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Education

- **Ph.D.**, Biological Sciences, 2013, Purdue University, West Lafayette, Indiana, USA
- **M.Sc.**, Biological Sciences, 2007, Birla Institute of Technology and Science, Pilani, India
- **B.E.**, Computer Science, 2007, Birla Institute of Technology and Science, Pilani, India

Appointments

- **Assistant Professor** (September 2020- current), Department of Communication Sciences and Disorders, University of Pittsburgh, Pittsburgh PA
- **Investigator** (October 2018 – August 2020), Eaton-Peabody Labs, Massachusetts Eye and Ear, Boston MA
- **Instructor** (September 2018 – August 2020), Department of Otolaryngology – Head and Neck Surgery, Harvard Medical School, Boston MA
- **Senior Research Fellow** (October 2015 – September 2018), Department of Otolaryngology – Head and Neck Surgery, Harvard Medical School, Mass. Eye and Ear Infirmary, Boston MA
- **Senior Research Fellow** (September 2014 – October 2017), Department of Otolaryngology – Head and Neck Surgery, Harvard Medical School, Mass. Eye and Ear Infirmary, Boston MA
- **Post-doctoral fellow** (February 2013- August 2014), Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN

Teaching Experience

- **Advanced Electrophysiology** (Instructor)
  CSD 2252 *Spring 2021 (upcoming), Department of Communication Sciences and Disorders, University of Pittsburgh*
- **Lab in Neurophysiology** (Teaching Assistant)
  BIOL 542N *Fall 2009, 2010, 2011, Department of Biological Sciences, Purdue University*
  Instructors: Dr. Donald Ready, Dr. Stephanie Gardner
- **Human anatomy and physiology** (Teaching Assistant)
  BIOL 204, *Spring 2008, 2010, 2012, Department of Biological Sciences, Purdue University*
  Instructor: Dr. David Bridges
- **Human anatomy and physiology** (Teaching Assistant)
  BIOL 203**,** *Fall 2007 Department of Biological Sciences, Purdue University*
  Instructor: Dr. David Bridges

Publications in peer-reviewed journals:

- Chen JX, Whitton JP, *Parthasarathy A,* Hancock KE, Polley DB. "Fluctuations in Subjective Tinnitus Ratings Over Time: Implications for Clinical Research" **Otology & Neurotology** (2020)
- *Parthasarathy A,* Pinto SR, Lewis RM, Goedicke WB, Polley DB. "Data-driven segmentation of audiometric phenotypes across a large clinical cohort" **Scientific Reports** (2020)
- Lewis RM, Jahn KN, *Parthasarathy A,* Goedicke WB, Polley DB. "Audiometric Predictors of Bothersome Tinnitus in a Large Clinical Cohort of Adults with Sensorineural Hearing Loss" **Otology & Neurotology** (2020)
- *Parthasarathy A,* Hancock KE, Bennett K, DeGruttola V, Polley DB. "Bottom-up and top-down neural signatures of disordered multi-talker speech perception in adults with normal hearing" **eLife** (2020)
- *Parthasarathy A,* Bartlett EL, Kujawa SG. "Age-related Changes in Neural Coding of Envelope Cues: Peripheral Declines and Central Compensation" **Neuroscience** (2019)
- *Parthasarathy A*, Herrmann B, Bartlett EL. "Aging alters envelope representations of speech-like sounds in the inferior colliculus." **Neurobiology of Aging** (2019)
- *Parthasarathy A*, Kujawa SG. "Synaptopathy in the aging cochlea: Characterizing early-neural deficits in auditory temporal envelope processing" **Journal of Neuroscience** (2018)
- Herrmann B, *Parthasarathy A*, Bartlett EL. "Aging affects dual encoding of periodicity and envelope shape in rat inferior colliculus neurons" **European Journal of Neuroscience** (2017).
- Coventry BS, *Parthasarathy A*, Sommer AL, Bartlett EL. "Hierarchical Winner-Take-All Particle Swarm Optimization social network for neural model fitting" **Journal of Computational Neuroscience** (2016)
- *Parthasarathy A*, Lai J, Bartlett EL. "Age-related changes in processing simultaneous amplitude modulated sounds assessed using envelope following responses" **Journal of the Association for Research in Otolaryngology** *(JARO)* (2016)
- Herrmann B, *Parthasarathy A*, Han E, Obleser J, Bartlett EL. "Sensitivity of rat inferior colliculus neurons to frequency distributions" **Journal of Neurophysiology** (2015)
- *Parthasarathy A,* Datta J, Luna-Torres JA, Hopkins C, Bartlett EL. "Age-related changes in the relationship between auditory brainstem responses and envelope following responses". **Journal of the Association for Research in Otolaryngology** *(JARO)* (2014)
- Rabang CF*, *Parthasarathy A**, Venkataraman Y, Fisher ZL, Gardner SM, Bartlett EL. "A computational model of inferior colliculus responses to amplitude modulated sounds in young and aged rats". **Frontiers in Neural Circuits** (2012) *(*shared first author)*
- *Parthasarathy A*, Bartlett EL. "Two-channel recording of auditory-evoked potentials to detect age-related deficits in temporal processing". **Hearing Research** (2012)
- *Parthasarathy A*, Bartlett EL. "Age-related auditory deficits in temporal processing in F-344 rats." **Neuroscience** (2011)
- *Parthasarathy A,* Cunningham PA, Bartlett EL. "Age-related differences in auditory processing as assessed by amplitude-modulation following responses in quiet and in noise" **Frontiers in Aging Neuroscience** (2010)

Links and citations can be found at - https://scholar.google.com/citations?user=4e8qQywAAAAJ&hl=en

Invited Talks

- "Markers and mechanisms of speech intelligibility", Massachusetts Eye and Ear Infirmary, **Harvard Medical School**, Boston MA, June 2019
- "Age-related changes in neural coding of envelope cues: peripheral declines and central compensation", **University of Pittsburgh**, Pittsburgh PA, April 2019
- "Age-related changes in neural coding of envelope cues: peripheral declines and central compensation", Midwinter meeting of the **Association for Research in Otolaryngology** (ARO), Baltimore MD, February 2019

- "Individual Variability in Temporal Fine Structure Processing Underlying Speech-in-noise Intelligibility in Listeners with "Normal" Audiograms"", Midwinter meeting of the **Association for Research in Otolaryngology** (ARO), Baltimore MD, February 2019
- "Using Envelope following responses to assess auditory temporal processing", **Akouos**, Boston MA, June 2018
- "Exaggerated temporal processing deficits as animals age after synaptopathic noise", Midwinter meeting of the **Association for Research in Otolaryngology** (ARO), San Diego CA, February 2018
- "Age-related changes in neural coding of envelope cues: peripheral declines and central compensation", **Workshop on Synaptopathy**, Boston University, Boston MA, December 2017.
- "Age-related changes in neural coding of envelope cues: peripheral declines and central **c**ompensation", **Aging and Speech Communication Conference**, University of Southern Florida, Tampa FL, November 2017.
- "Psychophysical and electrophysiological measures of temporal fine structure processing in normal-hearing listeners", **Massachusetts Eye and Ear Infirmary, Harvard Medical School**, Boston MA, April 2017
- "Synaptopathy in the aging cochlea: Characterizing peripheral deficits in complex sound processing", **Massachusetts Eye and Ear Infirmary, Harvard Medical School**, Boston MA, December 2016
- "Separating the contributions of the peripheral and central auditory system to age-related deficits in temporal processing", **Massachusetts Eye and Ear Infirmary, Harvard Medical School**, Boston MA, June 2014
- "Relationship between frequency following responses and other measures of auditory function in an animal model of aging", Midwinter meeting of the **Association for Research in Otolaryngology** (ARO), San Diego CA, February 2014
- "Relationship between frequency following responses and other measures of auditory function in an animal model of aging", **Aging and Speech Communication conference**, **Indiana University**, Bloomington IN, October 2013
- "Age-related changes in the neural encoding of sounds in the auditory pathway", **Neuroscience division**, **Eli Lilly**, Indianapolis IN, September 2013
- "Using Frequency following responses to examine age-related changes in auditory temporal processing", **University of Illinois at Urbana-Champaign**, Urbana- Champaign IL, May 2013.

Conference Posters:

- Lewis RM, *Parthasarathy A*, Polley DB "Audiological Predictors of Tinnitus in Patients at Massachusetts Eye and Ear", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore 2019
- Chen JX, Whitton JP, *Parthasarathy A*, Hancock KE, Polley DB "Audiometric Characteristics of Blast and Non-blast Patients with Chronic Subjective Tinnitus", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore 2019
- *Parthasarathy A*, Hancock KE, Polley DB "Neural and perceptual signatures of temporal fine structure processing underlying speech-in-noise intelligibility", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), San Diego, 2018
- *Parthasarathy A*, Whitton JP, Hancock KE, Polley DB "Psychophysical and Electrophysiological Measures of Temporal Fine Structure Processing in Normal-hearing Listeners", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore, 2017
- *Parthasarathy A*, Smith EY, Kujawa SG "Temporal Processing Deficits in Age-related Cochlear Synaptopathy", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore, 2017
- *Parthasarathy A*, Encina-Llamas G, Shin-Cunningham BG, Kujawa SG "Temporal Processing Deficits

Due to Noise-induced Synaptopathy Studied Using Envelope Following Responses", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore, 2017

- Encina-Llamas G, *Parthasarathy A*, Harte JM, Dau T, Kujawa SG, Shin-Cunningham BG, Epp B "Hidden Hearing Loss with Envelope Following Responses (EFR): The Off-frequency Problem", Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore, 2017
- Han E.X, *Parthasarathy A*, Bartlett E.L "Response profiles of inferior colliculus neurons in young and old rats", Annual meeting of the **Society for Neuroscience**, San Diego, 2016
- *Parthasarathy A*, Whitton J.P, Hancock K.E, Polley D.B "Psychophysical and electrophysiological measures of temporal fine structure processing in normal-hearing listeners", **Gordon Research Conference** on Plastic and Dynamic Auditory Systems, Lewiston, 2016
- Soverns C.S, *Parthasarathy A*, Bartlett E.L "Representations of voice onset timing cues in the inferior colliculus of young and aged rats", Annual meeting of the **Society for Neuroscience**, Chicago, 2015
- Coventry B.S, *Parthasarathy A*, Bartlett E.L, "Swarm intelligence meets the brain: Estimating cellular parameters related to auditory processing in young and aged rats using particle swarm optimization", Annual meeting of the **Society for Neuroscience**, Chicago, 2015
- *Parthasarathy A*, Bartlett E.L, "Age-related changes in the transformation of responses to amplitude modulated sounds in the inferior colliculus", Annual meeting of the **Society for Neuroscience**, Washington D.C, 2014.
- Coventry B, Han E, *Parthasarathy A*, Bartlett E.L, "In Vivo and Modeling Study of Age Related Changes in Frequency Tuning and Spontaneous Activity in the Inferior Colliculus, Mid-winter meeting of the **Association of Research in Otolaryngology** (ARO), Baltimore, 2014
- Coventry B, Han E, *Parthasarathy A*, Bartlett E.L, "A Study of Age Related Changes in Frequency Tuning and Synaptic Noise in the Inferior Colliculus: Recreating In Vivo Responses Using a Computational Model", **Aging and Speech Communication conference**, IU Bloomington, 2013
- *Parthasarathy A*, Lai J, Bartlett E.L, "Age-related changes in the neural population representation of amplitude modulation in the presence of overlapping maskers", Mid- winter meeting of The **Association of Research in Otolaryngology** (ARO), Baltimore, 2013
- *Parthasarathy A*, Bartlett E.L, "Age-related changes in auditory processing of speech- like stimuli assessed at population and cellular levels", Annual meeting of the **Society for Neuroscience**, and **Advancements and perspectives in auditory neurophysiology** (APAN), New Orleans, 2012
- *Parthasarathy A*, Bartlett E.L, "Age-related changes in auditory processing of speech- like stimuli assessed at population and cellular levels",
- *Parthasarathy A*, Gardner S.M, Bartlett E.L, "Multi-level analysis of age-related declines in auditory temporal processing", Mid-winter meeting of The **Association of Research in Otolaryngology** (ARO), San Diego, 2012
- Gardner S, Fisher Z, *Parthasarathy A*, Bartlett E.L, "Markers of inhibitory and excitatory synaptic function and their relationship to auditory evoked responses in young and aged animals" **Aging and Speech communication conference**, Bloomington 2011
- *Parthasarathy A*, Bartlett E.L, "Age related changes in auditory processing of speech- like stimuli assessed at the population level" **Aging and Speech communication conference**, Bloomington 2011
- Evenson C, *Parthasarathy A*, Bartlett E.L, "Effects of the volatile anesthetic isoflurane compared to the sedative Domitor on envelope following responses in young and aged animals" **Aging and Speech communication conference**, Bloomington 2011
- *Parthasarathy A*, Cunningham P.A, Bartlett E.L, "Age-related changes in auditory processing of modulation waveforms assessed at the population level " Midwinter meeting, **Association of Research in Otolaryngology** (ARO), Baltimore 2011
- *Parthasarathy A*, Cunningham P.A, Bartlett E.L, "Auditory processing in normal versus aged animals assessed at the population level under challenging listening conditions " **Society for Neuroscience** annual meeting, San Diego 2010

Awards:

- **Travel Scholarship,** Aging and Speech Communication conference. Bloomington IN, October 2013
- **Bilsland Dissertation Fellowship**, Fall 2012, Purdue University, West Lafayette, IN
- **Travel Scholarship,** Aging and Speech communication conference, Bloomington, IN, October 2011
- **David Ross Fellowship** for outstanding incoming students, 2008-2009, Purdue University, West Lafayette, IN
- **Second Place in the Biology Paper Presentation** competition, APOGEE 2005 at BITS, Pilani for "*Standardization of tests for the identification of diphtheroids from ocular isolates"*
- **Institute Merit-and-need Scholarship** from January 2004-December 2006, BITS Pilani, India

Memberships in professional organizations:

- **Society for Neuroscience** (SfN), *(2008-present)*
- **Association of Research in Otolaryngology** (ARO), *(2010 – present)*

Editorial Contributions:

- **Frontiers in Human Neuroscience** *(Review Editor)*
- **Frontiers in Neuroscience** *(Review Editor)*
- **Frontiers in Psychology** *(Review Editor)*
- **Journal of Neurophysiology** *(Ad-hoc)*
- **Neurobiology of Aging** *(Ad-hoc)*
- **Hearing Research** *(Ad-hoc)*
- **Journal of the Acoustical Society of America** *(Ad-hoc)*
- **Trends in Hearing** *(Ad-hoc)*
- **Scientific Reports** *(Ad-hoc)*
- **International Journal of Audiology** *(Ad-hoc)*
- **Frontiers in Cellular Neuroscience** *(Ad-hoc)*

References

Available upon request