Tracy M Centanni, Ph.D.

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**EDUCATION**

* + - * **The University of Texas at Dallas 2013**

Ph.D., Cognition and Neuroscience

Dissertation title: Speech-coding and training-induced plasticity in auditory cortex of normal and

dyslexia model rats

Dissertation supervisor: Michael P Kilgard, Ph.D.

* + - * **The University of Texas at Dallas 2011**

M.S., Applied Cognition and Neuroscience

* + - * **The Pennsylvania State University 2008**

B.S., Psychology (Neuroscience concentration)

**ACADEMIC RESEARCH TRAINING**

* + - * **Massachusetts Institute of Technology**

Postdoctoral Associate, McGovern Institute for Brain Research, Gabrieli Lab 2014-2017

* + - * **MGH Institute of Health Professions**

Postdoctoral Researcher, Speech and Language (SAiL) Literacy Lab 2013-2015

* + - * **MGH Institute of Health Professions**

Project Manager, Speech and Language (SAiL) Literacy Lab 2013-2014

* + - * **University of Texas at Dallas**

Doctoral Researcher, Cortical Plasticity Lab 2009-2013

* + - * **Pennsylvania State University**

Undergraduate Research Assistant

Vision, Memory, and Cognitive Neuroscience Research Lab 2006-2008

**ACADEMIC APPOINTMENTS**

* **University of Florida**
  + Associate Professor, Speech Language and Hearing Sciences 2023-present
* **Texas Christian University**
  + Assistant Professor of Behavioral Neuroscience 2017-2023
  + Non-tenure track affiliations:
    - Department of Communication Sciences and Disorders 2022-2023
    - Anne Burnett Marion School of Medicine 2018-2023

**COURSES TAUGHT**

* **Texas Christian University 2017-2023**
  + Human Neuropsychology
  + Experimental Psychology: Perception
  + Principles of Behavior I
* **Emerson College 2017**
  + Developmental Psychology
* **Massachusetts Institute of Technology 2015**
  + *Assistant instructor;* Introduction to Psychology

**PEER REVIEWED PUBLICATIONS** (+ indicates student author, **\*** indicates shared authorship)

[*Link to Google Scholar Profile*](https://scholar.google.com/citations?user=qa2SOXgAAAAJ&hl=en&authuser=1)

R Alsulaiman & **TM Centanni**, (In press). Influence of enhanced perceptual features on development of neural specialization for Arabic print in early readers. *GESPR.*

VJ Thakkar+, ZA Richardson, A Dang, **TM Centanni**, (2023). Improvement of memory-based reading comprehension through transcutaneous auricular vagus nerve stimulation. *Behavioral Brain Research.* 438. 114164. https://doi.org/10.1016/j.bbr.2022.114164  
Pre-print (2021) available at: *PsyArXiv.* doi: https://doi.org/10.31234/osf.io/wvsrc

NZ Al Dahhan, K Halverson, CP Peek, D Wilmot, A D’Mello, RR Romeo, O Meegoda, A Imhof, K Wade, A Sridhar, E Falke, **TM Centanni**, JDE Gabrieli, JA & Christodoulou, (2022) Dissociating executive function and ADHD influences on reading ability in children with dyslexia. *Cortex.* 153: 126-142: doi: 10.1016/j.cortex.2022.03.025

SD Beach, O Ozernov-Palchik, SC May, **TM Centanni**, TK Perrachione, D Pantazis, JDE Gabrieli (2022) The neural representation of a repeated standard stimulus in dyslexia. *Frontiers in Human Neuroscience.* 16. doi:10.3389/fnhum.2022.823627

**TM Centanni**, SD Beach, O Ozernov-Palchik, S May, D Pantazis, JDE Gabrieli, (2022). Categorical perception and influence of attention on neural consistency in response to speech sounds in adults with dyslexia. *Annals of Dyslexia.* 71(1): 56-78. doi: 10.1007/s11881-021-00241-1

Ozernov-Palchik, SD Beach, M Brown, **TM Centanni**, N Gaab, G Kuperberg, TK Perrachione, JDE Gabrieli, (2021) Speech-specific perceptual adaptation deficits in children and adults with dyslexia. *Journal of Experimental Psychology.* doi: 10.1037/xge0001145.  
Pre-print (2021) available at: *PsyArXiv,* doi:10.31234/osf.io/4n5ec

C Pollack, D Wilmot, **TM** **Centanni**, K Halverson, I Frosch, A D’Mello, R Romeo, A Imhof, J Capella, K Wade, NZ Al Dahhan, JDE Gabrieli, JA Christodoulou, (2021) Anxiety, motivation, and competence in mathematics and reading in children with and without learning difficulties. *Frontiers in Psychology*.  
Pre-print (2021) available at: *PsyArXiv,* doi:10.31234/osf.io/pqt5uO

SD Beach, O Ozernov-Palchik, SC May, **TM Centanni**, JDE Gabrieli, D Pantazis, (2021). Neural decoding reveals subphoneic, phonemic, and higher-order representations of speech across tasks, *Neurobiology of Language.* doi: https://doi.org/10.1162/nol\_a\_00034

O Ozernov-Palchik, **TM Centanni**, SD Beach, SC May, TP Hogan, JDE Gabrieli, (2020). Distinct neural substrates of individuals differences in components of reading comprehension in adults with or without dyslexia. *NeuroImage.* 226(2021), 117570. doi: <https://doi.org/10.1016/j.neuroimage.2020.117570>

VJ Thakkar+, AS Engelhart+, H Abadzi, N Khodaparast, **TM Centanni**, (2020) Auricular vagus nerve stimulation improves automaticity in novel orthography learning in adults. *Brain Stimulation.* 13(6): 1813-1820.

AM D’Mello, **TM Centanni**, JA Christodoulou, JDE Gabrieli, (2020), Cerebellar engagement during fluent reading: implications for adults with dyslexia. *Brain and Language.* 208: 104828.

H Abadzi & **TM Centanni**, (2020), Why fast and effortless reading is indispensable. *Comparative Education Review. 64(2):* 299-308.

**TM Centanni,** AR Halpern, A.R. Siesler, MJ Wenger, (2020), Context-dependent neural responses to minor notes in frontal and temporal regions distinguish musicians from non-musicians. *Cognitive, Affective, and Behavioral Neuroscience.* 29(3): 551-564. doi: 10.3758/s13415-020-00785-6

**TM Centanni**, M Anchan, M Beard, R Brooks, LA Thompson, S Petrill, (2019). Sight reading ability correlates with performance on reading tasks requiring short term memory and content integration. *Frontiers in Psychology.* 10, 2604. doi.org/10.3389/fpsyg.2019.02604

**TM Centanni\*,** ES Norton\*, A Park, SD Beach, K Halverson, O Ozernov-Palchik, N Gaab, JDE Gabrieli, (2019*).* Fusiform response to letters in kindergarten predict future reading outcomes in children at risk for dyslexia. *NeuroImage: Clinical.* 22: 101715.

**TM Centanni,** D Pantazis, DT Truong, JR Gruen, JDE Gabrieli, TP Hogan (2018), Inconsistent neural responses in cortex: a potential neural mechanism for heterogeneity in dyslexia. Developmental Cognitive Neuroscience. 34: 7-17. doi:10.1016/j.dcn.2018.05.008

**TM Centanni\*,** ES Norton\*, A Park, SD Beach, K Halverson, O Ozernov-Palchik, N Gaab, JDE Gabrieli (2018), Letter Specificity in Left Fusiform Gyrus Predicts Word Reading in Kindergarten Children. *Developmental Science.* 21(5),doi:10.1111/desc.12658

**TM Centanni,** LW King, MD Eddy, S Whitfield-Gabrieli, JDE Gabrieli (2017). Dissociation of sensitivity versus specificity in development of left occipito-temporal specialization for print. *Brain and Language.* 170: 62-70, doi: 10.1016/j.bandl.2017.03.009

**TM Centanni,** AB Booker, F Chen, AM Sloan, RS Carraway, RL Rennaker, JJ LoTurco, MP Kilgard (2016). Knockdown of dyslexia-gene *Dcdc2* interferes with rapid speech sound discrimination, *The Journal of Neuroscience.* 36(17): 4895-4906, doi: 10.1523/JNEUROSCI.4202-15.2016

CT Engineer, KC Rahebi, MS Borland, EP Buell, **TM Centanni,** MK Fink, KW Im, LG Wilson, MP Kilgard (2015). Degraded neural and behavioral processing of speech sounds in a rat model of Rett Syndrome. *Neurobiology of Disease.* 83: 26-34.

**TM Centanni,** JR Green, J Iuzzini-Seigel, CW Bartlett, TP Hogan (2015). Evidence for gains at 15q11.2 as a susceptibility factor for inherited language impairment. *Frontiers in Genetics.* 6:272,doi: 10.3389/fgene.2015.00272.

**TM Centann**i**,** JN Sanmann, JR Green, J Iuzzini-Seigel, C. Bartlett, WG Sanger, TP Hogan (2015). *The role of candidate-gene CNTNAP2* in childhood apraxia of speech and specific language impairment. *American Journal of Medical Genetics, part b;* doi: 10.1002/ajmg.b.32325*.*

K Farquharson, **TM Centanni,** C Franzluebbers, TP Hogan (2014). Phonological and lexical influences on phonological awareness performance in children with Specific Language Impairment and Dyslexia. *Frontiers in Educational Psychology;* 5:838, doi: 10.3389/fpsyg.2014.00838*.*

AC Reed, **TM Centanni**, MS Borland, CJ Matney, CT Engineer, MP Kilgard (2014). Behavioral and neural discrimination of speech sounds after moderate or intense noise exposure in rats. *Ear and Hearing;* doi: 10.1097/AUD.0000000000000062.

CT Engineer **TM Centanni,** KW Im, KC Rahebi, WA Vrana, NA Moreno, MP Kilgard (2014). Speech training improves auditory cortex responses to speech sounds in a rat model of autism. *Frontiers in Systems Neuroscience;* 8:137*,* doi: 10.3389/fnsys.2014.00137*.*

**TM Centanni**, F Chen, CT Engineer, AB Booker, RL Rennaker, JJ LoTurco, MP Kilgard (2014). Speech sound processing deficits and training-induced neural plasticity in rats with dyslexia gene knockdown. *PLOS one;* 9(5): e98439. doi: 10.1371/journal.pone.0098439.

**TM Centanni**, AB Booker, AM Sloan, F Chen, BJ Maher, RS Carraway, N Khodaparast, JJ LoTurco, MP Kilgard (2014). Knockdown of the dyslexia-associated gene *KIAA0319* impairs temporal responses to speech stimuli in rat primary auditory cortex. *Cerebral Cortex;* 24(7): 1753-66.

CT Engineer, **TM Centanni**, KW Im, KC Rahebi, EP Buell, MP Kilgard (2014). Degraded speech sound processing in a rat model of Fragile X syndrome. *Brain Research;* 1564: 72-84.

CT Engineer, **TM Centanni**, KW Im, MS Borland, NA Moreno, RS Carraway, LG Wilson, MP Kilgard (2014). Degraded auditory processing in a rat model of autism limits the speech representation in non-primary auditory cortex. *Developmental Neurobiology;* doi: 10.1002/dneu.22175*.*

**TM Centanni**, AM Sloan, AC Reed, CT Engineer, RL Rennaker, MP Kilgard (2014). Detection and identification of speech sounds using cortical activity patterns. *Neuroscience;* 258: 292-306*.*

**TM Centanni,** CT Engineer, MP Kilgard (2013). Cortical speech-evoked response patterns in multiple auditory fields are correlated with behavioral discrimination ability. *Journal of Neurophysiology;* 110(1): 177-189.

**BOOK CHAPTERS**

**TM Centanni,** (2020). Translational Research in Dyslexia, Translational Neuroscience of Speech and Language

Disorders, Contemporary Clinical Neuroscience, Springer*.*

CT Engineer, **TM Centanni**, MP Kilgard. (2015). Rodent Models of Speech Sound Processing,

Neurobiology of Language, 1st Edition.

**PREPRINTS UNDER PEER REVIEW**

**TM Centanni,** (2023) Development of neural specialization for English and Arabic print in early readers. *PsyArXiv.* doi:https://10.31219/osf.io/hgkv5 (*Revisions submitted*)

CL Roark, B Chandrasekaran, **TM Centanni** (2023) Auditory category learning in children with dyslexia. *OSF*  Doi: 10.17605/OSF.IO/BH62T (*Under review)*

J Solorzano-Restrepo+, VJ Thakkar+, AS Engelhart+, **TM Centanni**, (2022) Influence of parental education on rhythm perception and reading in children. *PsyArXiv.* doi:https://10.31234/osf.io/8ybuj (*Under review*)

**MANUSCRIPTS IN REVIEW OR PREPARATION**

RA Marks, C Pollack, SL Meisler, AM D’Mello, **TM Centanni**, RR Romeo, K Wade, AA Matejko, D Ansari, JDE Gabrieli, JA Christodoulou, Neurocognitive risk factors for co-occurring math difficulties in dyslexia: Differences in executive function and visuospatial processing. *Manuscript in revision.*

VJ Thakkar+, J Crupper, AS Engelhart+, A Dang, N Mattox, **TM Centanni,** High Frequency taVNS Increases Retention of Novel Language Learning in Young Adults. *Manuscript in preparation.*

L Gunderson+, K Brice, DM Parra, AS Engelhart+, **TM Centanni,** A novel task for measuring prediction abilities in a rat model using a speech sound discrimination task. *Manuscript in preparation.*

**GRANTS IN PROGRESS (EXTERNAL)**

GRAMMY Museum 07/01/2022 – 06/30/2024 Total Award: $10,000  
Neural prediction in young adults with dyslexia with differing levels of musical training  
Role: Principal Investigator

1R15HD103479-01A1 04/01/2021 – 03/31/2024 Total Award: $310,956  
NICHD

Anatomical and functional consequences of dyslexia-gene DCDC2 knockout in a rat model  
Role: Principal Investigator 04/01/2021 – 06/30/2023

Subcontract PI: 07/01/2023 – 03/31/2024

**COMPLETED GRANTS**

Sheikh Saud Bin Saqr Al Qasimi Foundation 01/01/2021-12/31/2022 Total Award: $8,440

for Policy Research  
Influence of letter size and spacing on the neural correlates of reading acquisition in Arabic script  
Role: Principal Investigator

Research and Creative Activities Grant, TCU 09/01/2020 – 08/31/2021 Total Award: $5,970

Auditory perception deficits as an early marker for Alzheimer’s Disease – evidence from a rat model

Role: Principal Investigator

Invests in Scholarship Grant, TCU 06/01/2018 – 08/30/2019 Total Award: $25,000

The role of dyslexia-susceptibility genes on auditory processing and training-induced plasticity

at various stages of development

Role: Principal Investigator

Research and Creative Activities Grant, TCU 06/01/2018 – 05/31/2019 Total Award: $3,175

Conditions for efficacy of auricular vagus nerve stimulation on driving neural plasticity

Role: Principal Investigator

**DISSERTATIONS AND THESES SUPERVISED**

Logun Gunderson, M.S. Thesis **2023**

Title: Prediction of rapid speech sound stimuli in a *Dcdc2* knockout rat model of dyslexia

Vishal Thakkar, Ph.D. Dissertation **2021**

Title: Non-invasive vagus nerve stimulation improves language and comprehension: empirical

evidence and a review of reading skills

Abby Engelhart, M.S. Thesis **2021**

Title: Decreased beta desynchronization in Broca’s area during pseudoword repetition in children

with childhood apraxia of speech

**OTHER AWARDS AND HONORS**

**Clark Society Endowed Faculty Award:** nominated **2023**

**TCU Junior Faculty Summer Research Program Award;** $6,000 **2020**

**Private Donation to Centanni at TCU;** $16,500 **2019**

*Money donated to fund research on auricular vagus nerve stimulation*

**TCU Junior Faculty Summer Research Program Award;** $6,000 **2018**

**Private Donation to Centanni at MIT**; $5,000 **2016**

*Money donated by Noam and Lisa Bardin to fund research on the genetic mechanisms of dyslexia*

**ASHA;** Audiology/Hearing Science Research Travel Award; $1,000 **2015**

**ASHA;** Selected participant in Lessons for Success Program **2015**

**ASHA;** Research Mentor Pair Travel Award; $500 **2014**

**University of Texas at Dallas;** Research Stipend for Women in Bio-Behavioral Sciences; $2,000 **2012**

**INVITED SCIENTIFIC PRESENTATIONS**

**University of Oxford, Wellcome Center-** “Non-invasive vagus nerve stimulation for **2022**

improvement of reading in young adults”  
**Texas Christian University-** Biology department seminar series: Non-invasive improvement of **2022**

vagus nerve stimulation for reading in young adults”  
**University of Oklahoma-** Neurobiology series: “Non-invasive vagus nerve stimulation **2021**  
for improvement of reading and language in adults” **2021**

**Hamlin Robinson School-** Invited Speaker Series, “Neural and genetic mechanisms **2020**  
of dyslexia – new insights”

**University of Nebraska, Lincoln-** Seminar series: “Non-invasive vagus nerve stimulation **2020**  
for improvement of reading and language in adults”

**The University of Connecticut**: Psychology Colloquia series, “Acquisition of print specificity **2020**  
and novel methods for improving plasticity”

**Texas Christian University-** Works in Progress lecture series: “Jump-start your brain: **2020**  
a novel approach for improving language learning in adults”

**University of Pittsburgh-** “Neural and genetic mechanisms of letter-sound learning” **2019**

**University of Texas at Dallas, Center for BrainHealth-** “Heterogeneous neural deficits in dyslexia **2019**

during speech sound processing tasks”

**University of Texas at Dallas, Callier Center-** FLASH Speaker Series: “New Insights into **2018**Heterogeneity in Dyslexia: from genes to brain to behavior”

**MGH Institute of Health Professions-** Seminar: “An SLP’s Guide to Neuroscience and Genetics” **2016**

**Ohio State University**- Child Health Research Center Seminar: “Variability in the **2015**  
auditory-evoked neural response; a potential mechanism for dyslexia”

**Pace University**- “Genetics of Reading and Language Impairment” **2015**

**Boston University**- “The search for biological mechanisms of communication **2015**

disorders: insights from rats and humans”

**Haskins Laboratories**- “Neural and behavioral auditory processing impairments **2014**

after dyslexia gene knockdown.”

**MGH Institute of Health Professions-** Doctoral Seminar- “Genetic knockdown **2014**

causes increased neural variability in rats: a potential neural mechanism for dyslexia”

**Psi Chi/Psi Beta-** Building Bonds Psychology Conference- “Neural processing of **2013**

speech in dyslexia.”

**Harvard University**- Eaton Peabody Lab, Central Auditory Club meeting- “Neural **2013**

and behavioral auditory processing impairments after dyslexia gene knockdown.”

**The University of Connecticut**: BNS Department seminar- “Cortical activity patterns **2012**

predict speech discrimination of rapid speech sounds by rats.”

**PEER REVIEWED PRESENTATIONS**

**TM Centanni** (2023), **Neural deficits in dyslexia- unique markers or multiple paths to the same impairment? Part of symposium entitled: Biological and environmental correlates of reading, Society for the Scientific Study of Reading, Port Douglas, Australia**

**TM Centanni** (2022), Neural inconsistency is not related to print sensitivity in children with dyslexia. **Part of symposium entitled**: Bridging educational practice and neuroscience to study developmental language disorders: a review of neuroimaging approaches, International Mind Brain Education Society, Montreal, Canada

**TM Centanni** (2021). Non-invasive auricular vagus nerve stimulation improves memory for read passage content in young adults. **Symposium chair and speaker:** Vagus nerve stimulation for improvement of sensory, motor, and cognitive skills. Brain Stimulation International Congress, Charleston, SC, USA.

**TM Centanni** (2021). Non-invasive auricular vagus nerve stimulation improves memory for read passage content in young adults. Society for the Neurobiology of Language, Online conference.

**TM Centanni** (2020), Using MEG to evaluate neural correlates of childhood apraxia of speech. **Part of symposium entitled**: Bridging educational practice and neuroscience to study developmental language disorders: a review of neuroimaging approaches, International Mind Brain Education Society, Montreal, Canada \*Conference cancelled due to COVID-19

**TM Centanni** (2016), An SLP’s Guide to Neuroscience: Explaining Brain Differences & Genetics to Your Clients. American Speech and Hearing Association, Philadelphia, USA

**TM Centanni,** TP Hogan (2015), An SLP’s Guide to Neuroscience: How Knowledge of Brain/Genetics Can Better Inform Your Practice. American Speech and Hearing Association, Denver, USA

**TM Centanni**, JN Sanmann, TP Hogan, J Iuzzini, WG Sanger, JR Green (2014), *CNTNAP2* deletion in two children with childhood apraxia of speech without language impairment.American Speech and Hearing Association, Orlando, USA

**CONFERENCE POSTERS** (\* indicates graduate student author)

Alsulaiman, R & **Centanni, TM** (2023). Influence of enhanced perceptual features on development of neural specialization for Arabic print in early readers: A case study in the UAE. iWORDD – International Workshop on Reading and Developmental Dyslexia, San Sebastian, Spain.

Gunderson, L\*, Brice, K\*, Parra, M, Engelhart, AS, & **Centanni, TM** (2022). A novel task for measuring prediction abilities in a rat model using a speech-sound discrimination task*.* Society for the Neurobiology of Language, Philadelphia, PA, USA.

Thakkar, VJ,\* Engelhart, AS\*, **Centanni, TM**, (2022) High Frequency taVNS Increases Retention of Novel Language Learning in Young Adults. Society for the Neurobiology of Language, Philadelphia, PA

SD Beach, O Ozernov-Palchik, SC May, **TM Centanni**, JDE Gabrieli, D Pantazis (2021). Neural decoding reveals representations of perceptual category and perceptual ambiguity during speech perception. Society for the Neurobiology of Language, Online conference

Solorzano-Restrepo\*, J., Thakkar\*, VJ, Engelhart\*, A., Davis, N., & **Centanni, TM** (2021). Parental education is correlated with children’s reading but not rhythm perception skills. Society for the Neurobiology of Language, Online conference

Pollack, C., Wilmot, D., **Centanni, T. M.,** Halverson, K., Frosch, I., D'Mello, A. M., Romeo, R., Imhof, A., Capella, J., Wade, K., Al Dahhan, N. Z., Gabrieli, J. D. E., & Christodoulou, J. A.  (2021). Anxiety, motivation, and ability in math and reading in children with and without learning difficulties. Paper presentation at the 19th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI), Gothenburg, Sweden.

SD Beach, O Ozernov-Palchik, SC May, **TM Centanni**, JDE Gabrieli, D Pantazis (2020). Bilateral neural representations underlie normal categorical speech perception in adults with dyslexia. Society for the Neurobiology of Language, Online conference

AS Engelhart\*, KV Chenausky, AL McIlraith, J Iuzzini-Seigel, JR Green, TP Hogan, **TM Centanni** (2020). Increased beta desynchronization in Broca’s area during nonword production in children with childhood apraxia of speech. Society for the Neurobiology of Language, Online conference

VJ Thakkar\*, ZA Richardson, A Dang, **TM Centanni** (2020). The Effects of Transcutaneous Auricular Vagus Nerve Stimulation on Reading Comprehension. Psychonomics. Online conference

VJ Thakkar\*, AS Engelhart\*, A Dang, ZA Richardson, N Mattox, K Turner, G Mortenson, **TM Centanni** (2020). The Effect of taVNS on Novel Language Learning in Young Adults. Society for the Neurobiology of Language, Online conference

SE Taghavi\*, AS Engelhart\*, **TM Centanni** (2020). The effect of dyslexia-gene *Dcdc2* knockout on performance during a prediction task in rats. Southwestern Psychological Association Annual Meeting. Frisco, TX. \*Conference cancelled due to COVID-19

A Tonsager\*, AS Engelhart\*, VJ Thakkar\*, **TM Centanni**, (2020). The effect of aVNS on novel language learning. Southwestern Psychological Association Annual Meeting. Frisco, TX. \*Conference cancelled due to COVID-19

ZA Richardson\*, VJ Thakkar\*, **TM Centanni**, (2020). The effect of auricular vagus nerve stimulation on reading comprehension. Southwestern Psychological Association Annual Meeting. Frisco, TX. \*Conference cancelled due to COVID-19

M Pitcock\*, VJ Thakkar\*, AS Engelhart\*, **TM Centanni** (2020). The effects of aVNS on orthography acquisition in young adults. Southwestern Psychological Association Annual Meeting. Frisco, TX. \*Conference cancelled due to COVID-19

VJ Thakkar\*, AS Engelhart\*, N Mattox, G Pecoraro, Z Richardson, **TM Centanni** (2019). Auricular vagus nerve stimulation as a method for driving neural plasticity in learning a novel orthography. Society for Neuroscience, Chicago, IL, USA.

AS Engelhart\*, J Iuzzini-Seigel, JR Green, TP Hogan, **TM Centanni** (2019). Comparing the somatosensory and pre-motor planning theories of childhood apraxia of speech: a magnetoencephalography study. Society for Neuroscience, Chicago, IL, USA.

**TM Centanni,** AR Seisler, AR Halpern, MJ Wenger (2019). Minor critical notes evoke attention-related ERP components in musicians over non-musicians. Society for Neuroscience, Chicago, IL, USA.

**TM Centanni**, SD Beach, O Ozernov-Palchik, SC May, JDE Gabrieli (2019). Heterogeneous neural deficits in dyslexia during speech sound processing tasks. Society for the Neurobiology of Language, Helsinki, Finland.

SD Beach, D Pantazis, O Ozernov-Palchik, SC May, **TM Centanni**, JDE Gabrieli (2019). What can machine learning tell us about human categorical perception? Society for the Neurobiology of Language, Helsinki, Finland.

Pollack, C, D'Mello, A, Wilmot, D, Frosch, I, Romeo, R, Imhof, A, Wade, K, Capella, J, **Centanni, TM**, Halverson, K, Gabrieli, JDE, & Christodoulou, JA (2019). Neural correlates of number mapping in elementary school children. European Association for Research on Learning and Instruction (EARLI), Aachen, Germany.

O Ozernov-Palchik, **TM Centanni**, SD Beach, SC May, JDE Gabrieli (2019). Distinct patterns of hypoactivation during naturalistic reading in low comprehenders and decoders. Society for the Scientific Study of Reading.

**TM Centanni,** V Thakkar, A Jefferson, C Stacey, N Khodaparast (2018). Effects of auricular vagus nerve stimulation on novel orthography acquisition. Society for Neuroscience, San Diego, CA, USA

**(*This abstract was selected as a Hot Topic and a lay summary was provided to the press)***

D Wilmot, A D’Mello, R Romeo, C Peek, O Meegoda, **TM Centanni,** K Halverson, JDE Gabrieli, J Christodoulou. (2018). Neural correlates of phonological processing in dyslexia and comorbid dyslexia-ADHD. Society for Neuroscience, San Diego, CA, USA

**TM Centanni,** V Thakkar, A Jefferson, C Stacey, N Khodaparast (2018). Effects of auricular vagus nerve stimulation on novel orthography acquisition: a pilot study. Society for the Neurobiology of Language, Quebec City, Canada

O Meegoda, N DeNovi, M Pennebaker, K Halverson, R Romeo, A Imhof, D Wilmot, **TM Centanni**, JDE Gabrieli, JA Christodoulou (2018). Reading miscue analysis in children with dyslexia, comorbid dyslexia/ADHD, and typical reading skills. American Speech and Hearing Association, Boston, USA

HA Beckius, K Halverson, **TM Centanni**, J Walters, JDE Gabrieli, JA Christodoulou (2018) Examining visual attention span in developmental dyslexia. American Speech and Hearing Association, Boston, USA

AM D’Mello, **TM Centanni**, JA Christodoulou, JDE Gabrieli, (2018), Cerebellar engagement during fluent reading: implications for adults with dyslexia. Organization for Human Brain Mapping, Singapore

O Ozernov-Palchik, **TM Centanni**, SD Beach, SC May, M Brown, JDE Gabrieli (2017) Connections between implicit learning and reading fluency: an fMRI investigation. Society for the Neurobiology of Language, Baltimore

**TM Centanni,** F Chen, AB Booker, AM Sloan, SD Beach, O Ozernov-Palchik, SC May, MP Kilgard, JJ LoTurco, D Pantazis, TP Hogan, JDE Gabrieli (2017) Translational research in dyslexia: genetic rodent models inform understanding of mechanisms in humans. Society for the Neurobiology of Language, Baltimore

SD Beach, **TM Centanni,** O Ozernov-Palchik, SC May, D Pantazis, TK Perrachione, JDE Gabrieli (2017) Neural correlates of the categorical perception deficit in dyslexia, Society for the Neurobiology of Language, Baltimore

H Beckius, K Halverson, **TM Centanni,** J Walters, C von Karolyi, E Winner, JDE Gabrieli, JA Christodoulou (2017) Examining the global visual-spatial advantage in dyslexia, ASHA, Los Angeles

**TM Centanni,** SD Beach, O Ozernov-Palchik, S May, JDE Gabrieli (2017) Neural correlates of single phoneme versus rapid auditory processing in adults with and without dyslexia, Society for Neuroscience, Washington DC

**TM Centanni,** SN Del Tufo, JDE Gabrieli, JA Christodoulou (2016) Altered brain bases of rapid naming in adults with dyslexia, Society for Neuroscience, San Diego

**TM Centanni,** D Pantazis, L Denna, JDE Gabrieli, TP Hogan (2015) Variability in the auditory-evoked neural response as a potential mechanism for dyslexia, Society for Neuroscience, Chicago

**TM Centanni**, AB Booker, F Chen, CT Engineer, AM Sloan, K Trull, N Wasko, RL Rennaker, JJ LoTurco, MP Kilgard (2013) Speech sound processing deficits and training-induced neural plasticity in rats with dyslexia gene knockdown, Society for Neuroscience, San Diego

CT Engineer, **TM Centanni**, KW Im, NA Moreno, WA Vrana, MS Borland, RS Carraway, JA Shetake, KG Ranasinghe, JR Riley, JD Seale, LG Wilson, MP Kilgard (2013), Auditory cortex speech sound processing impairments in a rat model of autism, Society for Neuroscience, San Diego

**TM Centanni**, CT Engineer, KW Im, MS Borland, KC Rahebi, MP Kilgard (2013), Impaired Neural and Behavioral Discrimination of Speech in Rat Models of Rett and Fragile X Syndromes, International Meeting for Autism Research, San Sebastían, Spain

**TM Rosen**, AB Booker, F Chen, N Wasko, K Trull, N Khodaparast, AM Sloan, RL Rennaker III, JJ LoTurco, MP Kilgard (2012), Neural and behavioral speech discrimination impairment in a rat model of dyslexia, Society for Neuroscience, New Orleans

**TM Rosen**, AM Sloan, RL Rennaker, MP Kilgard (2011), Evaluating neural correlates of compressed speech discrimination in the adult rat, Society for Neuroscience, Washington D.C.

**TM Rosen**, AM Sloan, CT Engineer, RJ Cheung, CL Mains, RL Rennaker, II, MP Kilgard (2010), Effects of inter-stimulus interval and presentation rate on speech discrimination in the adult rat, Society for Neuroscience, San Diego, California

CT Engineer, **TM Rosen**, WA Vrana, JR Riley, JA Shetake, KG Ranasinghe, JD Seale, MP Kilgard (2010), Animal model of speech sound processing in autism, The Emerging Neuroscience of Autism Spectrum Disorders, San Diego, California

**TM Rosen**, AM Sloan, CT Engineer, RJ Cheung, ZM Abdulali, RL Rennaker, II, MP Kilgard (2010), Effect of presentation rate on speech discrimination in the adult rat, The Tucker-Davis Symposium on Advances and Perspectives in Auditory Neurophysiology, San Diego, California

**SOCIETY MEMBERSHIPS**

*GenLang consortium – member* **2020-present**

*Society for the Neurobiology of Language* –member **2015-present**

*Cognitive Neuroscience Society*- member **2014-present**

*Society for Scientific Study of Reading (SSSR)*- member **2014-present**

*American Speech and Hearing Association (ASHA)-* member w/out certification **2014-2017**

*Society for Neuroscience*- member **2009-present**

**SERVICE**

Ad hoc reviewer: *American Journal of Speech-Language Pathology*, *Brain Structure and Function,*

*Noise and Health, Journal of Speech Language and Hearing Research, Brain and*

*Language, Experimental Brain Research, American Journal of Medical Genetics Part B,*

*Developmental Science, American Journal of Speech and Language Pathology,*

*NeuroImage: Clinical, Scientific Studies of Reading, Developmental Cognitive*

*Neuroscience, Cerebral Cortex, and others*

Grant reviewer: NIH Special Emphasis Panel **2023**

Galactosemia Foundation **2023**

NSF Reviewer **2023**

Mitacs Accelerate Research Grant **2022**

ASHA Reviewer **2021-2023**

Guest Editor: Frontiers in Neuroscience – Neuroprosthetics **2021**

Special Issue: Vagal Nerve Stimulation for Enhancing Recovery from

Neurological Injury or Disease

Outreach: Blog post and podcast on reading in Arabic, Al Qasimi Foundation **2023**

Keller Library public talk: Music and reading in the brain **2023**

Co-founder of Fort Worth Science Café (conceptualized in 2020, **2020-2023**

inaugural event March 2021) Organizer and co-host of events designed

to introduce the public to scientists and research in a casual environment.

Presented research on the brain basis of music and reading to the **2021**  
 Guardians Drum and Bugle Corps