

# CURRICULUM VITAE

## Simon Jacob Fischer-Baum

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Updated 1/29/2021

### EMPLOYMENT

2020-present	Associate Professor, Psychological Sciences, Rice University, Houston, TX Director, Cognitive Science Program Spring 2015, 2018-present
2013-2020	Assistant Professor, Psychology, Rice University, Houston, TX
2010-2012	Beckman Institute Post-Doctoral Fellow, Beckman Institute, University of Illinois, Urbana-Champaign, IL

### EDUCATION

2005-2010	Ph.D., Cognitive Science, Johns Hopkins University
2005-2008	M.A., Cognitive Science, Johns Hopkins University
1999-2003	B.A. with Honors, Neuroscience and Behavior, Columbia University

### PEER-REVIEWED JOURNAL ARTICLES

\* MENTEEES

UNDERGRADS

2021 (34)	<b>Fischer-Baum, S.</b> , Warker, J.A & <u>Holloway, C.</u> (2021). Learning Phonotactic-like Regularities in Immediate Serial Recall. <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> , 47, 129-146.
2020 (33)	Woolnough, O., Donos, C., Rollo, P. S., Forseth, K. J., Lakretz, Y., Crone, N. E., <b>Fischer-Baum, S.</b> , Dehaene, S. & Tandon, N. (2020). Spatiotemporal dynamics of orthographic and lexical processing in the ventral visual pathway. <i>Nature Human Behaviour</i> , 1-10.
2020 (32)	Schubert, T. M., Cohen, T., & <b>Fischer-Baum, S.</b> (2020). Reading the written language environment: Learning orthographic structure from statistical regularities. <i>Journal of Memory and Language</i> , 114, 104148.
2020 (31)	Noe, C.* & <b>Fischer-Baum, S.</b> (2020). Early lexical influences on sublexical processing in speech perception: Evidence from electrophysiology. <i>Cognition</i> , 197, 104162
2019 (30)	Zhai, M.*. & <b>Fischer-Baum, S.</b> (2019). Exploring the effect of knowledge of writing on reading Chinese characters in skilled readers <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> , 45, 724-731.
2018 (29)	<b>Fischer-Baum, S.</b> , Dial, H & Mis, R.* (2018). Word deafness with preserved number word perception. <i>Cognitive Neuropsychology</i> , 35, 415-429.
2018 (28)	Miozzo, M., Shuster, V. & <b>Fischer-Baum, S.</b> (2018). How modality-specific is morphology? <i>Cognitive Neuropsychology</i> , 35, 371-384.

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- 2018  
(27) **Fischer-Baum, S.**, Kook, J.H., Lee, Y., Ramos-Nuñez, A.\*, Vannucci, M. (2018). Sight or sound? Individual differences in the neural and cognitive mechanisms of single word reading. *Frontiers in Human Neuroscience*, 12, 271.
- 2017  
(26) **Fischer-Baum, S.** & Campana, G.E.\* (2017). Neuroplasticity and the logic of Cognitive Neuropsychology. *Cognitive Neuropsychology*, 34, 403-411.
- 2017  
(25) Medina, O.J. & **Fischer-Baum, S.** (2017). Single-case cognitive neuropsychology in the age of big data. *Cognitive Neuropsychology*, 34, 440-448.
- 2017  
(24) Ramos-Nuñez, A.\*, **Fischer-Baum, S.**, Martin, R., Yue, Q., Ye, F & Deem, M. (2017). Static and dynamic measures of human brain connectivity predict complementary aspects of human cognitive performance. *Frontiers in Human Neuroscience*, 11.
- 2017  
(23) Yue, Q., Martin, R., **Fischer-Baum, S.**, Ramos-Nuñez, A.\*, Ye, F & Deem, M. (2017). Brain modularity mediates the relation of cognitive performance to task complexity. *Journal of Cognitive Neuroscience*, 29, 1532-1546.
- 2017  
(22) **Fischer-Baum, S.** (2017). The independence of letter identity and letter doubling in reading. *Psychonomic Bulletin & Review*, 24, 873-878.
- 2017  
(21) **Fischer-Baum, S.**, Bruggemann, D., Gallego, I.F., Li, D.S.P.\* & Tamez, E.R. (2017). Decoding levels of representation in reading: A representational similarity approach. *Cortex*, 18, 88-102.
- 2017  
(20) **Fischer-Baum, S.**, Jang, A., & Kajander, D.\*. (2017). Functional neuroplasticity of reading recovery following chronic stroke: A representational similarity approach. *Neural Plasticity*, vol. 2017, Article ID 2761913, 16 pages. doi:10.1155/2017/2761913.
- 2016  
(19) **Fischer-Baum, S.**, Miozzo, M., Laiacona, M. & Capitani, E. (2016). Perseveration during verbal fluency in traumatic brain injury reflects impairments in working memory. *Neuropsychology*, 30, 791-799.
- 2016  
(18) Miozzo, M., Petrova, A., **Fischer-Baum, S.** & Peressotti, F. (2016). Serial position encoding of signs. *Cognition*, 154, 69-80.
- 2016  
(17) **Fischer-Baum, S.** & Englebreton, R.. (2016). Orthographic units in the absence of visual processing: Evidence from sublexical structure in braille. *Cognition*, 153, 161-174.
- 2015  
(16) Rapp, B., **Fischer-Baum, S.** & Miozzo, M. (2015). Modality and morphology: What we write may not be what we say. *Psychological Science*, 26, 892-902.
- 2015  
(15) **Fischer-Baum, S.** & McCloskey, M. (2015). Representation of item position in verbal short-term memory: Evidence from intrusion errors. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 41, 1426-1446.
- 2015  
(14) **Fischer-Baum, S.** (2015). How much better?: The challenge of interpreting interactions in intervention studies. *Aphasiology*, 29, 609-614.
- 2014  
(13) **Fischer-Baum, S.**, Dickson, D. S. & Federmeier, K.D. (2014). Frequency and regularity effects are task dependent: Evidence from ERPs. *Language, Cognition and Neuroscience*, 29, 1342-1355.
- 2014  
(12) **Fischer-Baum, S.** & Benjamin, A.S. (2014). Time, Space and Memory for Order. *Psychonomic Bulletin & Review*, 21, 1263-1271.

2014 (11)	<b>Fischer-Baum, S.</b> & Rapp, B. (2014). The analysis of perseverations in acquired dysgraphia reveals the internal structure of orthographic representations. <i>Cognitive Neuropsychology</i> , 31, 237-265.
2013 (10)	<b>Fischer-Baum, S.</b> (2013). Making sense of deviance: Identifying dissociating cases in the case series approach. <i>Cognitive Neuropsychology</i> , 30, 597-617.
2013 (9)	McCloskey, M., <b>Fischer-Baum, S.</b> & Schubert, T. (2013). Representation of letter position in single-word reading: Evidence from acquired dyslexia. <i>Cognitive Neuropsychology</i> , 30, 396-438.
2013 (8)	Miozzo, M., <b>Fischer-Baum, S.</b> & Caccappolo-van Vliet, E. (2013). Perseverations in Alzheimer's Disease: Memory slips? <i>Cortex</i> . 49, 2028-2039.
2013 (7)	<b>Fischer-Baum, S.</b> & Gonsalves, B. (2013). Stuck in the past: Neural events that predict prior list intrusions. <i>Psychological Science</i> , 24, 742-750.
2012 (6)	<b>Fischer-Baum, S.</b> & Rapp, B. (2012). Underlying cause(s) of letter perseveration errors. <i>Neuropsychologia</i> . 50, 305-318.
2011 (5)	Costa, V., <b>Fischer-Baum, S.</b> , Capasso, R., Miceli, G. & Rapp, B. (2011). Temporal stability and representational distinctiveness: Key functions of orthographic working memory. <i>Cognitive Neuropsychology</i> , 28, 338-362.
2011 (4)	<b>Fischer-Baum, S.</b> , Charny, J. & McCloskey, M. (2011). Both-edges representation of letter position in reading. <i>Psychonomic Bulletin &amp; Review</i> , 18, 1083-1089.
2010 (3)	Miozzo, M., <b>Fischer-Baum, S.</b> & Postman, J. (2010). The dissociability of morphological processing and lexical access, <i>Neuropsychologia</i> , 48, 2427-2436.
2010 (2)	<b>Fischer-Baum, S.</b> , McCloskey, M. & Rapp, B. (2010). The representation of grapheme position: Evidence from acquired dysgraphia, <i>Cognition</i> , 115, 466-490.
2008 (1)	Miozzo, M., <b>Fischer-Baum, S.</b> & Postman, J. (2008). Knowing where but not what: Impaired thematic roles and spatial language. <i>Cognitive Neuropsychology</i> , 25, 853-73.
<b>PEER-REVIEWED BOOK CHAPTERS</b>	
	* MENTEES <u>UNDERGRADS</u>
2019 (4)	<b>Fischer-Baum, S.</b> & Tian, Y.* (2019). The case for single case studies in memory research. In S. MacPhearson and S. Della Salla (eds). <i>Single Case &amp; Memory Handbook</i> . Taylor & Francis. (100% Effort)
2018 (3)	<b>Fischer-Baum, S.</b> (2018). A common representation of serial position language and memory. In K. Fedemeier and D. Watson (eds). <i>Psychology of Learning and Motivation vol. 68</i> . Academic Press. (100% Effort)
2015 (2)	Rapp, B. & <b>Fischer-Baum, S.</b> (2015). Uncovering the cognitive architecture of spelling. In A. Hillis (ed). <i>Handbook of Adult Language Disorders</i> . Hove: Psychology Press. (33% Effort)
2014 (1)	Rapp, B. & <b>Fischer-Baum, S.</b> (2014). Representation of orthographic knowledge. In V. Ferreria, M. Goldrick & M. Miozzo (eds.) <i>Oxford Handbook of Language Production</i> . New York: Oxford University Press (33% Effort)

## CURRENT AND PENDING RESEARCH SUPPORT

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### External

1. *NIH R21 DC016715: Functional reorganization of the reading system following stroke*  
9/26/17-8/31/2021  
*NIDCD Early Career Research (ECR) Award (Role: Sole PI)*  
Total Award: \$455,469 (Direct Costs: \$300,000)
2. *NSF BCS 1752751: CAREER: Mapping the neural locus of cognitive processes in word reading*  
4/1/18-3/31/23  
*NSF CAREER Grant (Role: Sole PI)*  
Total Award: \$418,693 (Direct Costs: \$282,477)  
*REU Supplement Awarded (\$12,000) Dates: 6/1/18-8/31/18*
3. *Investigating the Networks of Temporal Context Memory in TBI and Healthy Controls*  
11/1/18-5/31/21  
*The Institute for Rehabilitation and Research Foundation (Role: PI)*  
Total Award: \$60,000
4. *Exploring the knowledge, skills, and strategies TVIs need to effectively teach braille reading and writing.*  
9/1/19-8/31/23  
*IES-NSCER Grant (Role: PI)*  
Total Award: \$1,400,000
5. *NSF Research Center for Auditory Neuroengineering Technology (AudNet)*  
*Pending*  
*Submitted October 2, 2020*  
*National Science Foundation (Role: Co-PI, Rob Raphael, PI)*
6. *The neural code and network dynamics of reading*  
*Pending*  
*Submitted November 1, 2020*  
*National Institutes of Health (Role: PI of Rice Subcontract, Nitin Tandon, UT-Health, PI)*  
Total Award: \$8,000,000 (Co-PI allocation, approx. \$325,000)
7. *Learning and Communicating Complex Multimodal Information through Wearable Haptic Systems*  
*Pending*  
*Submitted November 12, 2020*  
*National Science Foundation (Role: Co-PI, Marcia O'Malley, PI)*  
Total Award: \$690,000

### Internal

1. *Modeling the Auditory System: From Graph Signal Processing to Speech and Music Perception*  
*Interdisciplinary Excellence Award (Role: Co-PI, Rob Raphael, PI)*  
Total Award: \$74,060
2. *Spatialization Of Verbal Serial Order Working Memory and Its Neural Underpinning*  
*Social Science Research Institute, Pre-Dissertation Award (Role: Mentor, Yingxue Tian, PI)*  
Total Award: \$2,000

## COMPLETED RESEARCH SUPPORT

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### External

1. *Recovery from Inhibition Deficits Enhanced by tDCS*  
10/1/15-9/30/17  
*The Institute for Rehabilitation and Research Foundation* (Role: PI)  
Total Award: \$60,000
2. *NSF EEC 1840636: Planning Grant: Engineering Research Center for Auditory Bioengineering*  
9/15/18-8/31/19  
*National Science Foundation* (Role: Co-PI, Rob Raphael, PI)  
Total Award: \$98,227
3. *Postdoctoral Research Fellowship and Research Fund*  
12/15/10-12/14/12  
*Arnold and Mabel Beckman Foundation* (Role: PI)  
Total Award: \$191,500

### Internal

1. *Interdisciplinary Research Perspectives on Braille Reading and Writing: A Small Conference*  
9/30/16-4/1/18  
*Scientia Institute, Rice University* (Role: Co-PI, Robert Englebreton, PI)  
Total Award: \$35,000
2. *Individual differences in the neural code for reading*  
3/1/16-2/28/17  
*Social Science Research Institute, Rice University* (Role: PI)  
Total Award: \$29,987
3. *Mapping Dimensions of Linguistic Information in Language Processing*  
*Faculty Initiative Funds, Rice University* (Role: PI)  
Total Award: \$32,725
3. *Neural bases of lexical access in epilepsy patients*  
*Social Science Research Institute* (Role: Sole PI)  
Total Award: \$10,000

## CONFERENCE PROCEEDINGS

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- 2019 Tian, Y\*, Dial, H., Martin, R. & **Fischer-Baum, S.** A common serial order mechanism for verbal short term memory and language production. *Frontiers in Human Neuroscience*.
- 2019 Zhai, M.\* & **Fischer-Baum S.** Exploring the task demand effect on stroke-motor representations on Chinese characters in reading. *Frontiers in Human Neuroscience*.
- 2019 Irons, S\*, Bradbury, K. Ciampa, C. & **Fischer-Baum, S.** Cascading activation in spoken production: Evidence from phonetic analysis of aphasic speech. *Frontiers in Human Neuroscience*.
- 2019 **Fischer-Baum, S.**, Chapman, C., Rollo, P., Tombridge, K., Breier, J. & Tandon, N. (2019) Disruption of the language production network following anterior temporal lobe resection. *Frontiers in Human Neuroscience*.
- 2018 **Fischer-Baum, S.**, Baca, E. \*, Rapp, B & Martin, R. (2018). A selective orthographic working memory deficit following cerebellar stroke. *Frontiers in Human Neuroscience*.
- 2018 Noe, C.\* & **Fischer-Baum, S.** (2018). The electrophysiological correlates of sublexical speech perception: A combined electrophysiological/cognitive neuropsychology approach. *Frontiers in Human Neuroscience*.

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- 2017 Irons, S.\*, Oppenheim, G.M. & **Fischer-Baum, S.** (2017). Breaking the *Dark Side*: A computational neuropsychology approach. *Frontiers in Psychology*.
- 2017 Shuster, V., Miozzo, M. & **Fischer-Baum, S.** (2017). Morphological processing in spelling. *Frontiers in Psychology*
- 2017 **Fischer-Baum, S.** & Toscano, J. (2017). Dissociation between lexical and indexical processing during speech perception. *Frontiers in Psychology*.
- 2017 Tian, Y.\* & **Fischer-Baum, S.** (2017). Separate Serial Order Short-term Memory Systems: A Case Series Approach. *Frontiers in Psychology*.
- 2016 Mis, R.\* & **Fischer-Baum, S.** (2016). Word deafness with preserved number comprehension. *Frontiers in Psychology*.
- 2016 **Fischer-Baum, S.** & Jang, A.\* (2016). The cognitive neuroplasticity of reading recovery in chronic aphasia: A representational similarity approach. *Frontiers in Psychology*.
- 2015 Chang, C. B., & **Fischer-Baum, S.** (2015). The effect of semantic predictability on vowel production with pure word deafness. In The Scottish Consortium for ICPHS 2015 (Ed.), *Proceedings of the 18th International Congress of Phonetic Sciences*. Glasgow, UK: The University of Glasgow.
- 2014 **Fischer-Baum, S.** & Kajander, D.\* (2014). Can words be read without abstract letter identities? *Frontiers in Psychology*.
- 2013 **Fischer-Baum, S.** (2013). General principles of serial order. *Procedia – Social and Behavioral Sciences*, 94, 216-217.
- 2013 Ries, S. & **Fischer-Baum, S.** (2013). Cross-domain approaches to the language puzzle. *Procedia – Social and Behavioral Sciences*, 94, 211.
- 2012 **Fischer-Baum, S.** (2012). Making sense of deviance: Outliers in the case series approach. *Procedia – Social and Behavioral Sciences*, 61, 12-13.
- 2012 **Fischer-Baum, S.** & Goldrick, M. (2012). Case series: Opportunities and challenges. *Procedia – Social and Behavioral Sciences*, 61, 6-7.
- 2011 **Fischer-Baum, S.**, McCloskey, M., Mathis, D. & Wilson, C. (2011). Orthotactics influences on spelling errors in dysgraphia. *Procedia – Social and Behavioral Sciences*, 23, 240-241.
- 2011 McCloskey, M., **Fischer-Baum, S.** & Alkhunaizi, F. (2011). Letter position representation in reading: Evidence from acquired dyslexia. *Procedia – Social and Behavioral Sciences*, 23, 241-242.
- 2007 **Fischer-Baum, S.**, Rapp, B. & McCloskey, M. (2007). The Representation of letter position: Evidence from dysgraphia. *Brain and Language*, 103, 101-102.
- 2007 Rapp, B., **Fischer-Baum, S.**, & Pastor, T. (2007). Perseveration and Graphemic Representations: Double Letters and Digraphs. *Brain and Language*, 103, 105-106.
- 2006 **Fischer-Baum, S.**, Postman, J. & Miozzo, M. (2006). The dissociability of morphological processing and lexical access. *Brain and Language*, 99, 101-102.

## INVITED TALKS

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- 2020 "Bridging cognitive and neural theories of reading and its recovery using representational similarity analysis" C-STAR Lecture, South Carolina
- 2020 "Reading Words " X the Moonshot Factory, Mountain View
- 2019 "Bridging cognitive and neural theories of reading and its recovery with representational similarity analysis " University of Illinois, Urbana-Champaign
- 2019 "Neurodiversity" O-Week Faculty Address, Rice University
- 2019 "Reading by Touch" Macquarie University, Sydney
- 2019 "A common representation of serial position language and memory." University of New South Wales, Sydney
- 2019 "Bridging cognitive and neural theories of reading and its recovery with representational similarity analysis " Macquarie University, Sydney
- 2018 "A common representation of serial position language and memory." UC- San Diego
- 2018 "Bridging cognitive and neural theories of reading and its recovery with representational similarity analysis " San Diego State University
- 2018 "Bridging cognitive and neural theories of reading and its recovery with representational similarity analysis " Royal Holloway University, London
- 2018 "Bridging cognitive and neural theories of reading with representational similarity analysis" Basque Center for Brain and Language
- 2018 "Cognitive network neuroscience and individual differences in working memory" Omega Psi Conference, Johns Hopkins University
- 2018 "Towards a cognitive architecture of braille reading and writing" Interdisciplinary Research Perspectives on Braille Reading and Writing, Rice University
- 2017 "Bridging cognitive and neural theories of reading with representational similarity analysis" Department of Psychology, University of Maryland
- 2017 "Bridging cognitive and neural theories of reading with representational similarity analysis" Department of Neurology, Georgetown University
- 2017 "Neural Plasticity and the Recovery of Language Function Following Stroke," MissionConnect, Houston, TX
- 2016 "Neuroplasticity and the logic of Cognitive Neuropsychology," Invited plenary lecture at the 34<sup>th</sup> European Workshop on Cognitive Neuropsychology, Bressanone, Italy
- 2016 "Representing order in spoken and written language," IDEALab Winter School, Rovereto, Italy
- 2014 "The structure of written language," Department Colloquium, Linguistics, Rice University, Houston

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- 2014 "General principles of serial order," International Workshop on Language Production 2014, Geneva, Switzerland
- 2013 "Homogeneity," Scientia, Rice University, Houston
- 2012 "Stuck on the Past: What perseverations can teach us about cognition," Beckman Director's Seminar, University of Illinois, Urbana-Champaign
- 2012 "Order representation in written and spoken language," Phonetics Seminar, Linguistics Department, Northwestern University, Evanston, IL
- 2012 "The representation of segment position in spoken production: Evidence from perseveration errors," Invited plenary lecture at the 30<sup>th</sup> European Workshop on Cognitive Neuropsychology, Bressanone, Italy
- 2012 "General principles of serial order," Department of Psychology, Rice University, Houston, TX
- 2009 "The Representation of Position," Language and Cognition Seminar, School of Psychology, University of Birmingham, Birmingham, UK

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#### CONFERENCE TALKS AND PRESENTATIONS

- 2019 Irons, S.\*, Gillentine, H. & **Fischer-Baum, S.** *The role of neuroscience in gender essentialist beliefs.* Psychonomics
- Beyersmann, E., Turney, A. & **Fischer-Baum, S.** *Morphological segmentation of nonwords in patients with acquired dyslexia.* Academy of Aphasia.
- Fischer-Baum, S.**, Zhai, M.\* & Turney, A.\* *Right hemisphere reorganization of the reading system following stroke.* Academy of Aphasia.
- Qi, Q, Feng, C., Zhai, M.\*, Macklin, A.\*, **Fischer-Baum, S.** *Semantic blocking creates interference in naming by increasing pattern dissimilarity.* Society for Neurobiology of Language.
- 2019 Noe, C.\* & **Fischer-Baum, S.** *Early stages of speech processing: A combined cognitive neuropsychology and electrophysiological approach.* Psychonomics, Montreal
- Tian, Y\*., Dial, H., Martin, R. & **Fischer-Baum, S.** *A common serial order mechanism for verbal short term memory and language production: Evidence from Aphasia.* Psychonomics, Montreal
- Tian, Y\*., Dial, H., Martin, R. & **Fischer-Baum, S.** *A common serial order mechanism for verbal short term memory and language production.* Academy of Aphasia, Macau.
- Zhai, M.\* & **Fischer-Baum S.** *Exploring the task demand effect on stroke-motor representations on Chinese characters in reading.* Academy of Aphasia, Macau.
- Irons, S\*., Bradbury, K. Ciampa, C. & **Fischer-Baum, S.** *Cascading activation in spoken production: Evidence from phonetic analysis of aphasic speech.* Academy of Aphasia, Macau.
- Fischer-Baum, S.**, Chapman, C., Rollo, P., Tombridge, K., Breier, J. & Tandon, N. *Disruption of the language production network following anterior temporal lobe resection.* Academy of Aphasia, Macau.



Woolbough, O., Donos, C., Rollo, P. **Fischer-Baum, S.**, Dehaene, S., & Tandon, N. *Functional architecture of the ventral visual pathway for reading*. Society for Neurobiology of Language, Helsinki.

Lally, C., **Fischer-Baum, S.**, Auer, T., & Rastle, K. *Morphological decomposition in the ventral stream*. Society for Neurobiology of Language, Helsinki.

2018 Noe, C.\* & **Fischer-Baum, S.** *Electrophysiological evidence of early lexical influences on sublexical processing: Evidence from the Ganong Paradigm*. Psychonomics, New Orleans

Irons, S.\* & **Fischer-Baum, S.** *Phonetic correlates of sublexical contributions to reading aloud familiar words*. Psychonomics, New Orleans

Schubert, T. , Cohen, T., & **Fischer-Baum, S** *Learning relationships between alphanumeric symbols through statistical properties*. Psychonomics, New Orleans

Warker, J., **Fischer-Baum, S.**, Holloway, C., Poirier, R. & Fasano, R. *Phonetic correlates of sublexical contributions to reading aloud familiar words*. Psychonomics, New Orleans

Noe, C.\* & **Fischer-Baum, S.** *The electrophysiological correlates of sublexical speech perception: A combined electrophysiological/cognitive neuropsychology approach*. Academy of Aphasia, Montreal

**Fischer-Baum, S**, Baca, E\*. Rapp, B. & Martin, R. *A selective orthographic working memory deficit following cerebellar stroke*. Academy of Aphasia, Montreal

Noe, C.\* & **Fischer-Baum, S.** *Using the N100 to Measure Top-Down Influence Onto Phonetic Feature Representations*. ARMADILLO, Houston, TX.

Tian, Y.\* , Dial, H. **Fischer-Baum, S.** *The Domain-Specific Capacity for Serial Order Working Memory: A single case study*. ARMADILLO, Houston, TX.

Irons, S.\* & **Fischer-Baum, S.** *Phonetic correlates of sublexical contributions to reading aloud familiar words*. ARMADILLO, Houston, TX.

**Fischer-Baum, S.** *Reading by touch*. ARMADILLO, Houston, TX.

Noe, C.\* & **Fischer-Baum, S.** *Electrophysiological evidence of early lexical influences on sublexical processing: Evidence from the Ganong Paradigm*. Society for the Neurobiology of Language, Quebec City.

**Fischer-Baum, S**, Irons, S.\* & Oppenheim, G.M. *Breaking the Dark Side: A computational neuropsychology approach*. IWLP, Nijmegen, Netherlands

Irons, S.\* & **Fischer-Baum, S.** *Phonetic correlates of sublexical contributions to reading aloud familiar words*. IWLP, Nijmegen, Netherlands

**Fischer-Baum, S.** *Mapping the neural correlates of reading with representational similarity analysis*. SSSR, Brighton, UK

Zhai, M.\* & **Fischer-Baum, S.** *Exploring the effects of writing on reading in Chinese skilled readers*. SSSR, Brighton, UK.

Yue, Q., Martin, R., **Fischer-Baum, S.**, & Deem, M. *Language-specific and domain-general regions jointly predict individual differences in sentence comprehension: Evidence from a network approach*. Cognitive Neuroscience Society, Boston.

Poirier, R. C., Fasano, R. M., Warker, J. A., & **Fisher-Baum, S.** *Speech errors reveal learning bias for syllable positional constraints*. Eastern Psychological Association, Philadelphia, PA.

- 2017 Jenkins, G., Noe, C.\* & **Fischer-Baum, S.** *How to direct attention to favor memory formation*. Psychonomics, Vancouver.  
Zhai, M.\* & **Fischer-Baum, S.** *Exploring the effects of writing on reading in Chinese skilled readers*. Psychonomics, Vancouver.

Tian, Y.\* & **Fischer-Baum, S** & Beier, M.. *The Domain-Specific Capacity for Serial Order Working Memory: An Individual Differences Approach*. Psychonomics, Vancouver.

Yue, Q., Martin, R., **Fischer-Baum, S.**, & Deem, M. *Language and multiple demand regions jointly predict individual differences in sentence comprehension: Evidence from a network approach*. Society for the Neurobiology of Language, Baltimore.

**Fischer-Baum, S.**, Kook, J.H, Lee, Y., Ramos-Nuñez, A.\*, & Vannucci, M.. *Sight or sound? Individual differences in the neural and cognitive mechanisms of single word reading*. Society for the Neurobiology of Language, Baltimore.

Irons, S.\*, Oppenheim, G.M. & **Fischer-Baum, S.** *Breaking the Dark Side: A computational neuropsychology approach*. Academy of Aphasia, Baltimore

Shuster, V., Miozzo, M. & **Fischer-Baum, S.** *Morphological processing in spelling*. Academy of Aphasia, Baltimore

**Fischer-Baum, S.** & Toscano, J. *Dissociation between lexical and indexical processing during speech perception*. Academy of Aphasia, Baltimore.

Tian, Y.\* & **Fischer-Baum, S.** *Separate Serial Order Short-term Memory Systems: A Case Series Approach*. Academy of Aphasia, Baltimore.

Zhai, M.\* & **Fischer-Baum, S.** *Exploring the effects of knowledge of writing on reading Chinese characters in skilled readers*. ARMADILLO, College Station, TX.

Tian, Y.\* & **Fischer-Baum, S.** *The Domain-Specific Capacity for Serial Order Working Memory*. ARMADILLO, College Station, TX.

**Fischer-Baum, S.** *Bridging cognitive and neural theories of reading using representational similarity analysis*. ARMADILLO, College Station, TX.

Martin, R., Yue, Q., **Fischer-Baum, S.**, & Deem, M. *Brain modularity mediates the relation between sentence complexity and behavioral performance*. ARMADILLO, College Station, TX.

Balatsou, E. **Fischer-Baum, S.** & Oppenheim, G. *The psychological reality of picture name agreement*. AMLaP, Lancaster, UK.

Ramos-Nuñez, A.\*, **Fischer-Baum, S.**, Martin, R., Yue, Q., Ye, F & Deem, M. *Static/Dynamic measures of human brain connectivity predict complementary aspects of human cognition*. Human Brain Mapping, Vancouver

Ye, F., Yue, Q., Martin, R., **Fischer-Baum, S.**, Ramos-Nuñez, A.\* & Deem, M. Brain modularity mediates the relation of cognitive performance to task complexity. *American Physical Society*, New Orleans

**Fischer-Baum, S.** *Edge-based representations of item position in language and memory.* International Convention of Psychology Science, Vienna

Noe, C.\* & **Fischer-Baum, S.** *Separating Stimulus-Processing and Task-Specific Components of the ERP Dm Waveform.* Aging and Cognition, Dallas

2016 **Fischer-Baum, S.** & Englebreton, R. *Orthographic units in the absence of visual processing: Evidence from sublexical structure in braille.* Psychonomics, Boston

Noe, C.\* & **Fischer-Baum, S.** *Separating Stimulus and Task Effects Influencing Encoding Success, a Subsequent Memory ERP Study.* Psychonomics, Boston

Mis, R.\* & **Fischer-Baum, S.** *Word deafness with preserved number comprehension.* Academy of Aphasia, Bangor, Wales

**Fischer-Baum, S.** & Jang, A.\* *The cognitive neuroplasticity of reading recovery in chronic aphasia: A representational similarity approach.* Academy of Aphasia, Bangor, Wales

Petrova, A., Miozzo, M., **Fischer-Baum, S.** & Peressotti, F. *Serial position encoding of signs.* International Meeting of the Psychonomic Society, Grenada, Spain

Yue, Q., Martin, R., **Fischer-Baum, S.**, Ramos Nunez\*, A., Deem, M. & Ye, F. *The role of task complexity in mediating relations of whole brain modularity to task performance.* Society for the Neurobiology of Language, London, UK

Petrova, A., Miozzo, M., **Fischer-Baum, S.** & Peressotti, F. *Why short term memory span for signs is lower than for speech.* Society for the Neurobiology of Language, London, UK

Warker, J. & **Fischer-Baum, S.** *Testing First-Order and Second-Order Constraint Learning in Visual Sequences.* IWLP, San Diego

**Fischer-Baum, S.** *A common representation of serial order in working memory and language production.* International Conference on Memory, Budapest, Hungary

**Fischer-Baum, S.**, Holloway, C.\* & Warker, J. *Learning item-position associations in immediate serial recall.* International Conference on Memory, Budapest, Hungary

Tian, Y.\* & **Fischer-Baum, S.** *Evidence for separable serial order STM systems: A case study approach.* International Conference on Memory, Budapest, Hungary

Damato, A., Rodemann, A., Warker, J. & **Fischer-Baum, S.** *Limits on learning positional constraints in visual sequences.* Eastern Psychological Association, New York

2015 **Fischer-Baum, S.** Tamez, E.\* & Li, D.\* *Levels of representation during single word reading: Evidence from representation similarity analysis.* Society for the Neurobiology of Language, Chicago

Warker, J., **Fischer-Baum, S.** Della Posta, D. & Rodemann, A.. *Errors Reveal First-Order Constraint Learning in Visual Sequences.* Psychonomics, Chicago

Chang, C. B., & **Fischer-Baum, S.** *The effect of semantic predictability on vowel production with pure word deafness.* International Congress of Phonetic Sciences, Glasgow, Scotland

- 2014 **Fischer-Baum, S.** & Holloway, C.\*. *Learning phonotactic-like regularities in immediate serial recall*. Psychonomics, Long Beach
- Fischer-Baum, S.** & Kajander, D.\* *Can words be read without abstract letter identities?*. Academy of Aphasia, Miami
- Petrova, A., Miozzo, M., **Fischer-Baum, S.** & Peresotti, F. *Positional effects in short-term memory for the deaf*. From Sound to Gesture, Padua, Italy
- 2013 Dickson, D. S., **Fischer-Baum, S.** & Federemeier, K.D. *ERP Effects of Frequency and Regularity Are Modulated By Task Demands: Evidence from Categorization and Delayed Reading Aloud*. Neurobiology of Language, San Diego
- Fischer-Baum, S.** & Benjamin, A.S. *Time, space and memory for order*. Psychonomics, Toronto, Canada
- Fischer-Baum, S.** *General principles of serial order*. Academy of Aphasia, Lucerne, Switzerland
- Fischer-Baum, S.,** Dickson, D. S. & Federemeier, K.D. *Are frequency and regularity effects task dependent? Evidence from ERPs*. Cognitive Neuroscience, San Francisco
- 2012 **Fischer-Baum, S.** *Repetition schema in verbal short-term memory*. Psychonomics, Minneapolis.
- Fischer-Baum, S.** *Making sense of deviance: Outliers in the case series approach*. Academy of Aphasia, San Francisco
- Fischer-Baum, S.** & Rapp, B. *The domain-general nature of item doubling: Evidence from perseveration errors*. AMLaP, Riva del Garda, Italy
- Fischer-Baum, S.** & Dell, G. *Comparing types of perseveration in spoken production*. IWOLP, New York
- 2011 McCloskey, M., Wilson, C., **Fischer-Baum, S.**, Mathis, D., Glasser, A. & Ghondasara, S. *Form and functions of orthotactic knowledge*. Psychonomics, Seattle
- Fischer-Baum, S.** & McCloskey, M. *The representation of position verbal and non-verbal short-term memory*. Psychonomics, Seattle
- Fischer-Baum, S.,** Olson, A, McCloskey, M., Romani, C. & Rapp, B. *Beyond the syllable position effect*. Mid-Phon 15, Urbana
- Fischer-Baum, S.,** McCloskey, M., Mathis, D. & Wilson, C. *Influence of orthotactics on dysgraphic errors*. Academy of Aphasia, Montreal, Canada
- McCloskey, M., **Fischer-Baum, S.** & Alkhunaizi, F. *Letter position representation in reading: Evidence from acquired dyslexia*. Academy of Aphasia, Montreal, Canada
- Fischer-Baum, S.** & McCloskey, M. *Domain-general properties of position representation*. ESCOP, San Sebastian, Spain
- Fischer-Baum, S.** & Smolensky, P. *Positive-overlapping letter position representation in reading: An axiomatic analysis of transposition priming*. Mathematical Psychology, Boston
- 2009 **Fischer-Baum, S.,** Charny, J. & McCloskey, M. *The representation of letter position in reading*. Psychonomics, Boston

- Fischer-Baum, S.,** McCloskey, M, Jones, A., Folk, J. & Rapp, B. *Position representation in spelling and verbal working memory.* Academy of Aphasia
- 2008 **Fischer-Baum, S. & McCloskey, M.** *Serial order representation in immediate serial recall.* Psychonomics, Chicago
- Miozzo, M., **Fischer-Baum, S.** & Postman, J. *Knowing what but not where: Impaired thematic roles and spatial language.* Academy of Aphasia, Turku, Finland
- Fischer-Baum, S. & Rapp, B.** *Underlying causes of letter perseveration errors in dysgraphia.* Academy of Aphasia, Turku, Finland
- Costa, V., **Fischer-Baum, S.,** Rapp, B. & Miceli, G. *The representation of orthographic consonants: Evidence from dysgraphia.* IWOLP, Annapolis
- Fischer-Baum, S. & Rapp, B.** *Perseveration Errors and the Temporal Dynamics of Cognitive Processing.* Cognitive Neuroscience, San Francisco
- 2007 Rapp, B. & **Fischer-Baum, S.** *Orthographic Morphology: Evidence from Acquired Dysgraphia.* Psychonomics, Long Beach
- Fischer-Baum, S.,** Rapp, B. & McCloskey, M. *Encoding of Letter Position in Orthographic Representation: Evidence from Dysgraphia.* Psychonomics, Long Beach
- Fischer-Baum, S.,** Rapp, B. and McCloskey, M. *The Representation of Letter Position: Evidence from Dysgraphia.* Academy of Aphasia, Washington
- Rapp, B., **Fischer-Baum, S.,** and Pastor, T. *Perseveration and Graphemic Representations: Double Letters and Digraphs.* Academy of Aphasia, Washington DC
- Fischer-Baum, S.,** Rapp, B. and McCloskey, M. *The Representation of Letter Position in Spelling: Evidence from Acquired Dysgraphia.* Cognitive Science, Nashville
- 2006 **Fischer-Baum, S.,** Postman, J. and Miozzo, M. *The dissociability of morphological processing and lexical access.* Academy of Aphasia, Victoria, Canada
- Rapp, B., Barriere, I. and **Fischer-Baum, S.** *Morpho-orthography: Evidence of modality specific morphological processes.* Mental Lexicon, Montreal, Canada

#### **GUEST LECTURES**

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Camp Neuro: "Neuroscience and the Media" (Summer 2017)  
 Rice University: "Language Acquisition" (Spring 2017)  
 UT-HSC: "Intermediate Cognitive Neuroscience" (Fall 2016, Spring 2018, Spring 2019)  
 Young Owls Leadership Program: "Cognitive Neuroscience" (Summer 2016)  
 University of Houston: "Medical Speech-Language Pathology" (Summer 2014)  
 Rice University: "Research on Braille " (Spring 2014)  
 Rice University: "Rice Undergraduate Scholars Program" (Fall 2013)  
 Rice University: "Professional Issues" (Fall 2013, Fall 2019, Fall 2019)  
 Rice University: "Advanced Cognitive Neuroscience" (Fall 2013, 2017, 2019)  
 Rice University: "Foundations of Cognitive Psychology" (Spring 2013, 2015, 2017, 2019, Fall 2020)  
 University of Illinois: "Language: A users guide" (Fall 2012)  
 Johns Hopkins University: "Cognitive Development Seminar" (Spring, 2009)  
 Johns Hopkins University: "The Literate Mind and Brain" (Spring 2007, 2009)

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**TEACHING**

Semester	Number	Title	Enrollment	Effectiveness (1-5 scale, Rice Mean ~ 1.8)
Spr 13	PSYC 308	Memory	41	1.84
Spr 14	PSYC 308	Memory	45	1.88
Fall 14	PSYC 308	Memory	41	1.64
Fall 14	PSYC 578	CogNeuro: Theories and Methods	10	1.25
Spr 15	PSYC/NEUR 362	Cognitive Neuroscience	113	1.56
Spr 16	PSYC/NEUR 362	Cognitive Neuroscience	53	1.30
Spr 16	PSYC 524	Memory (Graduate Level)	5	1.00
Fall 16	PSYC 308	Memory	44	1.35
Spr 17	PSYC 308	Memory	43	1.31
Spr 17	PSYC/NEUR 362	Cognitive Neuroscience	71	1.33
Spr 18	PSYC/NEUR 362	Cognitive Neuroscience	80	1.49
Fall 18	PSYC 308	Memory	43	1.24
Spr 19	PSYC/NEUR 362	Cognitive Neuroscience	107	1.53
Spr 19	PSYC 524	Memory (Graduate Level)	4	1.00
Fall 19	PSYC 308	Memory	47	1.33
Spr 20	PSYC/NEUR 362	Cognitive Neuroscience	101	1.22
Spr 20	PSYC 578	CogNeuro: Theories and Methods	11	1.13
Fall 20	PSYC 430	Comp Models of Cog Processes	27	1.33

**MENTORING**

## Primary Graduate Mentor or Co-Mentor:

Colin Noe, 2014-present, M.A. 2018

*Winner Kenneth Laughery award for best Master's Thesis in Psychology*

Yingxue Tan, 2014-present, M.A. 2018

*Winner Kenneth Laughery award for best Master's Thesis in Psychology*

Sarah Irons, 2016-present, M.A. 2020

Mingjun Zhai, 2016-present

Katia Kazhuro, 2020-present

Yu Lu (co-advised with R. Martin), 2020-present

Ivanova Veras de Jesus (co-advised with R. Martin &amp; C. Fagundes), 2020-present

*Fulbright Fellow*

## Primary Postdoctoral Scholar Mentor

Aurora Ramos-Núñez (co-advised with R. Martin), 2015-2017

Current, Assistant Professor, College of Coastal Georgia

## Visiting Scholars:

Donald Li, July -August 2014, visiting from Tsinghau University, Beijing

Current, Graduate Student, Johns Hopkins University

Anna Petrova, Oct-Nov 2014, visiting from University of Padua, Italy

Current, Research Fellow, Higher School for Economics, Moscow

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Demet Özer, Jan-March 2015, visiting from Koç University, Turkey  
Current, Post-doc, Carnegie Mellon University

Clare Lally Jan-Feb 2019, visiting from Royal Holloway University, UK  
Current, PhD Student, Royal Holloway University, UK

Luis Hernandez, Aug-Sept 2019, visiting from Technico de Monterrey  
*Visit supported by the Puentes Consortium program*

Qingqing Qu, Jan 2020-Nov 2020, visiting from Chinese Academy of Sciences

Dissertation Committees (not primary advisor):

Denise Harvey (2014, Psychology)  
Current, Postdoctoral Scholar, University of Pennsylvania

Yingying Tan (2015, Psychology)  
Current, Postdoctoral Researcher, Max Planck Institute for Psycholinguistics

Jingyi Geng (2015, Psychology)  
Current, Senior Interaction Designer, Halliburton

Tao Wei (2016, Psychology)  
Current, Postdoctoral Scholar, Beijing Normal University

Heather Dial (2016, Psychology)  
Current, Postdoctoral Scholar, University of Texas, Austin

Hao Yan (2017, Psychology)  
Current, User Experience Researcher, Facebook

Qiu Hai Yue (2018, Psychology)  
Current, Postdoctoral Scholar, Vanderbilt University

Alda Rivas (2018, Psychology)  
Current, Interdisciplinary Research Psychologist, Census Bureau

Curtiss Chapman (2019, Psychology)  
Current, Postdoctoral Researcher, Max Planck Institute for Human Cognitive and Brain Sciences

Ben Krause (Outside member: Shepard School, 2014)  
Current, Visiting Assistant Professor, Hope College

Penelope Howe (Outside member: Rice Linguistics, 2017)  
Current, Fullbright Scholar, University of Antananarivo, Madagascar

Bazile Lanneau (Outside member: Rice Linguistics, 2017)  
Current, User Experience Researcher, Adobe

Patrick O'Driscoll (Outside member: Rice Applied Physics, 2018)  
Current, Machine Learning Algorithm Development Engineer, Rebellion Photonics

Eric Kook (Outside member: Rice Statistics, 2019)

Philipp Stempel (Outside member: Rice Linguistics, 2019)

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Rongjie Lui (Outside member: Rice Statistics, 2020)

Neel Desai (Outside member: Rice Statistics, in progress)

Kiefer Foresth (Outside member: UT-HSC, Neurosurgery, in progress)

Sudha Yellapantula (Outside member: Rice ECE, in progress)

Master's Committees (primary advisor):

Yingxue Tian (2018): *Winner Laughery Award for Best Master's Thesis*

Colin Noe (2018): *Winner Laughery Award for Best Master's Thesis*

Sarah Irons (2020)

Master's Committees (not primary advisor):

Julie Hughes (2013)

Alda Rivas (2015)

Curtiss Chapman (2016)

Rachel Zahn (in progress)

Autumn Horne (in progress)

Alix Macklin (Electrical and Computer Engineering, in progress)

Vanessa Martin (University of Houston, Communication Sciences; 2014)

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#### PROFESSIONAL AFFILIATIONS

The Academy of Aphasia (Membership Committee 2015-2017, Chair, 2016-2017; Program Committee 2018-present, Chair 2019-2020)

Psychonomic Society, Fellow

Cognitive Neuroscience Society

Society for the Neurobiology of Language

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#### COMMUNITY SERVICE

Conference Organizer, ARMADILLO 2018

Community Talk: Chambana Science Café (2012)

Community Talk: Center for Talented Youth Family Odyssey (2008)

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#### UNIVERSITY SERVICE

Resident Associate, McMurtry College, 2014-2018

Cognitive Science Program, Director, Spring 2015, 2018-present, Major Advisor, 2016-present

NeuroX Steering Committee, 2016-present (Co-Organizer, NeuroX Mini-Symposium, 2016), Major/Minor Advisor, 2016-present

Member, Committee on Teaching (2018-present)

Member, Faculty Review Committee (2021-present)

Member, Cog/Affective Neuroscience Search Committee (2017-2018)

Member, Phonology/Phonetics Lecturer Search Committee (2018)

Chair, Cognitive Science Lecturer Search Committee (2020)

Faculty Organizer, Psyc 529: Cognitive Tea (2013-2016, 2018-2019, 2021-present)



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Presenter, Social Sciences Recruitment Dinner (2017, 2018)  
Member, Task Force on Non-Tenure Track Faculty (2013-2014)  
Judge, UT-Rice-BCM Annual Neuroscience Poster Session (2013-present)

#### **EXTERNAL SERVICE**

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Associate Editor: *Cognitive Neuropsychology*, 2016-present

Consulting Editor: *Psychonomics Bulletin & Review*, 2020-present

Ad hoc reviewer, Journals: *Psychonomic Bulletin & Review*, *Cognition*, *Cognitive Psychology*, *Journal of Experimental Psychology: Language, Memory & Cognition*, *Acta Psychologica*, *Cognitive & Behavioral Neurology*, *Cognitive Science Society Conference*, *Neurocase*, *Language Learning and Development*, *NeuroImage: Clinical*, *Cortex*, *Journal of Cognitive Psychology*, *Cognitive, Affective and Behavioral Neuroscience*, *PLOS ONE*, *British Journal of Psychology*, *Psychological Review*, *Psychological Research*, *Scientific Reports*, *Journal of Neural Engineering*, *Frontiers in Human Neuroscience*, *American Journal of Speech-Language Pathology*, *Brain and Language*, *Cognitive Science*

Ad hoc reviewer, Grants: *Romanian National Counsel for Scientific Research*, *French National Research Agency ANR*, *Biotechnology and Biological Sciences Research Council UK*, *National Science Foundation*, *Einstein Society*, *Institute for Education Sciences*

#### **HONORS, AWARDS AND FELLOWSHIPS**

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2020	George R. Brown Award for Superior Teaching
2018	Recognition by 32nd Scholar-Athlete Banquet, Rice University
2018-2023	NSF CAREER Awardee
2016	"Rising Star," Association for Psychological Science
2015	"Must take Psychology Professors in Houston" Careers in Psychology
2010-2013	Beckman Institute Post-doctoral Fellowship (\$25,000 research grant)
2009-2010	William Orr Dingwall Foundation Neurolinguistic Fellowship
2005-2009	National Science Foundation, IGERT Fellowship
2005-2006	Dean's Graduate Fellowship, Johns Hopkins University
2006	National Science Foundation Graduate Fellowship, Honorable Mention