

## CURRICULUM VITAE

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### POST-SECONDARY EDUCATIONAL HISTORY

Emory University, Atlanta, GA.      B.S.    1987    Biology  
Washington University, St. Louis, MO    Ph.D. 1992    Neuroscience

### PROFESSIONAL EMPLOYMENT AND APPOINTMENTS

2016-      Chair, Department of Psychology, U. of Pittsburgh  
2008-      Professor, Dept. of Communication Sciences & Disorders, U. of Pittsburgh  
2008-      Senior Scientist, Learning Research & Development Center, U. of Pittsburgh  
2006-      Professor, Dept. of Psychology, U. of Pittsburgh  
2006-      Professor, Dept. of Neuroscience, U. of Pittsburgh  
2006-      Professor, Center for the Neural Basis of Cognition, U. of Pittsburgh  
2005-      Adjunct Faculty, Department of Psychology, Carnegie Mellon U.  
2003-2006 Associate Professor, Dept. of Psychology, U. of Pittsburgh  
2003-2006 Associate Professor, Dept. of Neuroscience, U. of Pittsburgh  
2003-2006 Associate Professor, Center for the Neural Basis of Cognition, U. of Pittsburgh  
1999-2008 Research Scientist, Learning Research & Development Ctr, U. of Pittsburgh  
1998-2002 Assistant Professor, Dept. of Neuroscience, U. of Pittsburgh  
1997-2002 Assistant Professor., Center for the Neural Basis of Cognition, U. of Pittsburgh  
1997-2002 Assistant Professor, Dept. of Psychology, Univ. of Pittsburgh  
1992-1996 Postdoctoral Research Associate, Depts. Neurology, U. of Iowa & Washing U.

## HONORS, AWARDS, AND FELLOWSHIPS

- 2014-2016 Chair of the NIH Language and Communication Study Section
- 2007 Fellow, Association for Psychological Science
- 2002 APA Distinguished Scientific Award for Early Career Contribution to Psychology
- 2001 Chancellor's Distinguished Research Award
- 1999-2001 Alfred P. Sloan Research Fellow
- 1997 Wiley Young Investigator Award in Human Brain Mapping
- 1992-1996 Fellow, Charles A. Dana Foundation
- 1993 Finalist, Donald Lindsley Prize in Behavioral Neurosci., Soc. for Neuroscience
- 1991 Olin Fellowship for Outstanding Biomedical Research, Washington University
- 1987-1992 Fellow, Spencer T. Olin Foundation, Washington University
- 1987-1990 Fellow, National Science Foundation
- 1986 Phi Beta Kappa, Emory University
- 1983-1987 Woodruff Fellow, Emory University

## PROFESSIONAL MEMBERSHIPS

- 2006- Member, Psychonomic Society
- 2006- Member, American Educational Research Association
- 2003- Member, Association for Psychological Science
- 1989- Member, Society for Neuroscience
- 1997- Member, Cognitive Neuroscience Society

## PUBLICATIONS

Ren X, Liu R, Coutanche MN, Fiez JA, Libertus ME (2022). Numerical estrangement and integration between symbolic and non-symbolic numerical information: Task-dependence and its link to math abilities in adults. *Cognition*, 224:105067.

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Chrabaszcz A, Wang D, Lipski WJ, Bush A, Crammond DF, Shaima S, Dickey MW, Holt LL, Turner RS, Fiez JA, Richardson RM (2021). Simultaneously recorded subthalamic and cortical LFPs reveal different lexicality effects during reading aloud. *Journal of Neurolinguistics*, 60:101019.

Dastolfo-Hromack C, Bush A, Chrabaszcz A, Lipski W, Wang D, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Turner RW, Fiez JA, Richardson RM (2021). Articulatory gain predicts motor cortex and subthalamic nucleus activity during speech. *Cerebral Cortex*,

32:1337-1349.

Guediche S, Fiez JA (2021). Comprehension of Morse code predicted by item recall from working memory. *Journal of Speech, Language, and Hearing Research*, in press.

Vogt KM, Ibinson JW, Smith CT, Citro AT, Norton CM, Karim HT, Popov V, Mahajan A, Aizenstein HJ, Reder LM, Fiez JA. (2021). Midazolam and ketamine produce distinct neural changes in memory, pain, and fear networks during pain. *Anesthesiology*, 135:69-82.

Cox KM, Fiez JA (2020). Abstract inference of unchosen option values. *European Journal of Neuroscience*, 51:909-921.

Hirshorn EA, Simcox T, Durisko C, Perfetti CA, Fiez JA (2020). Unmasking individual differences in adult reading procedures by disrupting holistic orthographic perception. *PLoS ONE* 15: e0233041.

Ben-Yehudah G, Hirshorn EA, Simcox T, Perfetti CA, Fiez JA (2019). Chinese-English bilinguals transfer L1 lexical reading procedures and holistic orthographic coding to L2 English. *Journal of Neurolinguistics*, 50:136-148

Carlos BJ, Hirshorn EA, Durisko C, Fiez JA, Coutanche MN (2019). Word inversion sensitivity as a marker of visual word form area lateralization: An application of novel multivariate measure of laterality. *Neuroimage*, 191:493-502.

Chrabaszcz A, Neumann WJ, Stretcu O, Lipski WJ, Bush A, Dastolfo-Hromack CA, Wang D, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Turner TS, Fiez JA, Richardson RM (2019). Subthalamic nucleus and sensorimotor cortex activity during speech production. *Journal of Neuroscience*, 39:2698-2708.

Lim SJ, Fiez JA, Holt LL (2019). Role of the striatum in incidental learning of sound categories. *Proceedings of the National Academies of Science*, 116:4671-4880.

Martin L, Durisko C, Moore MW, Chen D, Fiez JA. The VWFA is the home of orthographic learning when house images are used as letters (2019). *eNeuro*, 6:ENEURO.0425-19.2019.

Martin L, Hirshorn EA, Durisko C, Moore MW, Schwartz R, Zheng Y, Fiez JA (2019). Do adults acquire a second orthography using their native reading network? *Journal of Neurolinguistics*, 50:120-135.

Vogt KM, Norton CM, Speer LE, Tremel JJ, Ibinson JW, Reder LM, Fiez JA (2019). Memory for non-painful auditory items is influenced by whether they are experienced in a context involving painful electrical stimulation. *Experimental Brain Research*, 237:1615-1627.

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Ghuman AS, Fiez JA (2018). Parcellating the structure and function of the reading circuit

[Comment]. *Proceedings of the National Academies of Science*, 115:10542-10544.

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Liu R, Schunn CD, Fiez JA, Libertus ME (2018). The integration between nonsymbolic and symbolic numbers: Evidence from an EEG study. *Brain and Behavior*, 8:e00938.

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Moore MW, Fiez JA, Tompkins CA (2017). Consonant age of acquisition effects in nonword repetition are not articulatory in nature. *Journal of Speech, Language, and Hearing Research*, 60:3198-3212.

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Zelle SL, Gates KM, Fiez JA, Sayette MA, Wilson SJ (2017). The first day is always the hardest: Functional connectivity during cue exposure and the ability to resist smoking in the initial hours of a quit attempt. *Neuroimage*, 151:24-32.

Durisko C, McCue M, Doyle PJ, Dickey MW, Fiez JA (2016). A flexible and integrated system for the remote acquisition of neuropsychological data in stroke research. *Telemedicine and e-Health*, 22:1032-1040.

Fiez JA (2016). The cerebellum and language: Persistent themes and findings. *Brain and Language*, 161:1-3.

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Hirshorn EA, Li Y, Ward M, Richardson RM, Fiez JA, Guzman AS (2016). Decoding and disrupting left mid-fusiform gyrus activity during word reading. *Proceedings of the National Academy of Sciences*, 113:8162-8167.

Hirshorn EA, Wrencher A, Durisko C, Moore MW, Fiez JA (2016). Fusiform gyrus laterality in writing systems with different mapping principles: An artificial orthography training study. *Journal of Cognitive Neuroscience*, 28:882-94.

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to adaptive plasticity in speech perception. *Cerebral Cortex*, 25:1867-77.

Liu AS, Kallai AY, Schunn CD, Fiez JA (2015). Using mental computation training to improve complex mathematical performance. *Instructional Science*, 43:463-485.

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Lim S-J, Fiez JA, Holt LL (2014). How may the basal ganglia contribute to auditory categorization and speech perception? *Frontiers in Neuroscience*, 8:230.

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Wilson SJ, Sayette MA, Fiez JA (2014). Self-control, negative affect and neural activity during effortful recognition in deprived smokers. *Social, Cognitive, and Affective Neuroscience*, 9:887-94.

Hedges JH, Adolph KE, Amso D, Beavelier D, Fiez JA, Krubitzer L, McAuley JD, Newcombe NS, Fietzpatrick SM, Ghajar J. (2013). Play, attention, and learning: how do play and timing shape the development of attention and influence classroom learning? *Annals of the New York Academy of Science*, 1292:1-20.

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Wilson SJ, Sayette MA, Fiez JA (2012). Quitting-unmotivated and quitting-motivated cigarette smokers exhibit different patterns of cue-elicited brain activity when anticipating an opportunity to smoke. *Journal of Abnormal Psychology*, 121 :198-211.

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Strick PL, Dum RP, Fiez JA (2009). Cerebellum and Non-Motor Function. *Annual Review of Neuroscience*, 32:413-34.

Ben-Yehudah G, Fiez JA (2008). Impact of cerebellar lesions on reading and phonological processing. *Annals of the New York Academy of Sciences*, 1145:260-74.

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Wilson SJ, Sayette MA, Delgado MR, Fiez JA (2008). Effect of smoking opportunity on responses to monetary gain and loss in the caudate nucleus. *Journal of Abnormal Psychology*, 117:428-34.

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Wilson SJ, Sayette MA, Fiez JA, Brough E (2007). Carry-over effects of smoking cue exposure on working memory performance. *Nicotine and Tobacco Research*, 9:613-9.

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Ravizza SM, Delgado MR, Chein JM, Becker JT, Fiez JA (2004). Functional dissociations within the inferior parietal cortex in verbal working memory. *Neuroimage*, 22:562-73.

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Wilson SJ, Sayette MA, Fiez JA (2004). Prefrontal responses to drug cues: a neurocognitive analysis. *Nature Neuroscience*, 7:211-214.

Chein JM, Ravizza SM, Fiez JA (2003). Using neuroimaging to evaluate models of working memory and their implications for language processing. *Journal of Neurolinguistics*, 16:315-339.

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and Punishment: Effects of Valence and Magnitude Manipulations. *Cognitive, Affective, and Behavioral Neuroscience*, 3:27-38.

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McClelland JL, Fiez JA, McCandliss BD (2002). Teaching the /r/-/l/ Discrimination to Japanese Adults: Behavioral and Neural Aspects. *Physiology and Behavior*, 77:657-662.

Chein JM, Fissell K, Jacobs S, Fiez JA (2002). Functional heterogeneity within Broca's area during verbal working memory. *Physiology and Behavior*, 77: 635-639.

MacAndrew DK, Klatzky RL, Fiez JA, McClelland JL, Becker JT (2002). The phonological-similarity effect differentiates between two working memory tasks. *Psychological Science*, 13:465-468.

McCandliss BD, Fiez JA, Protopapas A, Conway M, McClelland JL (2002). Success and failure in teaching the /r/-/l/ contrast to Japanese adults: Tests of a Hebbian model of plasticity and stabilization in spoken language perception. *Affective, Cognitive, and Behavioral Neuroscience*, 2:89-108.

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## MANUSCRIPTS IN REVIEW/REVISION

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Koch GE, Libertus ME, Fiez JA, Coutanche MN. Representations within the intraparietal sulcus distinguish numerical tasks and formats. *Journal of Cognitive Neuroscience*, in invited revision.

Vogt KM, Ibinson JW, Burfew AC, Smith CT, Aizenstein HJ, Fiez JA. Brain connectivity increases under light sedation with midazolam and ketamine during task performance and the period experience of pain : Examining concordance between different approach for seed-based connectivity analysis. *Brain Connectivity*, in invited revision.

## RECENT CONFERENCE ABSTRACTS (2012-PRESENT)

Duricy E, Fiez JA (2022). A single-case study of left parietal damage and numeracy abilities. Annual meeting of the *Cognitive Neuroscience Society*, San Francisco.

Ren X, Coutanche MN, Fiez JA, Libertus ME (2022). Integration of symbolic and non-symbolic numerical information in children: Task dependence and its link to math abilities. Annual meeting of the *Mathematical Cognition and Learning Society*, Belgium.

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Duricy E, Durisko C, Fiez JA (2021). Damage to the left intraparietal sulcus does not consistently impair numeracy abilities. Annual meeting of the *Cognitive Neuroscience Society*, online.

Ren X, Coutanche MN, Fiez JA, Libertus ME (2021). The neural basis for number processing and its relation to individual differences in adults' mathematical skills. Annual meeting of the *Society for Neuroscience*, online.

Ren X, Liu R, Coutanche M, Fiez JA, Libertus M (2021). Numerical integration between the exact and approximate number systems: Evidence for task-dependence and its link to math abilities in adults. *Annual NSF Brain Initiative Meeting*, online.

Vogt KM, Smith CT, Ibinson JW, Fiez JA (2021). Whole brain connectivity changes with midazolam sedation during task performance and period gain: A functional MRI study in healthy young adults. Annual meeting of the *International Anesthesiology Research Society*, online.

Weiss AR, Korzeniewska, Chrabaszcz, Bush A, Fiez JA, Crone NE, Richardson RM (2021). Auditory cortex influences subthalamic nucleus activity during reading aloud. Annual meeting of the *Society for Neuroscience*, online.

Gebremedhen N, Durisko C, Duricy E, Ito K, Liew SL, Fiez JA (2020). Quality control of manual lesion tracing with automated segmentation approaches. *Society for the Neurobiology of Language*, online.

Gebremedhen N, Fraser C, Snow S, Durisko C, Berti L, Shixiiong J, Jacobs S, Fridriksson J, Fiez JA (2020). DeepMedic for automated lesion segmentation in chronic stroke. Annual meeting of the *Cognitive Neuroscience Society*. Boston, MA.

Koch GE, Durisko C, Liu R, Libertus ME, Fiez JA, Coutanche MA (2020). Neural representation of number across semantic, phonological, visual, and manual formats. *Annual NSF Brain Initiative Meeting*, Washington, DC.

Vogt KM, Ibinson JW, Mahajan AM, Aizenstein HJ, Fiez JA (2020). During acute intermittent pain, midazolam and ketamine distinctly alter functional connectivity between memory, pain, and fear response centers in the human brain. *15<sup>th</sup> Annual Symposium on Advances in Pain Research*, sponsored by the National Institutes of Health. Washington, DC.

Vogt KM, Smith CT, Mahajan A, Ibinson JW, Fiez JA (2020). Neural correlates of memory formation during period acute pain with low-dose midazolam and ketamine: A randomized within-subject crossover functional MRI study in healthy young adult subjects. Annual meeting of the *International Anesthesiology Research Society*. San Francisco, CA.

Liu R, Koch G, Coutanche MN, Fiez JA, and Libertus M. (2019). Representing numerical information across different formats in the adult brain. Annual meeting of the *Mathematical Cognition and Learning Society*. Ottawa, Canada.

Koch GE, Liu R, Libertsu ME, Fiez JA, Coutanche MN (2019). Neural representations of number across semantic, phonological, visual, and manual formats. Annual meeting of the *Society for Neuroscience*, Chicago, IL.

Libertus E, Coutanche M, Fiez JA, Koch G, Liu R (2019). Neural integration of visual and semantic number knowledge in 4<sup>th</sup> graders and adults. *Annual NSF Brain Initiative Meeting*, Washington, DC.

Ruizhe L, Koch G, Coutanche M, Fiez JA, Libertus M (2019). Representing numerical information across different formats in the adult brain. Annual *Cognition and Learning Society Conference*, Montreal, CA.

Baalason D, Durisko C, Fiez JA (2018). A new resource for aphasia research: The Western Pennsylvania Patient Registry (WPPR) and the Remote Acquisition of Neuropsychological Data (RAND) System. Annual meeting of the *Academy of Aphasia*, Montreal, CA.

Chrabaszcz A, Neumann WJ, Stretcu O, Lipski WJ, Bush A, Dastolfo-Hromack C, Wang D, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Turner RS, Fiez JA, Richardson M (2018). Cortical and subcortical representations of consonant articulatory features. Annual meeting of the *Society for Neuroscience*, San Diego, CA.

Coutanche M, Fiez JA, Libertus M (2018). Neurobehavioral integration of visual and semantic number knowledge and its role for individual variation in math ability. Annual *NSF Brain Initiative Meeting*, Washington, DC.

Dastolfo-Hromack C, Alhourani A, Lipski WJ, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Turner RS, Fiez JA, Richardson M (2018). Local field potentials in the human subthalamic nucleus predict scaling of speech production. Annual meeting of the *Society for Neuroscience*, San Diego, CA.

Ghuman AS, Li Y, Hirshorn EA, Richardson RM, Fiez JA (2018). Information processing dynamics in human category-sensitive ventral temporal cortex. Annual meeting of the *Organization for Human Brain Mapping*, Singapore.

Hirshorn EA, Carlos B, Durisko C, Perfetti C, Fiez JA, Coutanche MA (2018). Word inversion sensitivity as a marker of word identification style and visual word form area lateralization. Annual meeting of the *Society for Neuroscience*, San Diego, CA.

Lipski WJ, Richardson M, Bush A, Wang D, Dastolfo-Hromack C, Chrabaszcz, Crammond DJ, Shaiman S, Turner RS, Fiez JA (2018). Neuronal firing in the subthalamic nucleus encodes chunks in speech sequences. Annual meeting of the *Society for Neuroscience*, San Diego, CA.

Martin M, Durisko C, Moore MW, Fiez JA (2018). Learning to Read a Second Orthography Recruits the Visual Word Form Area and a Broader Reading Network. Annual meeting of the *Society for the Neurobiology of Language*.

Vogt KM, Ibsinson JW, Speer LE, Smith CT, Reder LM, Fiez JA (2018). Modulation of human memory by midazolam and ketamine during painful stimulation. Annual meeting of the *Society for Neuroscience in Anesthesiology and Critical Care*. San Francisco, CA.

Wang D, Lipski WJ, Bush A, Dastolfo-Hromack, Chrabaszcz A, Crammond DJ, Shaiman S, Turner RS, Fiez JA, Richardson M (2018). Differential modulation of neural activity in the

ventral lateral nucleus of the thalamus during speech production. Annual meeting of the *Society for Neuroscience*, San Diego, CA.

Ward MJ, Boring MJ, Silson E, Richardson RM, Baker CI, Fiez JA, Ghuman AS (2018). Anterior fusiform naming area: a patch at the anterior tip of the fusiform causally linked to reading and language. Annual meeting of the *Vision Sciences Society*, St. Petersburg, FL.

Boring M, Ward MJ, Lipski WJ, Richardson RM, Fiez JA, Ghuman AS (2017). Functional connectivity dynamics of the left midfusiform gyrus during single, printed word presentation. Annual meeting of the *Vision Sciences Society*, St. Petersburg, FL.

Lipski WJ, Alhourani A, Prinia T, Jones PW, Dastolfo-Hromack C, Helous LB, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Litman D, Turner RS, Fiez JA, Richardson RM (2017). Speech encoding in the human subthalamic nucleus. Annual meeting of the *Society for Neuroscience*, Washington, DC.

Adebiyi O, Durisko C, McCue M, Doyle PJ, Dickey MW, Fiez JA (2016). Remote acquisition of neuropsychological data through the use of a collaborative videoconferencing system. Annual meeting of the *Cognitive Neuroscience Society*. New York, NY.

Ghuman AS, Li Y, Hirshorn EA, Fiez JA, Richardson RM (2016). Information processing dynamics in human category-selective fusiform gyrus. Annual meeting of the *Vision Sciences Society*. St. Pete Beach, FL.

Hirshorn EA, Durisko C, Colarusso J, Simcox T, Fiez JA (2016). Stealth readers: Distinct reading profile of individuals with word inversion sensitivity. Annual meeting of the *Society for the Scientific Study of Reading*, Porto, Portugal.

Martin LM, Durisko C, Moore MW, Fiez JA (2016). Reading an artificial orthography results in left visual word form area activation. Annual meeting of the *Cognitive Neuroscience Society*. New York, NY.

Tremel JJ, Wheeler ME, Laurent PA, Wolk DA, Fiez JA (2016). Neural signatures of experience-based improvements in decision making. Annual meeting of the *Cognitive Neuroscience Society*. New York, NY.

Vogt KM, Ibinson JW, Tremel J, Popov V, Reder LM, Fiez JA (2016). Variability in the effect of experimental pain on long-term memory during sedation with dexmedetomidine and midazolam. Annual meeting of the *American Society of Anesthesiologists*, Chicago, IL.

Vogt KM, Ibinson JW, Tremel J, Reder LM, Fiez JA (2016). Acute experimental pain affects long-term memory of auditory cues presented during sedation with dexmedetomidine and midazolam. Annual meeting of the *International Anesthesia Research Society*, San Francisco, CA.

Vogt KM, Ibinson JW, Tremel J, Reder LM, Fiez JA (2016). Modulation of long-term auditory memory by acute pain, including during sedation with dexmedetomidine and midazolam. Annual meeting of the *Association of University Anesthesiologists*, San Francisco, CA.

Alvarez TA, Fiez JA (2015). Phonological recoding and orthographic learning: Testing the self-teaching hypothesis in young adults. Annual meeting of the *Society for the Scientific Study of Reading*, The Big Island, Hawaii.

Fiez JA (2015). Contributions of the cerebellum to reading development. Symposium on Cerebellar contributions to learning and cognition. Annual meeting of the *Cognitive Neuroscience Society*. San Francisco, CA.

Hirshorn EA, Durisko C, Moore M, Perfetti CA, Fiez JA (2015). Effects of mapping principle on the learning trajectory of two artificial orthographies. Symposium: Using dynamic learning studies to probe interactions between reading and lexical learning – Part 2. Annual meeting of the *Society for the Scientific Study of Reading*, The Big Island, Hawaii.

Liu AS, Schunn CD, Fiez JA, Libertus ME (2015). Symbolic Integration, Not Symbolic Estrangement, of Double-Digit Numbers. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*, in press.

Lopresti C, Alvarez TA, Fiez JA (2014). Motor sequencing in the human cerebellum: How movement predictor and effector influence activity. Annual meeting of the *Society for Neuroscience*, Washington, DC.

Tremel JJ, Laurent PA, Wolk DA, Wheeler ME, Fiez JA (2014) Modulation of declarative memory efficacy affects neither learning rate nor the role of reinforcement learning systems in deterministic, feedback-based decision-making. Annual meeting of the *Society for Neuroscience*, Washington, DC.

Tremel JJ, Laurent PA, Wolk DA, Wheeler ME, Fiez JA (2014) Modulation of declarative memory efficacy affects neither learning rate nor the role of reinforcement learning systems in deterministic, feedback-based decision-making. Annual meeting of the *Society for Neuroscience*, Washington, DC.

Yang Y, Dickey MW, Fiez J, Murphy B, Mitchell T, Collinger J, Tyler-Kabara E, Boninger M, Wang W (2014). Concept encoding in individual neurons in motor cortex. Annual meeting of the *Society for the Neurobiology of Language*, Washington, DC.

Hirshorn E, Wrencher A, Schwartz R, Durisko C, Moore M, Fiez J (2013). Using artificial orthographies to study the neural correlates and fusiform laterality of writing systems with different grain sizes. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.



Moore M, Durisko C, Chen D, Brendel P, Hirshorn E, Fiez (2013). Reading houses : A house-based orthography elicits left fusiform activation. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.

Simcox T, Ben-Yehuda G, Perfetti C, Fiez J (2013). Word inversion reveals native language influences on lexical organization in a second language. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.

Simcox T, Ben-Yehuda G, Perfetti C, Fiez J (2013). Word inversion reveals native language influences on lexical organization in a second language. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.

Collins E, Moore M, Durisko C, Fiez J (2013). Building a better network : artificial orthographies and the serial decoding scaffold. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.

Lim S-J, Fiez JA, Holt LL (2013). Investigating the role of speech-selective regions during videogame-based non-speech sound category acquisition. Annual meeting of the *Society for the Neurobiology of Language*, San Diego, CA.

Moore MW, Fiez JA, Tompkins CA (2013). Differences between early-developing and late-developing phonemes: Implications for phonological deficits in SLI. Annual *Symposium on Research in Child Language Disorders*, Madison WI.

Lim S, Fiez JA, Wheeler ME, Holt LL (2013). Investigating the neural basis of video-game-based category learning. Annual meeting of the *Cognitive Neuroscience Society*, Toronto, Canada.

Simcox, T, Fiez JA (2013). Collecting response times using Amazon Mechanical Turk and Adobe Flash. Annual meeting of the *American Psychological Society*, Washington, DC.

Lim S, Fiez JA, Holt LL. (2013). Context-dependent modulation of striatal systems during incidental auditory category learning. Annual meeting of the *Society for Neuroscience*, San Diego.

Alvarez TA, Lopresti C, Durisko C, Tremel J, Fiez JA (2013). The cerebellum and cognition: Investigating functional specialization within the cerebellum. Annual meeting of the *Society for Neuroscience*, San Diego.

Lopresti C, Alvarez TA, Durisko C, Tremel J, Fiez JA (2013). The cerebellum and phonological processing: Common activation across verbal working memory and rhyme judgment tasks. Annual meeting of the *Society for Neuroscience*, San Diego.

Hirshorn EA, Wrencher A, Cordier J, Moore MW, Fiez JA (2012). Developing an alphasyllabary writing system for English: Implications for decoding and the VWFA.. Annual meeting of the *Society for the Neurobiology of Language*, Donostia, Spain.

Kallai A, Schunn CS, Fiez JA (2012). Automaticity in processing numbers that were never presented: An fMRI study. Annual meeting of the *Cognitive Neuroscience Society*, Chicago IL.

## INVITED CONFERENCE AND WORKSHOP PRESENTATIONS (2012-PRESENT)

Fiez JA (2019, November). Session presentation for *Science 2019*, University of Pittsburgh.

Fiez JA (2019, October). Keynote address at the *International Conference on Psycholinguistics in China*. Chengdu, China.

Fiez JA (2018, June). Does L1 Chinese literacy affect L2 English reading? *International Workshop on Advanced Learning Sciences 2018*. Pittsburgh, PA.

Fiez JA (2018, September). The cerebellum and reading. *Parallel Distributed Processing and the emergence of an understanding mind. Symposium in honor of James L. McClelland*. Princeton, NJ.

Fiez JA (2018, August). How does your brain specialize itself for reading? Keynote address. Annual conference of the *Society for the Neurobiology of Language*. Quebec City, CA.

Fiez JA (2018, October). The cerebellum and language. Keynote address, Annual meeting of the *Academy of Aphasia*, Montreal, CA.

Fiez JA (2015, March). Contributions of the cerebellum to reading development. Symposium on Cerebellar contributions to learning and cognition. Annual meeting of the *Cognitive Neuroscience Society*. San Francisco, CA.

Fiez JA (2015, January). Modeling bilingual reading in artificial orthographies. Talk presented at the *Netherlands Institute for Advanced Study Workshop on Second Language Reading Across Languages and Writing Systems*, Wessenaar, The Netherlands.

Fiez JA (2014, November). Rewire. Talk presented at the *Unboxed Conference* sponsored by Leadership Pittsburgh, Farmington, PA.

Fiez (2014, November). *Perspectives on educational neuroscience*. Workshop sponsored by the *Society for Neuroscience*, Washington DC.

Fiez (2014, June). Educational neuroscience and reading. *Mini-Symposium on Educational Neuroscience*, Multimodal Neuroscience Training Program, Pittsburgh, PA.

Fiez (2012, May). Play, Attention, and Learning (PAL): How Does Play and Timing Shape the Development of Attention and Facilitate Classroom Learning? Workshop sponsored by the New York Academy of Sciences. New York, NY.

## **RECENT DEPARTMENTAL COLLOQUIA (2012-PRESENT)**

Core for Advanced Resonance Imaging, Baylor College of Medicine, January 2020  
Center for Advances of Language Science, Beijing, China, October 2019  
Center of Chinese Ministry of Education. Beijing, China, October 2019  
Neurology Grand Rounds, University of Pittsburgh, February 2018  
Huck Institutes Distinguished Lecturer, Penn State, April 2014  
Neuroscience Program, University of Iowa, September 2013  
Brain and Cognitive Sciences Department, MIT, October 2013  
Temple Inst for Learning & Education Sciences, Temple University, October 2012  
Department of Psychiatry, University of Pittsburgh, January 2012

## **PENDING GRANT SUBMISSIONS**

NIH T32 GM081760-01            7/1/22-6/30/27  
Predoctoral Training Program in Behavioral Brain Research  
Total costs: \$1,558,575  
Project title: Principal Investigator

NIH U01 NS128921-01  
The Neural Code and Dynamics of the Reading Network  
Total costs: \$4,870,359  
Project role: Co-Investigator (PI: Tandon)

## **ACTIVE RESEARCH PROJECTS**

LRDC Internal Grant 7/01/22-6/30/24  
Testing the Efficacy and Mechanism of a Glass Analysis Method Reading Intervention  
Total costs: \$148,707  
Project title: Principal Investigator

NIH U01NS117836-01    9/17/20-6/30/25  
Cortical-Basal Ganglia Speech Networks  
Total costs: \$1,195,991  
Project title: Co-Investigator (PI: Richardson)

NIH R01 HD096738-01A        9/12/19-7/31/24  
Investigating the role of the cerebellum in reading  
Total costs: \$3,453,356  
Project role: Principal Investigator

NSF 1923129                    9/1/19-8/31/22  
Total costs: \$668,330  
Studying the neural basis of numeracy using the lesion method

Project role: Principal Investigator

NSF 1734735 9/1/17-11/30/20

NCS-FO: Neurobehavioral integration of visual and semantic number knowledge and its role for individual variation in the math ability of children and adults

Total costs: \$982,661

Project role: Co-Principal Investigator (PI: Libertus)

NIH T32 GM081760-01 7/1/07-6/30/22

Predocutorial Training Program in Behavioral Brain Research

Total costs: \$1,558,575

Project title: Principal Investigator

## **PREVIOUSLY SPONSORED RESEARCH PROJECTS**

NIH U01NS098969 7/30/2016-5/31/2019

Subthalamic and corticosubthalamic coding of speech production

Total costs: \$3,084,000

Subcontract to Fiez: ~ \$500,000

Project title: Co-Investigator (PI: Richardson)

NIH K18DC014577 5/01/2016-4/30/2018

Training in lesion-symptom mapping for speech-language research

Total costs: \$167,875

Project title: Principal Investigator

NIH R21MH106317 4/01/2015-3/31/17

Neural Substrates of Deterministic Decision Making

Total costs: \$401,694

Project title: Principal Investigator

NIH R21DC013568A 7/01/14-6/30/16

Remote Neuropsychological Assessment: A Proof-of-Concept Test

Total costs: \$423,500

Project title: Principal Investigator

NIH R01DC011520 04/01/12-3/31/16

Neural Basis of Verb-Argument Processing

Total costs: \$1,288,000

Subcontract to Fiez: 5% annual effort

Project title: Co-Investigator (PI: Dickey)

LRDC Internal Grants 7/1/14-6/30/16

The dangers of computation without quantitative meaning: Testing the case of symbolic estrangement

Total costs: \$87,955

Subcontract to Fiez: ~ \$25,000

Project title: Co-Principal Investigator (PI: Libertus)

American Heart Association 1/01/14-12/31/16  
Cyber-Enabled Neuropsychological Self-Assessment (CENSA) in Stroke Research  
Total costs: \$150,000  
Project role: Principal Investigator

NIH R01HD060388 8/15/2009-7/31/2014  
Reading and the Right Fusiform  
Total costs: \$1,545,000  
Project role: Principal Investigator

NSF 1125719 9/01/2011-8/31/14  
The Cerebellum and Language  
Total costs: \$593,228  
Project role: Principal Investigator

LRDC Internal Grants 7/1/11-6/30/13  
The Cerebellum and Language  
Total costs: \$88,209  
Project title: Principal Investigator

NSF 0815945 8/15/09-7/31/11  
Training in Arithmetical Fluency  
Total costs: \$1,241,568  
Project title: Principal Investigator

NSF/NIH Suppl Award SBE-0839229 7/1/09-6/30/10  
Pittsburgh Science of Learning Center  
Total costs: \$200,000  
Project title: Project Principal Investigator (Center PI: Koedinger)

NIH RO1MH59256 1/1/06-12/31/11  
Articulatory/Phonological Processes in Working Memory  
Total costs: \$2,235,698  
Project Title: Principal Investigator

NIH R01 DA018910 9/30/04-8/31/09  
Pubertal Maturation and Drug Use Vulnerability  
Total costs: \$1,466,875  
Subcontract to Fiez: 0.6 months of annual salary  
Project title: Co-investigator (PI: Dahl)

NIH R01 NS048178 7/15/05-5/31/09  
fMRI in the Examination of Episodic Memory after TBI  
Subcontract to Fiez: 5% annual effort  
Project title: Co-investigator (PI: Ricker)

NIH R01 DA02463                      1/1/06-12/31/08  
Neural Bases of Executive Control in Addiction  
Total costs: \$800,000  
Project title: Principal Investigator

James S. McDonnell Foundation 12/01/02-5/1/07  
The Functional Neuroanatomy of Reading: Comparative Research Across Writing Systems  
and Levels of Expertise  
Total costs: \$446,796  
Project Title: Principal Investigator

Pittsburgh Mind Body Center    1/1/07-12/31/07  
Attentional bias, craving, and smoking-related cues: an fMRI investigation  
Project title: Co-Investigator (PI: Tindle)

Pittsburgh Science of Learning Center (NSF)    10/1/06-8/31/07  
Training of arithmetical fluency  
Total costs: \$27,420  
Project title: Principal Investigator

NIH P50 MH64445                      6/01/02-5/30/07  
Toward a Neurobiologically Constrained Framework for Modeling Human Cognition.  
Interactive Processes in Language: Sentence Processing  
Total center costs: \$9,733,932  
Subcontract to Fiez: \$438,388  
Project Title: Co-Investigator (Center PI: McClelland; Project PI: McDonald)

NIH RO1MH59256                      7/1/00-6/30/06  
Articulatory/Phonological Processes in Working Memory  
Total costs: \$1,469,319  
Project Title: Principal Investigator

Pittsburgh Inst for Neurodegenerative Disorders 4/1/03-3/31/06  
Functional Neuroimaging of Reward-related Processing in Parkinson's Disease  
Total costs: \$25,000  
Project Title: Principal Investigator

NIH 1R01 NS044837-01              10/01/02-6/30/05  
Participation of the Cerebellum in Problem Solving  
Total costs: \$772,000  
Subcontract to Fiez: 0.6 months of annual salary support  
Project Title: Co-investigator (PI: Houk)

NIH RO1 DA14103                      8/01/01-12/31/05  
fMRI Studies of the Neural Basis of Reward Processing  
Total costs: \$879,042  
Project Title: Principal Investigator

Alfred P. Sloan Foundation      9/16/99-9/15/01  
Alfred P. Sloan Research Fellowship  
Total costs: \$35,000  
Project Title: Principal Investigator

NSF SBR 9873465      10/1/98-9/30/01  
Computational Models and Coordinated Neuroimaging of Learning and Cognitive Function  
Total costs: \$1,200,000  
Project title: Co-Principal Investigator (PI: Schneider)

NSF IRI-9720350      10/1/97-9/30/00  
The Biological Basis of Incremental Learning  
Total costs: \$775,000 total award  
Subcontract to Fiez: \$24,294  
Project Title: Co-Principal Investigator (PI: Touretzky)

NSF IRI-9720348      10/1/97-5/31/00  
Intervention Strategies that Promote Learning: Their Basis and Use in Enhancing Literacy  
Total costs: \$998,161  
Subcontract to Fiez: \$212,189  
Project Title: Co-Principal Investigator (PI: McClelland)

## **PROFESSIONAL SERVICE**

Member of the Editorial Board for:

*Cerebral Cortex, Cerebellum, Journal of Neurolinguistics, Open Mind*

Ad hoc manuscript reviewer (5-10 papers per year) for:

*Brain, Brain and Language, Current Biology, Journal of Cognitive Neuroscience, Journal of Neuroscience, Neuroimage, Neuropsychologia, Proceedings of the National Academy of Sciences, USA*

Member of the NIH Cognitive Neuroscience Study Section (June 2005-July 2009)

Member of the NIH Language and Communication Study Section (October 2011-June 2014)

Chair of the NIH Language and Communication Study Section (October 2014 – June 2016)

Ad hoc grant reviewer for the National Science Foundation, National Institutes of Health

Abstract reviewer, Neurobiology of Language Conference (2013, 2014, 2017)

## **UNIVERSITY AND DEPARTMENTAL SERVICE**

### Active service:

Co-Director, BRIDGE Center (2020-present)

Chair, Steering Committee for the BRIDGE Center (2018-2020)

Chair, Dept. of Psychology (2016-present)

Member, Dietrich School Diversity Committee (2016-present)

Member, University Research Council (2012-present)  
Co-Director, Western Pennsylvania Patient Registry (2008-present)  
Co-Director, Behavioral Brain Research Training Program (2007-present)  
Member, CNBC Executive Committee (1997-present)

Major past service:

Member, Reimagining the CNBC Core Committee (2022)  
Co-Manager, Neuroscience Imaging Center (2010-2019)  
Member, Search Committee for the Vice-Chancellor for Research (2016-2017)  
Member, CNUP Training Grant Steering Committee (2003-2016)  
Member, Psychology Executive Committee (2002-2016)  
Director of Graduate Studies and Chair, Graduate Education Committee (2009-2016)  
Director, Hot Metal Bridge Fellowship Program in Psychology (2010-2015)  
Member, Psychology Faculty Development Committee (2003-2007)  
Chair, Cognitive Program in Psychology (2004-2006)  
Chair, LRDC Strategic Planning Committees (2008-9, 2014)  
Chair, LRDC Diversity Committee (2009-2011)  
Member, LRDC Executive Committee (2003-2007)  
Member, Provost's LRDC Search Committee (2007-2008)  
Member, BIRC Management Committee (2002-2010)

**COURSES TAUGHT**

Undergraduate courses:

PSY1059: Advanced Lab: Neuropsychology of Brain Injury (20-2, 21-1)  
PSY042/0421: Human Cognition (98-1, 99-1, 00-2, 01-2, 04-2, 05-2, 06-2, 08-1)  
PSY1470: Brain and Cognition (99-1, 01-1, 02-1, 03-2, 07-2)  
PSY1054: Emotion and the Brain (03-2, 05-1, 07-1, 10-1, 11-1, 13-1, 14-2)  
PSY1059: Advanced Lab in the Neuropsychology of Brain Injury (20-2)

Graduate courses:

PSY2475: Behavioral Neuroscience (10-1, 12-1, 14-2, 16-2)  
PSY2575: Perspectives on Psychology and Neuroscience (00-2, 01-2, 04-1, 06-1, 08-1)  
PSY2575: Seminar on Affective Cognitive Neuroscience (01-2)  
Guest lecturer in Neuro3, Graduate course in Systems Neuroscience (00-2, 02-1)  
Faculty Supervisor, CNUP Journal Club (03-01)

**CURRENT TRAINEE SUPERVISION**

Advanced trainees:

Anna Chrabaszcz, Postdoc/Research Associate, 2017-  
Keith Vogt, Assistant Professor of Anesthesiology, T32/K mentee, 2017-

Graduate (Ph.D.) student supervision:

Erin Duricy, Neuroscience, 2019-  
August Vincent, Psychology, 2019 -



## STUDENT COMMITTEES (2021-2022)

Ciara Willet (Summer, 2021). Psychology Comprehensive Exam  
Mark Curtiss (Fall, 2021). CNUP PhD Dissertation  
Rae Buckser (Fall, 2022). Psychology Master's thesis  
Matt Boring (Spring, 2022). CNUP PhD Dissertation  
Joey Posner (Spring, 2022). PhD Dissertation (Georgetown)  
Lin (Zoe) Zhou (Spring, 2022). Psychology Comprehensive Exam  
Xeuying (Caroline) Ren (Spring 2022). Psychology Comprehensive Exam.  
Sophia Norvilas (Spring 2022). Psychology Undergraduate Honor's thesis  
Xiaoxi (Amy) Qi (Spring 2022). Psychology Undergraduate Honor's thesis  
Antonija Kolobaric (Spring 2022). CNUP Comprehensive Exam

## PREVIOUS TRAINEES

### Post-doctoral fellow supervision:

Keith Vogt, 2015-2017 (T32 mentor)  
*Assistant Professor, University of Pittsburgh*  
Elizabeth Hirshorn, 2012-2017  
*Assistant Professor, SUNY New Paltz*  
Arava Kallai, 2009-2012  
*Postdoctoral fellow, Ben Gurion University*  
Susan Ravizza, 2001-2004  
*Associate Professor, Michigan State University*  
Simone Sprenger, 2003-2004  
*Assistant Professor, University of Groningen, Netherlands*  
Gal Ben-Yehuda, 2004-2009  
*Assistant Professor, Open University, Israel*  
David Fraser, 2006-2009  
*Assistant Professor, Chatham University*  
Hilary Tindle, 2005-2009 (K-award co-mentor)  
*Associate Professor of Medicine, Vanderbilt-Ingram Cancer Center*

### Graduate (Ph.D.) student supervision:

Travis Alvarez, Dept. of Psychology, 2012-2019  
*Lecturer, Dept. of Psychology, U. of Pittsburgh*  
Joshua Tremel, Dept. of Psychology, 2014-2018  
*Data Scientist, KPMG, Seattle, WA*  
Michelle Moore, Dept. of Communication Sciences & Disorders, 2005-2012  
*Assistant Professor, Dept. of Communication Sciences, U. of West Virginia*  
Karin Cox, Dept. of Psychology (Cognitive), 2004-2011  
*Masters student in Computer Science, University of Pittsburgh*  
Sara Guediche, Dept. of Neuroscience, 2004-2009  
*Postdoctoral fellow, Basque Center on Cognition, Brain, and Language, Spain*  
Alison Gilbert, Dept. of Psychology (Clinical), 2001-2008

*Research Scientist, Northshore Health System*  
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