount: \$450,000 Annual Direct
Role: Co-Investigator

Project Title: High frequency activity in infants with epilepsy
Principal Investigator: Julia M. Stephen, PhD
Percent Effort: 25%
Funding organization: NIH/NICHD 1R21HD057387-01
Dates: 6/1/08-5/31/12
Amount: \$275,000
Role: Principal Investigator

Project Title: High frequency activity in infants with epilepsy Supplement
Principal Investigator: Julia M. Stephen, PhD
Percent Effort: Equipment grant 0%
Funding organization: NIH/NICHD 1R21HD057387-02S1
Dates: 6/1/10-5/31/12
Amount: \$98,920
Role: Principal Investigator

Project Title: Realistic Simulations and Empirical Data: MEG Reconstructions of Time
Principal Investigator: Cheryl Aine, PhD
Percent Effort: 10%
Funding organization: NIH/NIMH 1R21 MH080141-01A1
Dates: 2/1/08-11/31/11
Amount: \$275,000
Role: Co-Investigator

Project Title: Fetal ethanol-induced behavioral deficits: Mechanisms, diagnoses, and interventions Supplement
Principal Investigator: Daniel Savage, PhD
Percent Effort: 3% Project MRN Subaward PI: Julia Stephen, PhD.
Funding organization: NIH/NIAAA P20 AA017068-03S1
Dates: 7/1/10-6/30/11
Amount: \$85,375
Role: Project PI

Project Title: Towards Identifying an Early Marker for Fetal Alcohol Spectrum Disorders (FASD)
Principal Investigator: Julia Stephen, PhD
Percent Effort: 5%
Funding organization: DOE MRN Internal Grant award
Dates: 2/1/10-1/31/11
Amount: \$39,998
Role: Principal Investigator

Project Title: Combining Heavy Metal Exposure, Genes and MEG to Identify Early Markers in Autism Spectrum Disorders

Principal Investigator: Julia Stephen, PhD

Percent Effort: 15%

Funding organization: DOE MRN Internal Grant award

Dates: 4/1/08-9/30/09

Amount: \$94,000

Role: Principal Investigator

Project Title: Characterization of the Mirror Neuron System in 3-9 month old infants using the babySQUID MEG system

Principal Investigator: Robert Annett/ Julia Stephen, PhD

Percent Effort: 5%

Funding organization: UNM HSC CTSA – Novel Methods Pilot Project

Dates: 3/08-3/09

Amount: \$20,000

Role: Principal Investigator

Project Title: Fetal ethanol-induced behavioral deficits: Mechanisms, diagnoses, and interventions

Principal Investigator: Daniel Savage, PhD

Percent Effort: 5% Project 7B PI: J. Stephen, Auditory and Somatosensory Integration in young children with FASD.

Funding organization: NIH/NIAAA P20 AA017068-01

Dates: 7/1/08-6/30/13

Amount: \$2.5M

Role: Project PI

Project Title: Functional Neuroimaging of Normal Aging and Alzheimer's Disease

Principal Investigator: Cheryl J. Aine, Ph.D.

Funding organization: NIH-NIA R01 AG020302

Dates: 5/15/04-12/31/08

Amount: \$ 1,845,383

Role: Co-Investigator

Project Title: Auditory and Somatosensory Integration in young children with Autism: In Search of an Early Marker

Principal Investigator: Dina Hill, PhD

Percent Effort: 15%

Funding organization: UNM HSC CTSC

Dates: 11/1/07-6/30/09

Amount: \$50,000

Role: Co-Investigator

Project Title: Neuroimaging Successful vs. Normal Aging

Principal Investigator: Cheryl J. Aine, Ph.D.

Percent Effort: 10%

Funding organization: UNM CTSC
Dates: 6/1/06-5/30/08
Amount: \$50,000
Role: Co-Investigator

Project Title: Development of the babySQUID MEG System
Percent Effort: 50%
Funding organization: The MIND Institute
Dates: 1/1/06 – 12/31/06
Role: Co-Investigator

Project Title: Integrative Program in CNS Pathophysiology Research
Principal Investigator: Yoshio Okada, Ph.D.
Percent Effort: 50%
Funding organization: NIH (IDeA)
Dates: 2/1/01 – 1/31/06
Amount: \$ 9,854,374
Role: Co-Investigator

Project Title: Functional Neuroimaging of Normal Aging
Principal Investigator: Cheryl J. Aine
Percent Effort: 30%
Funding organization: VA Merit Review
Dates: 10/1/01 – 9/30/04
Amount: \$423,900
Role: Co-Investigator

Project Title: Dynamic systems mediating verbal and spatial working memory tasks as characterized by MEG
Principal Investigator: Cheryl J. Aine, Ph.D.
Percent Effort: 20%
Funding organization: Mental Illness and Neuroscience Discovery Institute (MIND)
Dates: 1/1/03 – 12/30/03
Amount: \$150,000
Role: Co-Investigator

Project Title: Auditory and Visual Integration in Aging
Principal Investigator: Julia M. Stephen, PhD
Funding organization: UNM-HSC Research Allocation Committee
Dates: 7/1/03-6/30/04
Amount: \$19,400
Role: Principal Investigator

Project Title: Auditory and Visual Integration in Alzheimer's Disease
Principal Investigator: Julia M. Stephen, PhD
Funding organization: UNM COBRE grant

Dates: 1/1/04-7/31/04
Amount: \$15,000
Role: Principal Investigator

Project Title: Characterization of Language Representation in the Brain to Object Naming and Word Reading Using Combined MEG and fMRI
Principal Investigator: Julia M. Stephen, Ph.D. Chad Woodruff
Percent Effort: 20%
Funding organization: National Foundation for Functional Brain Imaging
Dates: 11/1/00 – 10/30/01
Amount: \$ 41,254
Role: Principal Investigator

Project Title: Dynamic Systems mediating verbal and spatial working memory tasks as characterized by MEG
Principal Investigator: Cheryl J. Aine, Ph.D.
Percent Effort: 20%
Funding organization: Mental Illness and Neuroscience Discovery Institute (MIND)
Dates: 1/1/02 – 12/30/02
Amount: \$150,000
Role: Co-Investigator

Project Title: Functional Neuroimaging of Normal Aging and Alzheimer's Disease
Principal Investigator: Cheryl J. Aine, Ph.D.
Percent Effort: 20%
Funding organization: National Foundation for Functional Brain Imaging
Dates: 11/1/00 – 5/30/02
Amount: \$95,000
Role: Co-Investigator

Amount: Project Title: Functional/Anatomical Characterization of the Recovery Process of a Sensorimotor Ischemic Stroke
Principal Investigator: Larry Davis, MD
Percent Effort: 5%
Funding organization: National Foundation for Functional Brain Imaging (NFFBI)
Dates: 11/1/00 – 10/30/01
Amount: \$ 120,000
Role: Co-Investigator

Project Title: Neuromagnetic Mapping of Multiple Visual Areas in Humans
Principal Investigator: Cheryl Aine, Ph.D.
Percent Effort: 80%
Funding organization: NIH NEI (5R01EY08610-10)
Dates: 9/1/97-8/31/00
Amount: \$ 600,000
Role: Postdoctoral Fellow

Project Title: Functional/Anatomical Characterization of the Recovery Process of a Sensorimotor Ischemic Stroke

Principal Investigator: Larry Davis, MD

Percent Effort: 20%

Funding organization: National Foundation for Functional Brain Imaging (NFFBI)

Dates: 12/1/99-11/30/00

Amount: \$125,542

Role: Co-Investigator

Other Committee/Service Work

Scientific Advisory Board Member, Biomag 2020 (delayed until 2021), 22nd International Conference on Biomagnetism, Birmingham, UK.

Scientific Advisory Board Member, Biomag 2018, 21st International Conference on Biomagnetism, Philadelphia, PA

Scientific Advisory Board Member, MEG North America Conference 2017-present

Member of ISACM Executive Committee 2013-2017

Member MRN Safety Committee – July 2009 – present.

Member MRN Pilot Study Committee – July 2012 – present.

Member of MRN Performance Evaluation Committee – August 2009 – 2010.

Member of MRN Internal Grants/Awards Committee – August 2009 – 2010.

Member of Radiation Control Committee, University of New Mexico Health Sciences Center, 2004-2007.

Member of University of New Mexico Faculty Senate Research Policy Committee, 2006-2007;
Intellectual Property Policy Subcommittee Chair 2007.

Community Service

Judge, SY Jackson Elementary School Science Fair, February 2011.

Judge, Junior Physics, Northwestern New Mexico Regional Science & Engineering Fair, March 2004.

Judge, Medical Student Research Day Poster Session, University of New Mexico School of Medicine, 2003, 2004, 2006.

Member of Albuquerque Mountain Rescue Council, 1998-2003.

Graduate Student Representative, Graduate Studies Committee, Physics Department, University of Minnesota, 1996.

Physics Presenter, Science is for Girls Summer Camp, University of Minnesota, Summer 1995.

Physics Presenter, Opportunities Day for Girls, University of Minnesota, 1994 and 1995.

Volunteer Guide, Opportunities Day for Girls, University of Minnesota, 1993.

Co-founder and President, Physics Club, Northern Michigan University, 1991 - 1992. Coordinated visit and lecture by Nobel-laureate in Physics Leon Lederman.

Judge's Assistant, Science Olympiad, Northern Michigan University, 1990 and 1991.