

APARNA RAO

EDUCATION

Ph.D., Audiology, *Purdue University, West Lafayette, IN.*

M.S., Audiology, *Utah State University, Logan, UT.*

B.S., *Speech and Hearing, All India Institute of Speech and Hearing, University of Mysore, India.*

PROFESSIONAL CREDENTIALS

1995-Current	ASHA Certificate of Clinical Competence: Audiology
2015-Present	State of AZ Licensed Dispensing Audiologist
2007-Present & 1997-2005	State of Minnesota Licensed Audiologist
2005- 2007	State of Georgia Licensed Audiologist
2003-2004	State of Minnesota Licensed Hearing Instrument Dispenser
1994-1995	State of Indiana Licensed Audiologist

EMPLOYMENT

Aug 2015- Present	Clinical Associate Professor , <i>Department of Speech and Hearing Science, Arizona State University</i>
Aug 2007- May 2015	Assistant Professor (non-tenure track) , <i>Department of Speech-Language-Hearing Sciences, University of Minnesota</i>
Dec 2005- Jun 2007	Clinical Audiologist , <i>Department of Rehabilitation Services, Medical College of Georgia Health, Inc., Augusta, GA</i>
Dec 1996-Jul 2002	Instructor to Assistant Professor , <i>Department of Communication Disorders, St. Cloud State University, St. Cloud, MN.</i>

(Oct 2002- Nov 2005: During this period, I worked part-time as a clinical audiologist and also relocated to India for 1.5 years due to family obligations.)

JOURNAL PUBLICATIONS

Peer reviewed

Rao, A., Altus, B., Schroeder, R., Margolis, R. H. (November 2018). Comparison of thresholds obtained with the Radioear B-71 and B-81 bone-conduction transducers. Manuscript under revision.

Yu, L., Rao, A., Zhang, Y., Burton, P. C., Rishiq, D., Abrams, H. (2016). Neuromodulatory effects of auditory training and hearing aid use on audiovisual speech perception in elderly individuals. *Frontiers in Aging Neuroscience*, 9, <https://doi.org/10.3389/fnagi.2017.00030>

Rishiq, D., Rao, A., Koerner, T., Abrams, H. (2016). Can a commercially available auditory training program improve audiovisual speech performance? American Journal of Audiology, 25, 308-312.

Rao, A., Rishiq, D., Yu, L., Zhang, Y., Abrams, H. (2017). Neural Correlates of Selective Attention with Hearing Aid Use Followed by ReadMyQuips Auditory Training Program. Ear and Hearing, 38(1), 28-41.

Heekyung, H., Schlauch, R., & Rao, A. (2014). The effect of visual cues on scoring of clinical word recognition tests. American Journal of Audiology, 23, 385-893.

Rao, A., Tusler, L., & Formo, A. (2014). Comparison of 2f1-f2 and 2f2-f1 DPOAE microstructure in young and middle-aged adults. International Journal of Audiology, 53, 165-173.

Melara, R. D., Tong, Y., & Rao, A. (2012). Control of working memory: Effects of attention training on target recognition and distractor salience in working memory. Brain Research, 1430, 68-77.

Rao, A., & Long, G. (2011). Effects of aspirin on distortion product fine structure: Interpreted by the two-source model for distortion product otoacoustic emissions generation. Journal of the Acoustical Society of America, 129, 792-800.

Rao, A., Zhang, Y., & Miller, S. (2010). Selective listening of concurrent auditory stimuli: An event-related potential study. Hearing Research, 268, 123-132.

Tong, Y., Melara, R. D., & Rao, A. (2008). P2 enhancement from auditory discrimination is associated with improved reaction times. Brain Research, 1297, 80-88.

Melara, R.D., Rao, A., & Tong, Y. (2002). The duality of selection: Excitatory and inhibitory processes in auditory selective attention. Journal of Experimental Psychology: Human Perception and Performance, 28(2), 279-306.

Rao, A., Anderson, G. N., & Zack, J. (2002). A collaborative Early Hearing Detection and Intervention program for five rural hospitals. International Pediatrics, 17 (2), 102-106.

BOOK CHAPTER

Gravel., K., Rao, A., Steyermark, J., Schimmenti, L. (2016). Genetics of hearing loss. Book Chapter under review. Thieme Publishers.

*Rao, A., and *DeRuiter, M. (2012). Ethical Considerations for Preceptors and Supervisors. For Ethics in Audiology: Guidelines for Ethical Conduct in Clinical, Educational, and Research Settings, 2nd edition. Reston, VA: American Academy of Audiology. (*Both authors contributed equally.)

OTHER PUBLICATIONS

McDonald., E., Gravel, K., Rao, A. (2016). Effect of cochleovestibular malformation on surgical and auditory outcomes in pediatric cochlear implant recipients: A retrospective study using a web-based database. *Perspectives, SIG 9, 1 (1), 37-48.*

Rao, A. (February 2016). Review of the book *Adult Audiology Casebook*. Michael Valente and L. Maureen Valente. New York, NY: Thieme. (2015). 328 pp. ISBN: 978-1-60406-850-4. *Ear and Hearing*. Invited review.

DeRuiter, M., & Rao, A. (November 2012). Ethical considerations for the clinical supervisor. *SIGNatures: More Than Overseeing. The ASHA Leader*. Retrieve from: http://www.asha.org/Publications/leader/2012/121120/SIGNatures--More-Than-Overseeing.htm?utm_source=asha&utm_medium=newsletter&utm_campaign=leaderlive112112.

Miller, S., & Rao, A. (2012). Humanitarian Audiology: Overview and report of an Indian experience. *Perspectives on global issues in communication sciences and related disorders*, 2(1), 27-31.

Rao, A., Schimmenti, L.A., Vestal, E., Schnooveld, C., Ferrello, M., Ward, J., & Friedman, B. (2011). Genetic testing in childhood hearing loss: Review and case studies. <http://www.audiologyonline.com/articles/>

RESEARCH GRANTS

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|--------------------|---|
| Nov 2014 | Lions Hearing Foundation Research Grant (\$10,000)
Co-PI: Aparna Rao
Grant Title: Lions Children’s Hearing Center (LCHC) Pediatric Hearing Loss Database |
| Jul 2014- Aug 2015 | Starkey Hearing Technologies, Eden Prairie, MN (\$39,899).
PI:Aparna Rao
Study title: Can a commercially available auditory training program improve audiovisual performance? |
| Aug 2013-Aug 2014 | Starkey Hearing Technologies, Eden Prairie, MN (\$30,890).
PI:Aparna Rao
Study title: Event-related potential outcomes with “Read my quips” aural rehabilitation training program |
| Dec 2010-Dec 2012 | Grant-in-aid, University of Minnesota (\$18,880)
PI:Aparna Rao
Study title: Effects of medial olivocochlear bundle activation on cortical processing |

1998-1999 St. Cloud State University faculty research grant (\$3,600)
PI:Aparna Rao
Study title: Evaluation of newborn hearing screening programs in urban and rural settings

OTHER GRANTS

Fall 2001 St. Cloud State University faculty grant to address cultural diversity (\$450)

Fall 1999 St. Cloud State University Foundation grant to address continuing education options for speech-language pathologists (\$450)

Fall 1998 CentraCare Health Foundation Grant to initiate newborn hearing screening programs in central Minnesota (\$16,000)

RESEARCH PRESENTATIONS

Altus, B., Rao, A., Schroeder, R., Williams, E. J., Margolis, R. H., McBride, I. (April 2018). Reference Equivalent Threshold levels for two new audiometric transducers. Poster presented at the annual convention of the American Academy of Audiology, Nashville, TN.

Huang, A., Jensen, S., Margolis, R. H., Williams, E., McBride, I., Rao, A., Saly, G. L., Wilson, R. H. (April 2017). Speaker gender effects on word recognition. Poster presented at AudiologyNOW!, Indianapolis, IN. (*Received Poster Award for Excellence.*)

Margolis, R. H., Williams, E., Huang, A., Jensen, S., McBride, I., Rao, A., Saly, G. L., Wilson, R. H. (March 2017). Perception of backward speech. Poster presented at American Auditory Society meeting, Scottsdale, AZ.

Yu, L., Rao, A., Zhang, Y., Burton, P. C., Rishiq, D., Abrams, H. (April 2016). Changes in cortical functional connectivity for audiovisual speech perception associated with hearing aid use with or without auditory training. Poster presented at Cognitive Neuroscience Society meeting, New York, NY.

Taylor-Alonso, P., Rao, A., Fletcher, T., Hentges, J., Haas-Camitsch, K. (April 2016). Hearing health in Mexico: Screening statistics from a community-based program. Poster presented at the AudiologyNOW!, Phoenix, AZ. (*Received Poster Award for Excellence.*)

Rishiq, D., Rao, A., Koerner, T., & Abrams, H. (March 2016). Can a commercially available auditory training program improve audiovisual performance? Poster presented at American Auditory Society meeting, Scottsdale, AZ.

McDonald, E., Gravel, K., Ward, J., Erickson, H., Rao, A. (March 2015). Cochlear implant outcomes in pediatric patients with cochleovestibular malformations. Poster presented at the AudiologyNOW!, San Antonio, TX.

Rao, A., Rishiq, D., Yu, L., Zhang, Y., Abrams, H. (March 2015). Speech perception and electrophysiological outcomes with ReadMyQuips auditory training program. Poster presented at American Auditory Society meeting, Scottsdale, AZ.

Han, H., Schlauch, R., Yu, J., Rao, A. (March 2015). Explanation of SRT-PTA discrepancy in functional hearing loss. Poster presented at American Auditory Society meeting, Scottsdale, AZ.

Thibodeau, L., Muscato, N., Baxter, J., Rao, A., Sullivan, J. (September 2014). Implementing Intensive Auditory Rehabilitation Programs in University Settings. Poster presented at the annual meeting of the Academy of Rehabilitative Audiology, Philadelphia, PA.

Rao, A., Rishiq, D., Yu, L., Zhang, Y., Abrams, H. (August 2014). Auditory event-related potential outcomes with ReadMyQuips auditory training program. Poster presented at the International Hearing Aid Conference, Lake Tahoe, CA.

Litwinchuk, A., & Rao, A. (April 2014). DPOAE fine structure in young adults with or without a history of noise exposure. Poster presented at the undergraduate research symposium, University of Minnesota, Minneapolis, MN. (Mentored poster)

Han, H., Schlauch, R., Rao, A. (March 2014). Effect of visual cues on scoring of speech tests. Poster presented at American Auditory Society meeting, Scottsdale, AZ.

Rao, A., Koerner, T., Madsen, B., Zhang, Y. (March 2013). The role of olivocochlear efferents in auditory perception. Poster presented at American Auditory Society meeting, Scottsdale, AZ.

Yang, S., Rao, A., Zhang, Y. (April 2012). An event-related potential study of speech perception in noise in bilinguals. Poster presented at the undergraduate research symposium, University of Minnesota, Minneapolis, MN. (Mentored poster)

Rao, A., Tusler, E., & Formo, A. (November 2011). Age-related changes in 2f1-f2 and 2f2-f1 DPOAE microstructure. Oral presentation at the annual convention of the American Speech-Language-Hearing Association, San Diego, CA.

Tusler, E. M., Formo, A., & Rao, A. (April 2010). Effects of aging on DPOAE microstructure and its components. Poster presented at the Annual convention of the American Academy of Audiology, San Diego, CA.

Rao, A., Zhang, Y., & Miller, S. (March 2009). The influence of competing stimuli on auditory selective attention: A behavioral and electrophysiological study. Poster presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Zack, J., Rao, A., & Anderson, G. N. (November 2000). Early Hearing Detection and Intervention: A model rural hospital program. Poster presented at the annual convention of the American Speech-Language-Hearing Association, Washington, DC.

Rao, A., Anderson, G. N., & Zack, J. (July 2000). Using JCIH 2000 benchmarks to identify follow-up issues in an Early Hearing Detection and Intervention program. Poster presented at the National Symposium on Hearing in Infants. Denver, CO.

Melara, R. D., Rao, A., & Tong, Y. (October 1999). Behavioral and ERP effects of attentional competition, training, and transfer in auditory selective attention tasks. Poster presented at the 39th annual meeting of the Society for Psychophysiological Research, Granada, Spain.

Rao, A., & Melara, R. D. (February 1997). Plasticity of auditory selective attention in adults: A behavioral and physiological analysis. Paper presented at the mid-winter meeting of the Association for Research in Otolaryngology, St. Petersburg, FL.

Rao, A., Long, G., Narayan, S.S., & Dhar, S. (February 1996). Changes in temporal characteristics of TEOAEs and the fine-structure of DPOAEs with aspirin consumption. Poster presented at the mid-winter meeting of the Association for Research in Otolaryngology, St. Petersburg, FL.

Rao, A., Von Almen, P., & Blair, J.C. (November 1992). Validation of the use of the Rapid Speech Transmission Index in elementary school classrooms. Poster session presented at the annual convention of the American Speech- Language-Hearing Association, San Antonio, TX.

PROFESSIONAL PRESENTATIONS

Gravel, K., Schimmenti, L, Rao, A., Steyermark, J. (April 2017). A multidisciplinary team approach to hearing genetics. Learning module presented at AudiologyNOW!, Indianapolis, IN.

Thibodeau, L., Muscato, N., Baxter, J., Rao, A., Sullivan, J. (March 2015). Teaching Auditory Rehabilitation: A model Program with shared Resources. Learning module presented at AudiologyNOW!, San Antonio, TX.

Shoup, A., & Rao, A. (2010). Ethics and Research. Two-part webinar presented for the American Academy of Audiology, Reston, VA.

Rao, A., & Margolis, R. (2009). Ethics and Audiology. Round-table presentation at the Spring convention of the Minnesota Speech and Hearing Association, Minneapolis, MN.

Garner, G., Margolis, R., & Rao, A. (2009). Ethical equilibrium: The current ethical landscape. Presented at the Minnesota Academy of Audiology convention, Minneapolis, MN.

Rao, A. (2008). Introduction to genetics. Lecture presented at the California Academy of Audiology Annual Conference, Sacramento, CA.

Rao, A., Lovell, C., & Flannery, D. (2007). Genetics and Hearing Loss. Learning module presented at the annual convention of the American Academy of Audiology, Denver, Colorado.

Rao, A. (2006). Diagnosis of hearing loss in infants and children. Lecture presented at Mini-Medical School, a community outreach program sponsored by the Division of Continuing Education and School of Medicine at the Medical College of Georgia, Augusta, GA.

Rao, A., & Anderson, G. N. (2001). Planning and implementation of Early Hearing Detection and Intervention programs. Workshop sponsored by Everest Biomedical Instruments, St. Louis, MO.

Rao, A., Anderson, G. N., & Zack, J. (2000). Tailoring Early Hearing Detection and Intervention programs to urban and rural settings. Paper presented at the international conference on newborn hearing screening, diagnosis and intervention. Milan, Italy.

Rao, A., Anderson, G. N., & Zack, J. (2000). Early Hearing Detection and Intervention: An overview of two models. Paper presented at the 15th international conference of Self Help for the Hard of Hearing, St. Paul, MN.

Rao, A. (2000). Assessment and management of central auditory processing disorders in children. Workshop sponsored by the Benton-Stearns Educational District, St. Cloud, MN.

Rao, A. (1999). Management of central auditory processing disorders in children. Paper presented at the 15th annual day of excellence of the Southwest/ West central Service cooperative regional special needs project, Marshall, MN.

UNIVERSITY CREDIT COURSES TAUGHT

Arizona State University (2015-Present)

Audiology (Clinic preceptorship)
Auditory Evoked Potentials
Physiological measurements in hearing
Lab section for Basic Assessment and Amplification I
Instrumentation and Hearing Conservation
Advanced Audiometry

University of Minnesota (2007-Present)

Graduate Courses

Advanced Rehabilitative Audiology
Cochlear Implants
Hearing Loss in Children: Diagnosis (Pediatric Audiology: Diagnostics)
Lab section for Audiologic Assessment II (Physiological measures)
Clinical Foundations in Audiology (Clinical teaching)
Coordinated Grand Rounds for Au.D. Students
Ethics module as part of the Professional Issues and Counseling course

Undergraduate Courses

Hearing Measurement and Disorders
Rehabilitative Audiology

St. Cloud State University (1997-2002)

Graduate Courses

Audiology Clinic Practicum

Assessment and Management of Auditory Processing Disorders in Children

Finding and Evaluating Speech-Pathology Resources on the Internet

Advanced Audiology for Speech-Language Pathologists

Undergraduate Courses

Speech Science

Hearing Science

Hearing Measurement

Aural Rehabilitation

Introduction to Communication Disorders

Purdue University (1992-1996)

Undergraduate Lab Courses

Diagnostic Audiology

Aural Rehabilitation

Graduate Lab Course

Auditory Evoked Potentials

ADVISOR

Charais, E. (2012). Knowledge and attitudes of otitis media risk factors: Audiologists and doctor of audiology students. Magna thesis. (co-advised with Dr. Peggy Nelson, Department of Speech-Language-Hearing Sciences, University of Minnesota)

Rynders, L. (2011). Enlarged vestibular aqueduct and pediatric hearing loss. Summa thesis, University of Minnesota. (co-advised with Dr. Robert Schlauch, Department of Speech-Language-Hearing Sciences, University of Minnesota)

Zack, J. (2001). Development of Effective Follow-up Procedures for a Model Early Hearing Detection and Intervention Program. Master's thesis, St. Cloud State University.

Undergraduate research projects (fall 2009 & spring 2010, spring 2012, spring 2014)

THESIS AND DISSERTATION COMMITTEE MEMBER

2015 Ph.D. preliminary exam committee member, Koerner, T.

2015 M.A. Thesis committee member, Diamond, E.

2014 M.A. Thesis committee member, Heinzen, C.

2012 M.A. Thesis committee member, Thompson, D.

2011 Ph.D. preliminary exam and dissertation committee member, Anderson, L.

HONORS AND AWARDS

- 2007-2008 Advancing Academic and Research Careers (AARC) award, American Speech-Language-Hearing Association.
- 1999 “Spirit of Caring” award, Centracare Health Foundation, St. Cloud, MN, (Award for initiating Early Hearing Detection and Intervention Programs in Central Minnesota)
- 1996-1997 *NSSLHA Award*, Outstanding Teaching Assistant, Purdue University.

DEPARTMENTAL DUTIES

- May 2016-May 2018 Comprehensive examination committee, Arizona State University
- Aug 2016-Present Continuing Education committee, Arizona State University
- Aug 2015-Present Au.D. comprehensive exams committee, Arizona State University
- May 2008-May 2015 Examining Committee, M.A. Au.D. and Ph.D. students, University of Minnesota
- May 2011-Present Faculty advisor, University of Minnesota Chapter of the Student Academy of Audiology, University of Minnesota
- Spring 2009, 2012 Member, Admissions Committee, University of Minnesota
- Fall 2008 Member, Scholarship committee, Dept. of Speech-Language-Hearing Sciences, University of Minnesota
- Fall 2007 Member, Committee on faculty leave, Dept. of Speech-Language-Hearing Sciences, University of Minnesota
- Sept 2000-Jul 2002 Graduate Director, St. Cloud State University
- Aug 1999-Jul 2002 Graduate advisor, St. Cloud State University
- Aug 1999-Jul 2002 Faculty advisor for the SCSU Chapter of the National Students’ Speech- Language-Hearing Association, St. Cloud State University
- Aug 2000-Jul 2002 Scholarships Coordinator, St. Cloud State University
- Aug 1999-Jul 2002 Member, Retention/Promotion/Tenure Committee, St. Cloud State University
- Aug 2000-May 2001 Member, University committee for “Excellence in Leadership” awards, St. Cloud State University

PROFESSIONAL SERVICE AND EXPERIENCE

- Jan 2018- Present Editorial review board, American Journal of Audiology
- Aug 2011-Present Ad Hoc Reviewer, American Journal of Audiology, Journal of the American Academy of Audiology, and ASHA Perspectives

- Nov 2014 Reviewer of poster abstracts for the American Auditory Society meeting, March 2015.
- May 2014-Present Committee member, ASHA SIG 9, Hearing Loss in Childhood. Coordinator since Jan 2015. Coordinator duties involve overseeing all activities of SIG 9 with help from the coordinating committee, professional development manager and editor. Also responsible for collaborating with other organizations such as Education Audiology Association and other ASHA SIGs with interest in childhood hearing loss.
- Dec 2013 Reviewer of presentations for AudiologyNOW! 2014 (Learning modules).
- Jun 2013 Provided consultation and guidance to three Au.D. students to develop and implement a humanitarian hearing screening program in Guanajuato, Mexico. Humanitarian grant received from the International Hearing Foundation (\$6,500). Participated in project in Mexico, June 15-30, 2013.
- Jul 2012-May 2013 Participant, ASHA Leadership Development Program. Project: Audiology mentorship program for 1st and 2nd Au.D. graduate students. This is a collaborative program involving students in the Department of Speech-Language-Hearing Sciences and professional members of the Minnesota Academy of Audiology.
- Sept 2010-May 2011 Member, American Academy of Audiology Subcommittee on Childhood Hearing Screening. My contribution was the section on otoacoustic emissions. Evidence-based recommendations for the use of otoacoustic emissions as a screening tool in early-childhood and school-age children are presented. Document may be accessed at:
<http://www.audiology.org/resources/documentlibrary/Documents/ChildhoodScreeningGuidelines.pdf>
- Jan 2011-Jun 2011 Member, American Academy of Audiology gold standard summit sub-task force #1, Member, Ethical Practices Committee, American Academy of Audiology, July 2007-June 2010
- Spring 2002 Audiology Coordinator, Spring convention of the Minnesota Speech and Hearing Association, St. Cloud, MN.
- Aug 1998-Aug 1999 Member, Continuing education committee, Minnesota Academy of Audiology.

PROFESSIONAL AFFILIATIONS

American Speech-Language-Hearing Association
American Auditory Society
American Academy of Audiology

CV of Aparna Rao

Academy of Rehabilitative Audiology
Minnesota Academy of Audiology
Indian Speech-Language-Hearing Association