# VITAE: May, 2020

# **Edward J. Golob**

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## Education

1999-2001 Postdoctoral fellow (NIH Training Grant)

Department of Neurology University of California, Irvine

1993-1999 Ph.D., Experimental Psychology

Department of Psychology

Dartmouth College

1987-1991 B.A., Psychology

Capital University

Columbus, OH.

## Academic Positions

2016-Present Full Professor

Department of Psychology

University of Texas, San Antonio

2011-2016 Associate Professor

Department of Psychology, Program in Neuroscience,

Tulane Center for Aging

Tulane University

2004-2011 Assistant Professor

Department of Psychology, Program in Neuroscience,

Tulane Center for Aging (2007)

Tulane University

2010-Present Adjunct Professor

Louisiana State University, Life Course and Aging Center

2005-2008 Visiting Research Professor

Department of Neurology

University of California, Irvine

2001-2004 Assistant Researcher

Institute for Brain Aging and Dementia

University of California, Irvine

## Research Interests

* spatial cognition
* attention and working memory
* perception and action in the auditory system
* normal aging and age-related cognitive disorders

## Technical Experience

* Event-related potentials and EEG recording in humans
* Transcranial magnetic and electrical stimulation in humans
* Eye tracking and various psychophysiological methods in humans
* Extracellular single-unit recording in freely behaving rats
* Stereotaxic surgery, neurotoxic lesions, and electrode implantation

## Membership in Professional Societies and Service

* Cognitive Neuroscience Society (CNS)
* Association for Psychological Science (APS)
* Association for Research in Otolaryngology (ARO)
* Psychonomic Society, Fellow (2017)
* Auditory Perception and Cognition Society (APCAM)
* International Evoked Response Audiometry Study group
* Editorial Boards: Clinical Neurophysiology (2011-2017), Journal of Psychophysiology (2011-Present)
* Member NIH special emphasis panel (ZRG1 ETTN-K 10), June 2012, October 2012, February 2013, June 2015, November 2017
* Member NIH Sensory and Motor Neuroscience, Cognition and Perception Fellowship Study Section (ZRG1 F02B-D), October 2013, February 2014, 2015, 2016
* Member NIH special emphasis panel (ZRG1 IFCN-Q 55), October 2014
* Member NIH special emphasis panel (ZRG1 ETTN-G (12), March 2018
* Member NIH special emphasis panel ZRG1 IFCN-Y (03), February 2018
* NIDCD reviewer for NIH loan repayment program, March 2019, March 2020
* AD hoc member NIH: Mechanisms of Sensory, Perceptual, and Cognitive Processes (SPC) Study Section, June 2014. February 2017; Cognition and Perception Study Section (CP), October 2016, June 2019

## Grants and Contracts

Current

NIH (2015-2021). Principal Investigator. Shifting auditory spatial attention: cognitive

and neural mechanisms. $1,378,657 total costs.

NIH (2018-2021). Principal Investigator. Development of brain-computer interface

methods to influence brain dynamics in stuttering. $387,172 total costs.

Mitre Corp. (2020). Principal Investigator. Cyber Security Usability Assessment.

$50,000 total costs.

Completed

NIH (2012-2017). COBRE (Jazwinski, PI). Principal investigator, Project 2. Spatial

attention networks and cognitive aging. $1,117,695 total costs.

NSF (2015-2016). (Calhoun, PI). Faculty research mentor. Developmental

Chronnecto-Genomics (Dev-CoG): A Next Generation Framework for Quantifying Brain Dynamics and Related Genetic Factors in Childhood. $2,946,389 total costs.

NSF (2009-2014). Principal Investigator. “CAREER: Cortical processing of auditory

spatial information”. $768,443 total costs.

Tulane Research Enhancement Fund (2008-2010). Principal investigator. “Cognition

and brain function in healthy aging”. $16,800 total costs.

Louisiana State University (2008-2009). Co-Investigator. Cognitive effects of electrical

stimulation of the subthalamic nucleus. $50,000 total costs.

NIH R01 (2002-2006). Co-investigator. “Cognitive and neurophysiological changes in

mild cognitive impairment”. $1,053,530 total costs.

UC Irvine Health Sciences Research Imaging Center (2002). Principal Investigator.

“Functional neuroanatomy of episodic memory in mild cognitive impairment”.

$4,000 total costs.

**Courses**

Undergraduate:

* Cognitive Neuroscience (Tulane, PSYC/NSCI 438/638)
* Cognitive Neuroscience lab (Tulane, PSYC/NSCI 658)
* Cognitive Neuroscience (UT San Antonio, PSY 4343)

Graduate:

* Cognitive Neuroscience (Tulane, PSYC 703)
* Cognitive Psychology (Tulane, PSYC 707)
* Sensory and Motor Systems (Tulane, PSYC 708)
* Co-Director of Interdisciplinary Seminar on Aging (Tulane, AGST 702, 704)
* Human Cognition (UT San Antonio, PSY 5343)
* Applied Cognitive Psychology (UT San Antonio, PSY 7133)
* Biopsychology (UT San Antonio, PSY 7103)

**Student thesis advising**

* Kate Yurgil Psychology: M.S. 2008, Ph.D. 2010
* Laura Manning Psychology: M.S. 2007, Ph.D. 2011
* Lauren Stowe Psychology Ph.D. 2011
* Jeremy Nelson Neuroscience Ph.D. 2012
* Carolyn Pauker Neuroscience Ph.D. 2014
* Debra Karhson Neuroscience Ph.D. 2014
* Sandeepa Sur Aging Studies Ph.D. 2016
* Max Anderson Neuroscience M.S. 2014, Ph.D. 2018
* Lisa Chinn Psychology M.S. 2016. Ph.D. 2019 (co-advised)
* John Meyers Neuroscience M.S. 2014, Ph.D. 2019
* Stefanie Rader Neuroscience: M.S. 2006
* John Holmes Psychology: M.S. 2009
* Kelsey Ward Neuroscience: M.S. 2010
* Chris Holdgraf Neuroscience: M.S. 2010
* Michael Girgis Psychology M.S. 2013
* Xavier Readus Neuroscience M.S. 2013
* Felicia Obialo Neuroscience M.S. 2015
* Jenna Winston Neuroscience M.S. 2016
* Justin Randall Psychology M.S. 2019
* Carolyn Pauker Neuroscience: B.S. 2006, undergraduate honors thesis

- recipient of Arnold Gerall Prize in Neuroscience

* Steven Bright Neuroscience: B.S. 2007, undergraduate honors thesis

- recipient of Arnold Gerall Prize in Neuroscience

* Thomas Eskew Psychology: B.S. 2009, undergraduate honors thesis

- recipient of Rosa Cahn Hartman prize in Psychology

* Michael Seay Neuroscience: B.S. 2012, undergraduate honors thesis

- recipient of Arnold Gerall prize in Psychology

* Carly Rosen Neuroscience: B.S. 2016, undergraduate honors thesis

- recipient of Arnold Gerall prize in Psychology

**Administrative experience**

Department of Psychology, Tulane University

* Graduate training committee (2004 – 2015)
* 4+1 Admissions, Chair (2012 – 2016)
* Colloquium committee (2006 – 2011)
* Academic appeals committee (2007 – 2011)
* Various search committees

Program in Neuroscience, Tulane University

* Steering committee (2011 – 2016)

Tulane Center for Aging

* Colloquium committee (2008 – 2010)
* Seminar series coordinator (2008 – 2012)

School of Science and Engineering, Tulane University

* Grievance committee (2009 – 2011)
* Graduate Studies committee (2015 – 2016)

University of Texas, San Antonio

* Committee: Conflict of Interest in Research & Intellectual Property (2016 – Present)
* Graduate Admissions Committee (2016 – Present)
* Various search and advisory committees

## Publications\* \*Engineering conference papers in next section

Cherry K.E., Elliott E.M., Golob E.J., Brown J.S., Kim S, Jazwinski S.M. (submitted).

Strategic Encoding and Retrieval Processes in Verbal Recall among Older Adults.

Montanez R, Golob E, Xu S (submitted). Human cognition through the lens of

social engineering cyberattacks.

Anderson M.T., Kaminski N.R., Mock J.R., Golob E.J. (submitted). Numbers in short-

term memory bias auditory spatial perception.

Chinn L.K, Myers J.C., Sur S., Golob E.J. (submitted). Theta coherence in dynamic

cognitive control networks.

Golob E.J, Nelson J.T., Scheuerman J., Venable K.B., Mock J.R. (submitted). Auditory

spatial attention gradients and vigilance.

Sur S. & Golob E.J. (2020). Neural correlates of auditory sensory memory dynamics

in the aging brain. *Neurobiology of Aging*, 88: 128-136.

Myers J.C., Mock J.R., Golob E.J. (2020). Listening for the self: Auditory-motor

prediction facilitates perception of self-generated sounds. *Scientific Reports,* 10:1496.

Golob E.J. & Mock J.R. (2020). Dynamics of auditory spatial attention gradients.

*Cognition*. https://doi.org/10.1016/j.cognition.2019.104058

Golob E. & Mock J.R. (2019). Auditory spatial attention capture, disengagement,

and response selection in normal aging. *Attention, perception, and psychophysics*, 81(1): 270-280.

Eskine K.E., Anderson A.E., Sullivan M., Golob E.J. (2018). Effects of music

listening on creative cognition and semantic memory retrieval. *Psychology of Music*.

Chinn L.K., Pauker C.S., Golob E.J. (2018). Dynamics of cognitive control and

midline theta activity across multiple timescales. *Neuropsychologia*. PMID: 29410123

Lutfi-Proctor D.A., Elliott E.M., Golob E.J. (2018). Spatial integration and the

underlying mechanisms of cross-modality interference. *Journal of Cognition*, 1(1): p5, 1–15.

Golob E.J., Lewald J., Getzmann S., Mock J.R. (2017). Numerical value biases

sound localization. *Scientific Reports, 7*. PMID: 29222526

Golob E.J., Winston J., Mock J.R. (2017). Impact of verbal and spatial short-term

memory load on auditory spatial attention gradients. *Frontiers in Neuroscience, November 6*. PMID: 29218024

Karhson D. S. & Golob E.J. (2016). Atypical sensory reactivity influence on auditory

attentional control in adults with autism spectrum disorders. *Autism Research*, 9(10): 1079-1092. PMID: 26778164

Golob E.J., Lewald J., Jungilligens J., Getzmann S. (2016). Interaction of number

magnitude and stimulus position in auditory localization of speech. *Perception*,

45(1-2): 165-179. PMID: 26562857

Getzmann S., Golob E.J., Wascher E. (2016). Focused and divided attention in a

simulated cocktail-party situation: ERP evidence from younger and older adults. *Neurobiology of Aging*, 41: 138-149. PMID: 27103527

Mock J.R., Foundas, A.L., & Golob E.J. (2016). Cortical activity during cued

picture naming predicts individual differences in stuttering severity. *Clinical* *Neurophysiology*, 127: 3093–3101. PMID: 27472545

Mock J.R., Seay M.J., Charney D.R., Holmes J.L., Golob E.J. (2015). Rapid cortical

dynamics associated with auditory spatial attention gradients. *Frontiers in Neuroscience, June 2*. PMID: 26082679

Mock J.R., Foundas, A.L., & Golob E.J. (2015). Speech preparation in adults with

persistent developmental stuttering. *Brain and Language*, 149: 97–105.

PMID: 26197258

Karhson D. S. & Golob E.J. (2015). The role of right inferior parietal cortex in

auditory spatial attention: A repetitive transcranial magnetic stimulation study. *PLOS*

*One*. 10(12):e0144221. PMID: 26636333

Nelson J.T., McKinley R.A., Golob E.J., Warm J.S., Parasuraman R. (2014). Enhancing

vigilance in operators with prefrontal cortex transcranial direct current stimulation (tDCS). *Neuroimage*, 85: 909-917. PMID: 23235272

Yurgil K.A. & Golob E.J. (2013). Cortical potentials in an auditory oddball task reflect

individual differences in working memory capacity. *Psychophysiology*. 50(12): 1263-1274. PMID: 24016201

Stowe L.M. & Golob E.J. (2013). Evidence that the Lombard effect is frequency

-specific in humans. *Journal of the Acoustical Society of America*, 134(1): 640-7 PMID: 23862838. PMC3985863

Foundas A.L., Mock J.R., Corey D.M., Golob E.J., Conture E.G. (2013). The

speecheasy device in stuttering: Left ear-placement enhances fluency. *Brain and*

*Language*, 26(2): 141-150. PMID: 23712191

Mock J.R., Foundas A.L., Golob E.J. (2011). Modulation of sensory and motor

cortex activity during speech preparation: an ERP and TMS study. *European*

*Journal of Neuroscience*, 33(5):1001-1011. PMID: 21261757

Golob E.J. & Holmes J.L. (2011). Cortical mechanisms of auditory spatial attention

in a target detection task. *Brain Research*. 1384: 128-139. PMID: 21295017

Mock J.R., Foundas A.L., Golob E.J. (2011). Selective influence of auditory distractors

on motor cortex excitability. *Neuroreport*, 22(16): 830-833. PMID: 21904250

Yurgil K. & Golob E.J. (2010). Neural activity before and after conscious perception of

a multistable stimulus. *Neuropsychologia*, 48(10): 2952-2958. PMID: 20542046

Irimajiri R., Golob E.J., Starr A (2010). ApoE genotype and auditory cortical sensory

and cognitive potentials in healthy older females. *Neurobiology of Aging,* 31(10): 1799-1804. PMID: 18976833

Golob E.J., Ringman J.M., Irimajiri R., Bright S., Schaffer B., Medina L.D., Starr A

(2009). Cortical event-related potentials in preclinical familial Alzheimer’s

disease. *Neurology*, 73(20): 1649-1655. PMID: 19917987

Wang H., Golob E., Bert A., Nie K, Chu Y., Dick M, Mandelkern M., Su MY (2009).

Alterations in regional brain volume and individual MRI-guided perfusion in mild cognitive impairment correlated with memory function. *Journal of Geriatric Psychiatry and Neurology,* 22(1): 35-45. PMID: 19150973

Rader S.K., Holmes, J.L., Golob E.J. (2008). Auditory event-related potentials during a

spatial working memory task. *Clinical Neurophysiology,* 119: 1176-1189.

PMID: 18313978

Golob E.J., Irimajiri R., Starr A. (2007). Auditory cortical activity in amnestic mild

cognitive impairment: relationship to subtype and conversion to dementia. *Brain*,

130(3): 740-52.

Irimajiri R., Michalewski H.J., E.J. Golob, Starr A. (2007). Cholinesterase inhibitors

affect somatosensory but not visual cortical activities in amnestic mild cognitive impairment. *Brain Research*, 1145:108-16.

Wang H., Golob E.J., Su M.Y. (2006). Vascular volume and blood-brain barrier

permeability in hippocampus and cerebellum measured with dynamic contrast

-enhanced MRI in mild cognitive impairment. *Journal of Magnetic Resonance*

*Imaging*, 24(3): 695-700.

Bennett I.J., Golob E.J., Parker E.S., Starr A. (2006). Memory evaluation in mild

cognitive impairment using recall and recognition tasks. *Journal of Clinical and*

*Experimental Neuropsychology*, 28(8): 1408-1422.

Scalise A., Pittaro-Cadore I., Golob E.J., Gigli G.L. (2006). Absence of postexercise and

delayed facilitation of motor cortex excitability in restless legs syndrome: evidence of

altered cortical plasticity? *Sleep*, 29(6): 770-775.

Golob E.J., Ovasapyan V., Starr A. (2005). Event-related potentials accompanying

motor preparation and stimulus expectancy in the young, young-old and oldest-old. *Neurobiology of Aging,* 26(4): 531-542

Bassett J.P., Zugaro M.B., Muir G.M., Golob E.J., Wiener S.I., Muller R.U., Taube J.S.

(2005). Passive movements of the head do not abolish anticipatory firing properties

of head direction cells. *Journal of Neurophysiology*, 93(3): 1304-1316.

Irimajiri R., Golob E.J., Starr A. (2005). Auditory brainstem, middle- and long-latency

evoked potentials in mild cognitive impairment. *Clinical Neurophysiology*, 116(8): 1918-29.

Golob E.J. & Starr A. (2004). Serial position effects in auditory event-related potentials

during working memory retrieval. *Journal of Cognitive Neuroscience,* 16(1):

40-52.

Golob E.J. & Starr A. (2004). Visual encoding differentially affects event-related

potentials during working memory retrieval. *Psychophysiology*, 41(2): 186-192.

Bennett I.J., Golob E.J., Starr A. (2004). Age-related differences in auditory event

-related potentials during a cued attention task. *Clinical Neurophysiology*, 115(11):

2602-2615.

Stackman R.W., Golob E.J., Bassett J. P., Taube J.S. (2003). Passive transport

disrupts directional path integration by rat head direction cells. *Journal of*

*Neurophysiology*, 90(5): 2862-2874.

Golob E.J., Pratt H., Starr A. (2002). Preparatory slow potentials and event-related

potentials in an auditory cued attention task. *Clinical Neurophysiology*, 113(10):

1544-1557.

Golob E.J., Johnson J.K., Starr A. (2002). Auditory event-related potentials during target

detection are abnormal in mild cognitive impairment. *Clinical* *Neurophysiology*,

113(1): 151-161.

Golob E.J. & Taube J.S. (2002). Influence of aversive reinforcement on reorientation in

a spatial working memory task. *Behavioural Brain Research*, 136(1): 309-316.

Golob E.J., Miranda G.G., Johnson J.K., Starr A. (2001). Sensory cortical interactions in

aging, mild cognitive impairment, and Alzheimer's disease. *Neurobiology of Aging,*

22(5): 755-763.

Golob E.J., Stackman R.W., Wong A.C., & Taube J.S. (2001). On the behavioral

significance of head direction cells: Neural and behavioral dynamics on spatial reference and working memory tasks. *Behavioral Neuroscience*, 115(2): 285-304.

Golob E.J. & Starr A. (2000). Age-related qualitative differences in auditory cortex

responsiveness as a function of memory load. *Clinical Neurophysiology,* 111(12):

2234-2244.

Golob E.J. & Starr A. (2000). Effects of stimulus sequence on event-related potentials

and reaction time during target detection in Alzheimer’s disease. *Clinical Neurophysiology*, 111(8): 1438-1449.

Golob E.J. & Taube J.S. (1999). Head direction cells in rats with hippocampal or

overlying neocortical lesions: Evidence for impaired angular path integration.

*Journal of Neuroscience*, 19(16): 7198-7211.

Golob E.J. & Taube J.S. (1998). Recordings of postsubiculum head direction cells

following lesions of the laterodorsal thalamic nucleus. *Brain Research*, 780(1): 9-19.

Goodridge J.P., Dudchenko P.A., Worboys K.A., Golob E.J., & Taube J.S. (1998). Cue

control and head direction cells. *Behavioral Neuroscience*, 112(4): 749-761.

Golob E.J. & Taube J.S. (1997). Head direction cells and episodic spatial information

in rats without a hippocampus. *Proceedings of the National Academy of Sciences,*

*U.S.A.,* 94, 7645-7650.

Taube J.S. & Golob E.J. (1997). Computational functions of the hippocampus: Does it

encode all episodic memories? *Molecular Psychiatry,* 2(6), 442-445.

Taube J.S., Goodridge J.P., Golob E.J., Dudchenko P.A., & Stackman R.W. (1996).

Processing the head direction cell signal: A review and commentary. *Brain Research*

*Bulletin,* 40(5-6), 477-484.

**Peer-reviewed conference papers, book chapters, & technical reports**

Liu Z, Mock J, Huang Y, Golob E (2019). Predicting Auditory Spatial Attention from

EEG using Single- and Multi-task Convolutional Neural Networks. *IEEE International Conference on Systems, Man, and Cybernetics.*

Panwar S, Rad P, Quarles J, Golob E, Huang Y (2019). A Semi-Supervised Wasserstein

Generative Adversarial Network for Classifying Driving Fatigue from EEG signals.

*IEEE International Conference on Systems, Man, and Cybernetics.*

MockJ., MyersJ., Robbins K., Irani F., Golob E.J. (2019). Phase synchrony between

brain regions predicts disfluent brain states in people who stutter. *American Speech-Language-Hearing Association (ASHA) annual convention*.

Valecha R, Gonzalez A, Mock J.R., Golob E.J., Rao H.R. (2019). Investigating phishing

susceptibility – An analysis of neural Measures. *Neuro-Information Systems Retreat*

*2019.* in *Information Systems and Neuroscience.* Editors: F. Davis, R. Riedl, J. vom Brocke, P.M. Léger, A. Randolph, T. Fischer.

Scheuerman J, Venable K.B., Anderson M.T., Golob E.J. (2019). Modeling Spatial

Auditory Attention in ACT-R: A Constraint-Based Approach. *Association for the Advancement of Artificial Intelligence conference.*

Myers J.C., Mock J.R., Irani F., Robbins K.A., Golob E.J. (2018). Single-trial

classification of disfluent brain states in adults who stutter. *IEEE International*

*Conference on Systems, Man, and Cybernetics.*

Chinn L.C. & Golob E.J. (2017). Attention Allocation Dynamically Responds to

Context. *7th Joint IEEE International Conference on Development and Learning*.

Scheuerman J, Venable K.B., Anderson M.T., Golob E.J. (2017). Modeling spatial

auditory attention: handling equiprobable attended locations. *Cognition and Artificial*

*Intelligence for Human-Centred Design*.

Golob E.J., Venable K.B., Anderson M.T., Scheuerman J. (2017). Computational

modeling of auditory spatial attention. *Annual Conference of the Cognitive Science Society*.

Mock J.R., Irani F., Golob E.J. (2017). Pre-speech brain activity associated with fluent

and stuttered speech. *American Speech-Language-Hearing Association annual Convention.*

Golob E.J., Venable K.B., Anderson M.T., Benzell J.A., Scheuerman J. (2016).

Modelling auditory spatial attention with constraints. *International Workshop on Artificial Intelligence and Cognition, 4th edition*.

Dorr B, Galescu L, Golob E.J., Venable K.B., Wilks Y (2015). Companion-based

Ambient Robust Intelligence (CARING). *Association for the Advancement of*

*Artificial Intelligence, 29th Annual Meeting*.

Golob, E.J (2015). Review of “Auditory event-related potentials to words:

Implications for Audiologists”, Jerger, Martin, Fitzharris. *International Journal of Audiology*.

Golob E.J., Pratt H., Starr A. (2009). Learning and memory in normal aging: Event

-related potentials, EEG, and reaction time. pp. 107-201. in *New Encyclopedia of*

*Neuroscience*. Larry R. Squire (Editor-in-Chief). Elsevier.

Smith L.M. & Golob E.J (2008). Assessment of stimulus-feature selectivity in self

-monitoring using the Lombard effect. *American Speech-Language-Hearing*

*Association*.

Starr A. & Golob E.J. (2006). Cognitive Factors Modulating Auditory Cortical

Potentials. in *Auditory Evoked Potentials: Basic Principles and Clinical*

*Application*. Robert Burkhard, Manny Don, Jos Eggermont (Eds.). Lippincott

Williams & Wilkins.

Blair H.T., Sharp P.E., Cho J., Goodridge J.P., Stackman R.W., Golob E.J., Taube J.S.

(1998). Path integration in the rat head-direction circuit. In: *Advances in Neural*

*Information Processing Systems*. Vol. 10. D.S. Touretzky, M.C. Mozer, M.E.

Hasselmo (Eds.). MIT Press.

## Abstracts

Chinn L.K., Myers J.C., Golob E.J. (2018). Theta phase synchrony in a spatial cognitive

control network. *Society for Neuroscience Abstracts*, 44

Myers J.C., Mock J.R., Golob E.J. (2018). Neural oscillations predict stuttering

disfluency on a single trial basis. *Society for Neuroscience Abstracts*, 44

Scheuerman J., Anderson M.T., Mock J.R., Venable K.B, Golob E.J. (2018).

Computational Model of Spatial Auditory Attention in ACT-R. *Cognitive Science*

*Society.*

Golob E.J. & Mock J.R. (2018). Mismatch negativity as an index of auditory spatial

attention gradients. *Association for Research in Otolaryngology*, ARO Annual Midwinter Meeting.

Valecha R., Mock J., Golob, E.J., Rao H.R. (2017). An investigation of unconscious

processing of phishing messages – Towards developing an antidote to phishing victimization. *7th Annual Interdisciplinary Symposium on Decisions Neuroscience.*

Myers J., Mock J.R., Golob E.J. (2017). Feedforward motor enhancement of auditory

sensory thresholds. *Cognitive Neuroscience Society*.

Golob E.J., Winston J, Mock J.R. (2017). Impact of verbal and spatial short-term

memory load on auditory spatial attention gradients. *Association for Research in Otolaryngology*, ARO Annual Midwinter Meeting.

Golob E.J., Scheuerman J., Anderson M.T., Mock J.R., Venable K.B. (2016).

Computational modeling of auditory spatial attention. *Psychonomic Society*.

Anderson MT, Scheuerman J, Benzell J.A., Venable K.B., & Golob E.J (2016).

Modeling auditory spatial attention with AI constraint-based approaches. *Cognitive Neuroscience Society*.

Mock J.R., Charney D.R., Holmes J.L., & Golob E.J. (2016). Auditory spatial attention

control in the aging brain. *Cognitive Neuroscience Society*.

Chinn L.K., Pauker C.S, & Golob E.J. (2016). Timescales of cognitive control during an

auditory Simon Task. *Cognitive Neuroscience Society*.

Golob E.J. & Mock J.R. (2016). Dynamics of auditory spatial attention gradients.

*Association for Research in Otolaryngology*, ARO Annual Midwinter Meeting.

Chinn L.K. & Golob E.J. (2015). The impact of musical experience on cognitive control

during an auditory Simon task. *Association for Psychological Science Convention*.

Anderson M.T. & Golob E.J. (2015). Numbers retained in short-term memory bias

auditory spatial attention. *Association for Psychological Science Convention*.

Anderson, A, Eskine K, Golob E. (2015). Effects of music listening on creativity and

semantic memory retrieval. *Association for Psychological Science Convention.*

Myers J.C., Mock J.R., & Golob E.J. (2014). Effects of speech motor preparation on

auditory perception. *Midwest Auditory Research Conference*.

Seay M.J., Mock J.R., & Golob E.J. (2014). Cortical representations of absolute and

relative sound locations during an auditory spatial attention task. *Annual Meeting of the Society for Neuroscience.*

Karhson D. & Golob E.J. (2014). Neural Correlates of cognitive control and attentional

orienting in adults with Autism Spectrum Disorders. *International Meeting for Autism Research*.

Sur S. & Golob E.J. (2014). Neural correlates of auditory attentional control in the

Simon task. *Cognitive Aging Conference*.

Karhson D. & Golob E.J. (2013). Perceptual load modulates neural correlates of auditory

attention in Autism Spectrum Disorders. *Cognitive Neuroscience Society*.

Charney D.R. & Golob E.J. (2012). Individual differences as a function of normal aging

and working memory capacity. *Cognitive Neuroscience Society*.

Mock J.R., Foundas A.L., Golob E.J. (2012). Speech Preparation in adults who stutter.

*Cognitive Neuroscience Society*.

Mock J.R., Foundas A.L., Golob E.J. (2012). Auditory responsiveness during a delayed

naming paradigm in adults who stutter. *American Academy of Neurology*.

Cherry K.E., Golob E.J., Elliott E.M., Silva Brown J., Yu Q., Volaufova J., Jazwinski

S.M. (2011). Strategic encoding and retrieval processes in verbal recall among

oldest-old adults. *The Gerontologist*, 51, 128-129.

Pauker C.S. & Golob E.J. (2011). Effects of global probabilities on cortical processing

during an auditory Simon task. *Cognitive Neuroscience Society.*

Foundas A.L., Mock J.R., Corey D.M., Golob E.J., Conture E. (2011) Altered Auditory

Feedback in Developmental Stuttering: Effects of Attention. Neurology 76: A506. *American Academy of Neurology*.

Mock J.R., Foundas A.L., Golob E.J. (2010). Influence of sound location and

handedness on motor-evoked potentials. *29th International Congress of Clinical*

*Neurophysiology*.

Karhson D.S. & Golob E.J. (2010). Influence of repetitive TMS to right inferior parietal

cortex on auditory spatial processing. *Organization for Human Brain Mapping.*

Yurgil K. & Golob E.J. (2010). Working memory capacity and neural mechanisms of

attentional control. *Cognitive Neuroscience Society.*

Karhson D.S. & Golob E.J. (2010). The effect of repetitive TMS to the right inferior

parietal cortex on auditory spatial attention. *Cognitive Neuroscience Society.*

Badr Y., Manning L., Golob E.J. Richter E. (2010). The effect of deep brain stimulation

of the subthalamic nucleus on executive function in Parkinson's disease. *Louisiana*

*Neurosurgical Society.*

Manning L.M. & Golob E.J. (2009). Representation of key in non-verbal working

memory: an event-related potential study. *Cognitive Neuroscience Society.*

Holmes J.L. & Golob E.J. (2008). Auditory object codes and spatial attention: an event

-related potential analysis. *Society for Neuroscience* *Abstracts*, 34.

Nelson J.T. & Golob E.J. (2008). The effect of repetitive TMS to the left dorsolateral

prefrontal cortex on auditory event-related potentials. *Society for Neuroscience Abstracts*, 34.

Mock J.R., Foundas A.L., Golob E.J. (2008). The influence of speech-motor programming

on auditory cortical responses. *Society for Neuroscience Abstracts*, 34.

Holmes J.L. & Golob E.J. (2007). The influence of spatial attention and sound location

on auditory event-related potentials. *Society for Neuroscience* *Abstracts*, 33.

Autin K.M. & Golob E.J. (2007). Pre and post stimulus activity in dichotic listening: an

auditory ERP study. *Society for Neuroscience* *Abstracts*, 33.

Autin K.M. & Golob E.J. (2007). Auditory event-related potentials and perceptual

judgments of speech. XX Biennial Symposium of the International Evoked Response Audiometry Study Group.

Starr A., Golob E.J., Irimajiri R, Michalewski H.J. (2007). Sensory cortical changes

accompany aging, mild cognitive decline, and dementia. XX Biennial Symposium of

the International Evoked Response Audiometry Study Group.

Golob E.J., Irimajiri R., Starr A. (2007). Auditory cortical activity is abnormal in early

cognitive decline and anticipates subsequent conversion to dementia. 5th

International Symposium and Workshop on "Objective Measures in Cochlear and

Brainstem Implants".

Golob E.J., Manning L.M., & Rader S.K. (2006). ERP correlates of attention and

working memory. *International Organization for Psychophysiology.*

Golob E.J. & Rader S.K (2006). Influence of sound location and behavioral relevance

on auditory event-related potentials. *Society for Neuroscience* *Abstracts*, 32.

Rader S.K., Manning L.K., & Golob E.J. (2006). Auditory event-related potentials and

processing of speech and musical sounds during passive listening and target detection. *Society for Neuroscience* *Abstracts*, 32.

Manning L.K., Brown L.E., & Golob E.J. (2005). Lateralization of auditory processing

for speech and music: an event-related potential analysis. *Society for Neuroscience*

*Abstracts*, 31.

Rader S.K., & Golob E.J. (2005). Auditory event-related potentials during a spatial

working memory task. *Society for Neuroscience Abstracts*, 31.

Irimajiri R., Golob E.J., Michalewski H.J., & Starr A (2005). Cholinesterase inhibitors

influence both memory functions and sensory (auditory, somatosensory) evoked

cortical potentials in mild cognitive impairment. *Society for Neuroscience Abstracts*,

31.

Golob E.J. (2004). Event-related potentials and mild cognitive impairment. *Clinical*

*Electroencephalography*, 35(4), 211.

Irimajiri R., Golob E.J., & Starr A. (2004). Auditory event-related potentials in mild

cognitive impairment. *Cognitive Neuroscience Society.*

Wang H, Chu Y, Bert A, Chang V, Golob E, Hill MA, Mandelkern M, Nalcioglu O, &

Su MY (2004). Regional cerebral hypoperfusion of medial temporal lobe in mild

cognitive impairment. *Neurobiology of Aging*, 25(S2).

Wang H., Su MY, Chu Y, Bert A, Golob E, Mandelkern M, Chang V, Nalcioglu O.

(2004). Regional cerebral hypoperfusion of medial temporal lobe in mild

cognitive impairment. *International Society of Magnetic Resonance in Medicine, 12*.

Golob E.J. (2003). Neurophysiological analysis of processing speed reductions in aging

and mild cognitive impairment. *Clinical Electroencephalography*, 34(3), 172.

Bennett I., Golob E.J., Ovasapyan V., & Starr A. (2003). Age-related differences in

auditory event-related potentials during a cued attention task. *Society for*

*Neuroscience Abstracts*, 29.

Golob E.J., & Starr A (2002). Processing speed in aging: Event-related potentials in

stimulus evaluation and response preparation. *Society for Neuroscience Abstracts*,

28.

Ovasapyan V., Golob E.J., & Starr A. (2002). Changes in pre-stimulus slow potentials in

normals between 60 and 100 years of age. *Society for Neuroscience Abstracts*, 28.

Starr A., & Golob E.J. (2002). Event-related potentials in mild cognitive impairment.

*International Journal of* *Psychophysiology*. 45(1-2), 35.

Golob E.J., & Starr A. (2001). Primacy and recency effects during working memory

retrieval. *Society for Neuroscience Abstracts*, 27.

Ovasapyan V., Golob E.J., & Starr A. (2001). Pre-stimulus potentials in target detection

consist of motor preparation and stimulus expectancy components. *Society for*

*Neuroscience Abstracts*, 27.

Taube J.S., & Golob E.J. (2001). Influence of aversive reinforcement on reorientation in

a spatial working memory task. *Society for Neuroscience Abstracts*, 27.

Golob E.J., Miranda G.G., & Starr A. (2000). Neurophysiological examination of

cortical disconnection in Alzheimer’s disease. *Society for Neuroscience Abstracts,*

26: 1545.

Golob E.J., Wong A.C., & Taube J.S. (1998). On the behavioral relevance of head

direction cells. *Society for Neuroscience Abstracts*, 24: 1913.

Bassett J.P., Golob E.J., Muller R.U., & Taube J.S. (1998). Anticipatory time intervals of

head direction cells increase during passive movement. *Society for Neuroscience*

*Abstracts*, 24: 1912.

Golob E.J., & Taube J.S. (1997). Response of head direction cells to a novel landmark

cue. *Society for Neuroscience Abstracts*, 23: 504.

Blair H.T, Sharp P.E., Goodridge J.P., Stackman R.W., Golob E.J., & Taube J.S. (1997).

Experimental evidence for a path integrator in the rat head-direction circuit. *Proceedings of the Computational Neurosciences Conference CNS 97*.

Golob E.J., & Taube J.S. (1996). Head direction cells are less responsive to idiothetic

cues in rats with hippocampal lesions. *Society for Neuroscience Abstracts*, 22: 1873.

Golob E.J., & Taube J.S. (1995). Head direction cells recorded from rats with

hippocampal lesions. *Society for Neuroscience Abstracts*, 21: 945.

Golob E.J., & Taube J.S. (1994). Head direction cells recorded from the postsubiculum

in animals with lesions of the lateral dorsal thalamic nucleus. *Society for Neuroscience* *Abstracts*, 20: 805.

Schmidt H.S., Golob E.J., & Torello M.W. (1992). Alpha intrusion in sleep and its

relationship to excessive waking alpha and depression. *Sleep Research*, 21:258.

Schmidt H.S., Golob E.J., & Torello M.W. (1992). Enuresis associated with idiopathic

central nervous system hypersomnolence: Treatment with protriptyline. *Sleep*

*Research*, 21:308.

**Conference and invited lectures**

“Brain dynamics: making the most of what you have”. Neurofeedback and biofeedback

mini-conference. San Antonio, Texas. 10-19

“Predicting Auditory Spatial Attention from EEG using Single- and Multi-task

Convolutional Neural Networks. IEEE International Conference on Systems, Man, and Cybernetics. Bari, Italy. 10-19

“Brain dynamics: making the most of what you have”. Louisiana State University Health

Sciences Center. New Orleans, LA. Research Day Keynote. 04-19

“Eavesdropping on the brain: understanding neural codes and their applications. Texas

A&M University, San Antonio. 11-18

“Attention systems and layers of intelligence”. Southern Society for Philosophy and

Psychology. Keynote. 03-18

“On the role of loudness in auditory spatial attention gradients”. Annual Meeting of the

Psychonomic Society. Vancouver, BC, Canada. 11-17

“Effects of numerosity on auditory spatial perception”. Armadillo research conference.

Texas A&M University. College Station, TX. 10-17

“Impact of verbal and spatial short-term memory load on auditory spatial attention

gradients”. Association for Research in Otolaryngology (ARO)

Annual meeting. 02-17

“Adjustments of cognitive control on different timescales”. Southeastern Psychological

Association Annual Meeting. 04-16

“Dynamics of auditory spatial cognition”. University of Texas, San Antonio.

San Antonio, TX. 12-15.

“Impact of musical experience on attention control and working memory capacity”.

Southern Society for Philosophy and Psychology. New Orleans, LA. 04-15

“Control of auditory spatial attention in normal aging”. University of South Florida.

Tampa, FL. 11-14

“Control of auditory spatial attention in normal aging”. American Psychological

Association Convention. Washington, DC. 08-14

“Music and brain aging”. Performing Arts Medicine Association satellite conference,

American Medical Society for Sports Medicine. New Orleans, LA. 04-14

“Control of spatial attention in aging”. International Conference on Aging and

Cognition. Dortmund, Germany. 04-13

“Music and brain aging”. Louisiana State University Life Course and Aging Center.

Baton Rouge, LA. 02-13

“Interactions between perception and action in the auditory system”. School of

Allied Health Professions. Louisiana State University Health Sciences Center. 11-12

“Spatial cognition and attention control”. IDeA Conference. North Dakota State

University. Fargo, ND. 07-12

“Cortical dynamics in cognitive aging”. Leibniz Centre for Working Environment and

Human Factors. Dortmund, Germany. 10-11

“EEG analyses of cortical dynamics in normal and abnormal aging”. International

Cognitive Neuroscience Conference. Mallorca, Spain. 09-11

“Spatial cognition and attention”. University of Texas, Dallas and Center for Brain

Health. Dallas, TX. 02-11

“Top-down influences on sensory processing in normal aging”. International

Conference on Aging and Cognition. Dortmund, Germany. 10-10

“Auditory cortical activity measures identify those individual mild cognitive impairment

(MCI) subjects who will convert to Alzheimer’s dementia (AD)”. International

Conference on Aging and Cognition. Dortmund, Germany. 10-10

“Spatial cognition as a model system for understanding brain and cognitive aging”.

Department of Psychology. Louisiana State University. 09-10

“Top-down and bottom-up interactions in auditory cortical processing”. Dept. of Cell

Biology and Anatomy. Louisiana State University. 10-09

“Influence of speech motor programming on auditory and motor cortex responsiveness”.

Israel Society for Neuroscience. Eilat, Israel. 12-08

“Mild Cognitive impairment and dementia: a multidisciplinary approach”. Invited

symposium presented at “Brain and behavior: Advances in Neuroimaging”

conference. Tulane University. 12-07

“Cortical processing of speech and sound location information in humans”. Center for

Cognitive Science. University of Louisiana, Lafayette. 10-07

“ERP correlates of attention and working memory”. Invited symposium presented

at International Organization of Psychophysiology meeting. Istanbul, Turkey.

08-06.

“Memory, aging, and early Alzheimer’s disease: A cognitive neuroscience perspective”.

Program in Neuroscience seminar. Tulane University. 10-04.

“Event-related potentials and mild cognitive impairment”. Invited symposium presented

at EEG and Clinical Neuroscience Society Conference. Irvine, CA. 09-04.

“Working Memory and Age-Related Changes in Brain Function”. Department of

Psychology. University of South Florida. 01-04.

“Working Memory and Age-Related Changes in Brain Function”. Department of

Psychology. Texas A&M University. 01-04.

“Working Memory and Age-Related Changes in Brain Function”. Department of

Psychology. Tulane University. 12-03.

“Neurophysiological analysis of processing speed reductions in aging and mild cognitive

impairment”. Invited symposium presented at EEG and Clinical Neuroscience

Society Conference. Houston, TX. 09-03.

“Working Memory and Age-Related Changes in Brain Function. Department of

Psychology and Kennedy Center. Vanderbilt University. 12-02.

“Event-related potentials and mild cognitive impairment”. Alzheimer’s Disease Research

Centers of California Annual Conference. Lake Arrowhead, CA. 10-02.

“Event-related potentials and mild cognitive impairment”. Invited symposium presented

at International Organization of Psychophysiology meeting. Montreal, Canada.

07-02.

“Cortical Interactions, Working Memory, and Age-related Changes in Brain Function”

School of Psychology, Georgia Institute of Technology. 01-02.

“Electrophysiological dynamics of working memory retrieval”. Perception Group,

Department of Cognitive Sciences, University of California, Irvine. 05-01.

“Electrophysiological changes in mild cognitive impairment and dementia”.

Co-presented with Arnold Starr at Grand Rounds, Department of Neurology,

University of California, Irvine. 10-00.

“Auditory cortical activity during working memory tasks”. Presented at “Things

Auditory” Group, Department of Neurobiology and Behavior, University of

California, Irvine. 05-00.

“Strategies for early diagnosis of Alzheimer’s disease using cognitive evoked potentials”.

Co-presented with Arnold Starr at Texas Tech University. 11-99

## Referee:

Grants: National Science Foundation, National Institutes of Health, Neurological

Foundation of New Zealand, Israel Science Foundation, Technology Foundation STW, Wellcome Trust, DFG (German Research Foundation), National Science Centre (Poland)

### Journals: Neurobiology of Aging; Clinical Neurophysiology; Journal of the American

### Medical Association (JAMA); Cerebral Cortex; European Journal of

### Neuroscience; Biological Psychology; Journal of Neuroscience; Neuroimage;

### Behavioural Brain Research; Journal of the Acoustical Society of America; Neurology; Psychophysiology; Neuroscience Letters; Audiology and Neurotology; Neuropsychology; Journal of Neurology Neurosurgery and Psychiatry; Journal of Psychophysiology; International Journal of Psychophysiology; Neuropsychologia; Macedonian Journal of Medical Sciences; European Journal of Psychological Assessment; Journal of Geriatric Psychiatry and Neurology; Human Brain Mapping; Journal of Alzheimer’s Disease; Journal of Clinical Neurophysiology; PLOS One; Aging, Neuropsychology and Cognition; Journal of Diabetes and its Complications; Frontiers in Psychology; Intelligence; Attention, Perception, & Psychophysics