

## AYASAKANTA ROUT

Program Director and Professor of Audiology  
 Director, Hearing Aid Research Laboratory  
 Department of Communication Sciences & Disorders  
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### EDUCATION

**Ph.D. in Audiology**, Purdue University, West Lafayette, IN. Research interests: Signal processing in hearing aids, benefits from amplification, and speech perception in individuals with hearing loss. Dissertation: *Effect of Spectral Enhancement on the Speech Recognition Performance of Normal Hearing and Hearing Impaired Individuals*. 2006.

**M.Sc. in Speech & Hearing**, All India Institute of Speech and Hearing, University of Mysore, India. Area of research: Speech perception. Masters Thesis: *Perception of Monosyllabic Words by Indian Children*. 1996.

**B.Sc. in Audiology & Speech Therapy**, Ali Yavar Jung National Institute for the Hearing Handicapped, University of Bombay, India. 1992.

### EMPLOYMENT

2020 – Present	Professor, James Madison University, Harrisonburg, VA
2012 – 2020	Associate Professor (Tenured), James Madison University, Harrisonburg, VA.
2011 – Present	Program Director of Audiology, James Madison University, Harrisonburg, VA.
2005 – 2012	Assistant Professor, James Madison University, Harrisonburg, VA. (Primary responsibilities included teaching doctoral level courses, conducting research, mentoring graduate students, and leading the doctoral program in audiology)
2001 – 2005	Assistant Professor of Audiology, Ohio University, Athens, OH. (Taught graduate and undergraduate courses in audiology, conducted research, and served as academic advisor for undergraduate students)
1996 – 2001	Graduate Research / Teaching Assistant in Computer Engineering and Audiology, Purdue University, West Lafayette, IN.
1992 – 1994	Clinical Audiologist, Tripolia Hospital, Patna, India. (Provided audiologic diagnostic and rehabilitative service, established newborn hearing screening program)
Jun – Sep 1992	Assistant Audiologist, Training Center for the Teachers of the Deaf, Bhubaneswar, India. (Provided clinical service primarily to a pediatric population)

## **HONORS AND AWARDS**

- James Madison University Provost Award for Excellence in Graduate Advising, 2019
- Nominated for the James Madison University College of Integrated Sciences and Technology Outstanding Teacher Award, 2010-11 and 2011-12.
- Nominated for the James Madison University Alumni Association Distinguished Faculty Award, 2010-11.
- Ida Institute Fellow, Copenhagen, Denmark, March 2010.
- Ida Institute Academic Panel Fellowship, Gainesville, FL, October 2009.
- Nominated for the College of Integrated Sciences and Technology Outstanding Junior Faculty Award, 2008.
- Successful Grant Writing Workshop Travel Award, Deafness Research Foundation & NIDCD, March 2006.
- Purdue Research Foundation Fellowship, 2000, 2001.
- International Hearing Aid Research Conference (IHCON), Student Scholarship, 2000.
- American Academy of Audiology, Outstanding Student Investigator Award, 1999.
- American Speech-Language and Hearing Foundation, Science and Research Career Forum Travel Fellowship, 1999.
- Annual Academic Excellence Scholarship, All India Institute of Speech and Hearing, Mysore, 1995, 1996.
- Outstanding Podium Presentation in Audiology, Annual Convention of the Indian Speech-Language & Hearing Association, Calcutta, India, 1995.
- Special Recognition Award for establishing Universal Hearing Screening program at Tripolia Hospital, Patna, India, 1994.

## **PROFESSIONAL SERVICE / ADMINISTRATIVE EXPERIENCE**

### **DIVERSITY, EQUITY AND INCLUSION RELATED ACTIVITIES / WORKSHOPS**

- Founding member, JMU Asian Pacific Islander Desi American (APIDA) Faculty Caucus
- JMU CHBS L.E.A.D. Fellowship (Academic Year 21-22)- Bi-weekly leadership development activities with a DEI lens
- JMU CHBS Leadership Diversity Training Workshop (Washington Consulting Group), May 21, 2021; Aug 11, 2021; Sep 13, 2021.
- Implicit Bias in Recruitment (Dr. B.J. Bryson), Oct 11, 2021
- Implicit Bias in Hiring (Dr. David Owusu-Ansah) Oct 8, 2021
- JMU Graduate School Holistic Admission Review workshop (Kira Talent) 2018 (in-person), 2021 (virtual asynchronous)
- Universal Design of course syllabi- featured in JMU video and website- Oct 2021
- Mentored former PhD student to apply and receive the American Speech, Language and Hearing Association (ASHA) award for Minority Student Leadership Program
- JMU Diversity conference 2016, 2017, 2018, 2019

## **COMMUNITY ENGAGEMENT / MEDIA OUTLET**

- USA Today (upcoming) – Apple AirPods 3<sup>rd</sup> Gen as customizable hearing aids
- WebMD – Over the Counter hearing aids
- WebMD – Pediatric hearing loss and hearing aids
- AARP Magazine – hearing aid technology and consumer protection issues
- Erickson Living Magazine – general issues related to hearing loss
- WHSV TV – Over the counter hearing aids
- JMU Breeze – JMU audiology program

## **SELECTED PROFESSIONAL DEVELOPMENT WORKSHOPS/SEMINARS**

- ASHA University Day on Interprofessional education, Rockville, MD, Mar 2017, 2019
- ASHA AuD education summit, Rockville, MD, 2016
- Scholarly Writers Lockdown, James Madison University, Fridays, Fall 2011, 2012
- Scholarly Writers Boot Camp, James Madison Univ., May 9-12, 2011
- Deep Learning and Knowledge Retention, James Madison Univ., May 12, 2011
- Information Literacy and Technology Workshop, James Madison Univ., May 6-8, 2008
- James Madison University SRI Innovation Model Workshop, 8:00-5:00, May 27, 2008
- Value Factor Analysis Workshop (SRI Innovation Model), 2:00-5:00, August 06, 2008
- Faculty Workshop on Teaching Amplification, Park City, Utah, October 5-8, 2006

## **FACULTY SEARCH COMMITTEE**

- Search Committee, Dept of Health Professions tenure track, AY 2021-22
- Chair, Search committee for audiology clinical faculty, AY 2016-17
- Search committee for Director of Clinical Education, AY 2014-15
- Chair, search committee for tenure track faculty position AY 2013-14
- Search committee for tenure track faculty position AY 2010-11, 15-16

## **PROMOTION AND TENURE EVALUATION**

- Internal promotion and tenure evaluation for five faculty members (Associate and Full Professor)
- External promotion dossier evaluator: University of Georgia, Purdue University, Oklahoma University Health Sciences Center, University of British Columbia, University of South Florida, and Lamar University.

## **GRANT REVIEW**

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|----------------|--|
| 2019 - present | Department of Veteran Affairs Rehabilitation Research & Development (VARRD) Career Development Review Panel, Washington, DC.     |
| 2020 - present | Federal Advisory Committee Act (FACA) Scientific Committee Member-Department of Veteran Administration RRD (3-year appointment). |

## **ADVISORY BOARD / TASK FORCE**

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|------------|--|
| 2017- 2018 | ASHA Task Force on Standardization of the Audiology Externship   |
| 2014-2016  | Commonwealth of Virginia Department of Health Professions Ad-Hoc committee on scope of practice (Cerumen management) in Audiology. |
| 2013-2018  | Member of Advisory Board, Audiology India.   |

**JOURNAL EDITORIAL / REVIEW**

2019- present	Ad-hoc reviewer, International Journal of Audiology
2006-present	Assistant Editor, Journal of the American Academy of Audiology
2016-present	Review board member, JAIISH
2006-present	Ad-Hoc Reviewer, Thieme Medical publication
2003-2004	Senior Editor, Trends in Amplification
2000-present	Ad-Hoc Reviewer, American Journal of Audiology

**CONFERENCE PLANNING**

2010-present	Program Committee, Ruth Symposium, James Madison University
2009	Program Committee, JMU Innovations in Clinical Communication Sciences Fall Conference (Exhibitors and Sponsors)
2006	AAA Program Committee (Research Podium and Posters, Chair: Todd Ricketts, PhD)
2005	AAA Program Committee (Research Podium and Posters, Chair: Sheri Jones, PhD)
2004	AAA Program Committee (Instructional Courses, research podium and posters, Chair: Patrick Feeney, PhD)

**UNIVERSITY SERVICE**

2014-present	Appointed Member, International Engagement (CGE Council), JMU
2015-2018	International Students and Scholars engagement task force, JMU
2011- present	University Graduate Council, James Madison University
2002 – 2003	Au.D. Program Proposal Development Committee, Ohio University

**COLLEGE LEVEL COMMITTEES**

Fall 2021-	CHBS Graduate Curriculum Committee, JMU
Fall 2010 – 2011	CISAT Undergraduate Curriculum Committee, JMU
Fall 2008 – 2011	Dean's Faculty Advisory Committee, James Madison University

**SERVICE TO THE DEPARTMENT**

Fall 2018-	Departmental Fixed Assets Coordinator
Fall 2014-2018	Student Academy of Audiology, Chapter Advisor
Fall 2015-2019	Departmental Personnel Advisory Committee, Member
Sum 2011-present	Program Direction of Audiology, JMU
Sum 2007-present	Ph.D. Council, Dept. of CSD, James Madison University
Fall 2005-present	Au.D. Council, Dept. of CSD, James Madison University
Fall 2006- 2014	Undergraduate Council, Dept. of CSD, James Madison University
Fall 2006-2010	Undergraduate advisor, Dept. of CSD, James Madison University
Fall 2007-2009, 2021	Library Faculty Liaison, Dept. of CSD, James Madison University
Fall 2005-present	Consultant, Applied Audiology Lab (Clinic), James Madison University
Fall 2005-2006	Chair, Research Colloquium Committee, Ohio University

## PH.D. MENTORING

1. Lakshmi Magudilu Srishyla Kumar (Aug 2020). Measuring listening effort using physiological, behavioral and subjective methods in normal hearing subjects: Effect of Signal to Noise Ratio and Presentation Level. Doctor of Philosophy (Ph.D.). **Current position: Tenure-track Assistant Professor**, Department of CSD, Oklahoma University Health Sciences Center, Oklahoma City, OK.
2. Preeti Pandey (Anticipated graduation May 2024)
3. Husna Firdose (Anticipated graduation May 2024)

## AU.D. DISSERTATION CHAIR (CLINICAL DOCTORATE)

1. Ariana Morris (anticipated completion May 2022)
2. Abigail E. Compton (May 2020). Speech Understanding and Listening Effort in Noise with a New Speech Processing Algorithm. Doctor of Audiology (Au.D.).
3. Sara F. Wagner (May 2020). The Impact of Hair Covering Hearing Aid Microphones on Directional Performance. Doctor of Audiology (Au.D.).
4. Dakota Sharp (May 2019). Subjective difference between premium and mid-level digital hearing aids.
5. Leanne M. Browning (May 2019). Audiologists' Preferences in Programming Cochlear Implants: A Preliminary Report. (Co-chair)
6. Chelsea C. Barry (May 2018). Objective differences between premium and mid-level digital hearing aids.
7. Corinne N. O'Shaughnessy (May 2018). Development of a questionnaire to assess attitudes toward hearing aids.
8. Hollis T. Leidy (May 2017). The effect of workplace noise exposure on reaction time.
9. Haley A. Athey (May 2016). The effects of auditory fatigue on reaction time in normal hearing listeners at different signal to noise ratios.
10. Kaitlyn A. Sabri (May 2015). Evaluation of speech intelligibility and sound quality with a frequency compression algorithm.
11. Beth I. Hulvey (May 2015). The effects of increased listening effort on reaction time of normal hearing listeners.
12. Haley A. Athey (May 2016). The effects of signal to noise ratio on reaction time in nonsense syllable identification tasks.
13. Elizabeth A. Ripley (May 2014). The effects of auditory and visual distracters on the toleration of background noise in hearing-impaired listeners.
14. Lauren M. Shastany (May 2013). The effects of auditory and visual distracters on the toleration of background noise in normal hearing listeners.
15. Justine A. McDermott (May 2013). The effects of various modes of feedback on preferred iPod listening levels.
16. Sara A. Conrad (May 2012). Perceived occlusion and comfort in receiver-in-the-ear hearing aids.
17. Jennifer S. Mundorff (May 2011). The Effect of Speaking Rate and Style on Acceptable Noise Level in Listeners with Hearing Loss.

18. Sheena K. Jessee (May 2011). Subjective and Objective Analysis of Wind Noise Reduction Algorithms in Hearing Aids.
19. Melissa A. McNichol (May 2010). The Effect of Audiovisual Cues on Speech Understanding in Adverse Listening Environments
20. Phillip K Bond (May 2010). Comparison of Speech understanding and sound quality through microphone and telecoil inputs.
21. Sarah K. Sporck (May 2010). Effect of Real Ear Verification on Hearing Aid Benefit and Satisfaction.
22. Jennifer J. Goldman (May 2009). The effects of testing method, alternate types of target stimuli and attention on Acceptable Noise Level (ANL) scores in normal hearing listeners. Doctoral Dissertation Submitted to James Madison University.
23. Sara L. Billari (May 2009). Outcome Measures of Audient Foundation Hearing Aids at James Madison University Clinic. Doctoral Dissertation Submitted to James Madison University.
24. Lori E. Hanline (May 2008). Subjective and Objective Evaluation of Noise Reduction in Digital Hearing Aids. Doctoral Dissertation Submitted to James Madison University.

#### **UNDERGRADUATE HONORS THESIS SUPERVISION**

1. Sarah G. LaPrelle (anticipated completion May 2022). A comparative analysis of an internet-based hearing test to the standard clinical audiological evaluation – air and bone conduction.
2. Samantha Casilli (anticipated completion May 2022). A comparative analysis of an internet-based hearing test to the standard clinical audiological evaluation – self reported hearing handicap.
3. Rachel Pittard (2015). Listening fatigue and response time in normal hearing listeners.
4. Ranajit Prasad Parida (2010). Adaptation of the Abbreviated Profile of Hearing Aid benefit (APHAB) to Hindi. Master's Thesis in Audiology, Institute of Health Sciences, India.
5. Rebecca Lynn Jump (2004). Verification of Programmable Parameters with 2-cc Coupler Measurements. Undergraduate Honors Thesis Submitted to Ohio University.

#### **DOCTORAL DISSERTATION (COMMITTEE MEMBER)**

1. Bonnie Purtil (Anticipated graduation May 2022)
2. Taylor Arbogast (Anticipated graduation May 2022)
3. Lara R. Leggio (Anticipated graduation May 2023)
4. Victoria Whitney (2021). Influence of musicianship, socioeconomic status, and working memory on children's speech recognition in noise. (Chair: Yingjiu Nie)
5. Harley Wheeler (2020). Music and speech perception in pre-lingually deafened young listeners with cochlear implants - A preliminary study using sung speech. (Chair: Yingjiu Nie)
6. Victoria Andre (2019). Music and Speech Perception in Children Using Sung Speech: Effects of Neurocognitive Factors. (Chair: Yingjiu Nie)
7. Michael Morikawa (2018). Melodic Contour Identification and Speech Recognition by School-Aged Children. (Chair: Yingjiu Nie)
8. Mandy M. Robertson (2016). Middle ear reflectance measures in young normal listeners. (Chair: Brenda M. Ryals)
9. Allison G. McGrath (2016). Middle ear reflectance measures in the elderly. (Chair: Brenda M. Ryals)

10. Lindsay A. Parr (2012). Outcome Assessment of three patient counseling methods in Audiologic Rehabilitation. (Chair: Brenda M. Ryals)
11. Katharine A. Belzner (2010). DPOAE two-source separation in adult Japanese quail (*Coturnix coturnix japonica*). (Ph.D. Dissertation, Chair: Brenda M. Ryals).
12. Carrie Ann Hambrick Knox (May 2009). The Effect of Visual Feedback of Sound Intensity on Preferred iPod Listening Levels. (Chair: Dan C. Halling)
13. Lauren E. McIntosh (2010). Developing an Animal Model of Tinnitus. (Chair: Lincoln C. Gray)
14. Ashleigh McCombs (2007). Monaural vs. Binaural Stimulation Effects on the Multiple-Frequency Auditory Steady-State Response. (Chair: Roger A. Ruth)
15. Christopher C. France (2007). The Effect of Electrode Placement and Gender on the Stacked Auditory Brainstem Response. (Chair: Roger A. Ruth)
16. Jeannette H. Sadler (2007). The Effect of Body Position and Visual Fixation on the Vestibular Myogenic Potential. (Chair: Jonathan Spindel)
17. Heather L. Bennett (2007). Structural Features of Hair Bundle Polarity during Hair Cell Regeneration. (Chair: Brenda M. Ryals)
18. Dana C. Fein (2007). A Comparative Study of Responses Obtained by Supine and Prone Vestibular Caloric Testing. (Chair: Jonathan Spindel)
19. Kara Norcross (2007). Perceptions of Annoyance are Personal but Replicable. (Chair: Lincoln C. Gray)
20. English R. King (2007). In Search of Conductive Hearing Loss: A Comparison of Behavioral Audiometric Testing, ASSR, & SAL Technique. (Chair: Roger A. Ruth)
21. Rebecca J. Price (2007). Vestibular-Evoked Myogenic Potentials: The Influence of Biofeedback on Voluntary Tonic EMG Level for Clicks and Tone-burst Stimuli for Normal Hearing Females. (Chair: Jonathan Spindel)

#### **PROFESSIONAL AFFILIATIONS**

- Ida Institute fellow/academic panel member, Copenhagen, Denmark.
- Technical Expert/Consultant, Frye Electronics, Tigard, OR.
- American Academy of Audiology
- Engineering Projects in Community Service (EPICS), Dept. of Electrical & Computer Engineering, Purdue University. Project Partner and Advisor (1998-2001).

#### **PROFESSIONAL LICENSURE**

- Commonwealth of Virginia Hearing Instrument Specialist License. Department of Professional and Occupational Regulation, VA (License # 2101001611).

#### **SCHOLARSHIP AND PROFESSIONAL QUALIFICATIONS**

#### **PUBLICATIONS AND PRESENTATIONS**

##### **Research Publications**

1. Browning L.M., Nie, Y., Rout, A., and Heiner, M. (2020). Audiologists' Preferences in Programming Cochlear Implants: A Preliminary Report. *Cochlear Implant International*. DOI: 10.1080/14670100.2019.1708553.

2. Lakshmi, M.S., Rout, A., Morris, A., and Smaldino, J. (2019). Consumer Opinion of Personal Sound Amplification Products: A Preliminary Sentiment Analysis. *American Journal of Audiology*, 28: 450-459.
3. Lakshmi, M.S., Rout, A., and O'Donoghue, C.R. (2019). A Systematic Review and meta-analysis of digital noise reduction hearing aids in adults. *Journal of Disability and Rehabilitation: Assistive Technology*, DOI: 10.1080/17483107.2019.1642394
4. Rout, A. (2017). Wireless connectivity and sensorics in hearing instruments. *Journal of the All India Institute of Speech and Hearing*. 36: 6-11.
5. Conrad, S.A. and Rout, A. (2013). Perceived occlusion and comfort in receiver-in-the-ear hearing aids. *American Journal of Audiology*, 22:283-290.
6. Rout, A., Hanline, L., and Halling, D. (2008). New stimuli for evaluation of multichannel noise reduction. *Proceedings of the European Federation of Audiological Societies*, ISBN 3-9809869-6-9, P35, pp 1-4.
7. Surprenant, A., Hura, S., Harper, M., Jamieson, L., Long, G., Thede, S., **Rout, A.**, Hseueh T, Hockema, SA, Johnson, M., Srinivasan, P., White, C. and Laflen, JB (1999). Familiarity and pronounceability of nouns and names. *Behavior Research Methods, Instruments and Computers*. 31(4): 638-649.

#### **Book Chapters**

1. Smaldino, J. and Rout, A. (2019a). Introduction to Hearing Aids and Amplification Systems. In R. Hull (Ed.), *Introduction to Aural Rehabilitation* (3<sup>rd</sup> Ed.). San Diego: Plural Publishing.
2. Smaldino, J. and Rout, A. (2019b). Non-Hearing Aid Hearing Assistive Technology for Adults with Impaired Hearing. In R. Hull (Ed.), *Introduction to Aural Rehabilitation* (3<sup>rd</sup> Ed.). San Diego: Plural Publishing.
3. Rout, A. (2018). Audio Signal Processing in Digital Hearing Aids. In J. Galster (Ed.), *Audiology Treatment* (4<sup>th</sup> Ed). New York: Thieme.
4. Rout, A. (2015). Interprofessional Nature of Audiology. In P. Royal (Ed.), *Health Professions Today- Working Together to Provide Quality Care*. Philadelphia: F.A. Davis.

#### **Other**

1. Rout, A. (2020). ASHA AuD Student Day Helps Develop Leadership Skills. ASHA Audiology Connection (pp. 17). American Speech Language and Hearing Association.

#### **Manuscripts in Revision/submission/Preparation**

1. Rout, A. and Wagner, S.F. (in preparation). Concealing hearing aids under hair alters directional benefits. *Journal of American Academy of Audiology*.
2. Lakshmi, M.S., Rout, A. et al. (in preparation). Physiological, behavioral and subjective measurement of listening effort.
3. Lakshmi, MS, Pandey, P., Nie Y., Rout, A. (in preparation). A systematic review of the underlying constructs in listening effort assessment: a theoretical perspective.

## National and International Conference Presentations

1. Lakshmi, M.S., Rout, A., Pandey, P., Nie, Y., and DePaolis, R. (Mar 2022). Presentation Level Effect on Listening Effort: Pupillometry and Listening Span. Presented at the annual conference of the American Auditory Society.
2. Lakshmi, M.S. and Rout, A. (Mar 2021). Underlying constructs in physiological and behavioral measures of listening effort. Virtual presentation at the annual meeting of American Auditory Society.
3. Lakshmi, M.S. and Rout, A. (March 2020). SNR and presentation level effects on three listening effort measures. Annual meeting of the American Auditory Society, Scottsdale, AZ.
4. Lakshmi, M.S., Rout, A., Dellinger, A., and Smaldino, J. (January 2018). Text mining consumer perception of personal sound amplification products (PSAPs). Poster presented at the annual convention of the Indian Speech and Hearing Association, Mysuru, India.
5. Browning, L., Nie, Y., Rout, A., and Heiner, M. (April 2018). Audiologists' Preferences in Programming Cochlear Implants. Poster presented at the annual convention of the American Academy of Audiology, Nashville, TN.
6. Browning, L., Nie, Y., Rout, A., and Heiner, M. (March 2018). Audiologists' Preferences in Programming Cochlear Implants: A preliminary report. Poster presented at the annual meeting of the American Cochlear Implant Alliance CI 2018, Washington, DC.
7. Sharp, D., Rout, A., and Barry, C.C. (April 2018). Subjective and objective differences between premium and mid-level digital hearing aids. Poster presented at the annual convention of the American Academy of Audiology, Nashville, TN.
8. Barry, C.C. and Rout, A. (April 2017). Objective differences between premium and mid-level digital hearing aids. Poster presentation at AudiologyNow, Indianapolis, IN.
9. O'Shaughnessy, C.N., Rout, A., and Smaldino, J. (April 2017). Development of a questionnaire to assess attitudes toward hearing aids. Poster presentation at AudiologyNow, Indianapolis, IN.
10. Rout, A. (April 2016). Reaction time measure is sensitive to changes in listening effort but not listening fatigue. Podium presentation at AudiologyNow, Phoenix, AZ.
11. Athey, H.A., Hulvey, B.I., Ryals, B.M., Clinard, C.G., and Rout, A. (March 2015). Effect of signal to noise ratio on reaction time before and after effortful listening. Poster presentation at AudiologyNow, San Antonio, TX.
12. McGrath, A.G., Gray, L.C., Rout, A., and Ryals, B.M. (March 2015). Variability in clinically measured wideband absorbance over time in young and old adults. Poster presentation at AudiologyNow, San Antonio, TX.
13. Williams, M.M., Clinard, C.G., Rout, A., and Ryals, B.M. (March 2015). Wideband immittance and DPOAE amplitude changes in older adults. Poster presentation at AudiologyNow, San Antonio, TX.
14. Rout, A. (May 2014). The Effect of auditory and visual distraction on acceptable background noise level in NH and HI listeners. Podium presentation at the XXXII World Congress of Audiology, Brisbane, Australia.
15. Rout, A. and Shastany, L.M. (April 2013). Preferable background noise levels for cognitively loaded visual and auditory distracters. Podium presentation at AudiologyNow, Anaheim, CA.

16. Conrad, S.A. and Rout, A. (March 2012). Perceived occlusion and comfort in open-fit hearing instruments in elderly hearing-impaired listeners. *Annual Convention of the American Academy of Audiology, Boston, MA.*
17. Rout, A., Goldman, J.J., Ryals, B.M., and Halling, D.C. (April 2010). Acceptable noise Levels for Clear, Conversational, and Fast Speech. American Academy of Audiology, San Diego, CA.
18. Sporck, S.K., Rout, A., and Monk, K. (Mar 2010). Effect of real-ear verification on hearing aid benefit. American Auditory Society, Scottsdale, AZ
19. Halling, D.C., Knox, C., Salib, E., and Rout, A. (Nov 2009). The Effect of Visual Feedback of Sound Intensity on Preferred iPod Listening Levels. *Annual Conference of the American Speech Language and Hearing Association, New Orleans, LA.*
20. Rout, A., Hanline, L., and Halling, D. (June 2007). New stimuli for evaluation of multichannel noise reduction. *European Federation of Audiological Societies joint meeting with 10<sup>th</sup> Congress of the German Audiologic Society, Heidelberg, Germany.*
21. Sadler, J., Ratigan, J., Syms, M., and Rout, A. (April 2007). BAHA effects on single sided deafness speech recognition. *Annual Convention of the American Academy of Audiology, Denver, CO.*
22. Rout, A., Hanline, L., and Halling, D. (April 2007). Novel stimuli for electroacoustic evaluation of multichannel noise reduction hearing aids. *Annual Convention of the American Academy of Audiology, Denver, CO*
23. Rout, A., Hanline, L., and Halling, D. (March 2007). A comparative electroacoustic evaluation of digital noise reduction in hearing aids. *Annual Meeting of the American Auditory Society, Scottsdale, AZ.*
24. Rout, A., Laflen, J.B., Neel, A.T., Long, G.R., and Ricketts, T.A. (March 2006). Hearing loss, spectral enhancement, and speech recognition. *Annual Meeting of the American Auditory Society, Scottsdale, AZ.*
25. Rout, A., Laflen, J.B., and Neel, A.T. (September 2005). Effects of spectral enhancement on the speech recognition performance of individuals with hearing loss. *Presented at the Biennial International Conference on the Aging Auditory System: Considerations For Rehabilitation. Portland, OR.*
26. Jump, R.L. and Rout, A. (April 2005). Difference in Programmable parameters and actual measured values in digital hearing aids. *Presented at the 16<sup>th</sup> Annual Convention of the American Academy of Audiology, Washington, DC.*
27. Rout, A., Xu, L., and Bond, B.L. (April 2003). Effect of processing delay on the perception of hearing aid user's own voice quality. *Presented at the 14th Annual Convention of the American Academy of Audiology, San Antonio, TX.*
28. Laflen, J.B., Rout, A., Talavage, T.M., and Thirukonda, P. (August 2002). A flexible, analytical framework for applying and testing alternative spectral enhancement algorithms. *Presented at the International Hearing Aid Research Conference, Lake Tahoe, CA.*
29. Rout, A., Laflen, J.B., and Neel, A.T. (August 2002). Perceptual evaluation of spectrally enhanced speech. *Presented at the International Hearing Aid Research Conference, Lake Tahoe, CA.*
30. Rout, A. (April 2002). Paired comparison judgment on quality of spectrally enhanced speech. *Presented at the Annual Convention of the American Academy of Audiology, Philadelphia, PA.*

31. Rout, A., Laflen, J.B., Neel, A.T., and Ricketts, T.A. (August 2000). Effects of spectral enhancement on the speech recognition performance of individuals with cochlear hearing loss. *Presented at the International Hearing Aid Research Conference, Lake Tahoe, CA.*
32. Neel, A.T., and Rout, A. (June 2000). Phoneme recognition before and after hearing aid fitting. *Journal of the Acoustical Society of America*. Vol 107 (5.2): 2886.
33. Rout, A., and Ricketts, T. A. (March 2000). Perceptual evaluation of enhanced spectral contrast of speech by normal hearing and hearing impaired listeners II. *Presented at the 12th Annual convention of American Academy of Audiology, Chicago, IL.*
34. Rout, A., and Dhar, S. (March 2000). Measurement of Dynamic AGC characteristics in hearing aids - Beyond ANSI. *Presented at the 12th Annual convention of the American Academy of Audiology, Chicago, IL.*
35. Rout, A., Ricketts, T. A., Laflen, J. B. (March 2000). Design and Evaluation of two Spectral Enhancement Algorithms. *Presented at the 12th Annual convention of the American Academy of Audiology, Chicago, IL.*
36. Rout, A., and Ricketts, T. A. (April 1999). Perceptual evaluation of enhanced spectral contrast of speech by normal hearing and hearing impaired listeners I. *Presented at the 11th Annual convention of the American Academy of Audiology, Miami, FL.*
37. Surprenant, A., Hura, S., Harper, M., Jamieson, L., Long, G., Thede, S., **Rout, A.**, Hseueh T, Hockema, SA, Johnson, M., Laflen, JB, Srinivasan, P., and White, C. (1999). Familiarity and pronounceability of nouns and names: The Purdue Proper Name Database. *Journal of the Acoustical Society of America*. 2007-2008.
38. Rout, A. (December 1995). A suggested methodology and its efficacy for screening neonates. *Presented at the 28th Annual Convention of the Indian Speech-Language and Hearing Association, Calcutta, India. (Awarded the outstanding podium presentation in Audiology).*

### **Invited Presentations**

1. Rout, A. (November 2021). Hearing aid verification and outcomes assessment in pediatric population. 1<sup>st</sup> AIISH Audiology Global Conference, India. Presentation and Expert panelist in Virtual mode.
2. Rout, A. (October 2021). Don't get spooked by graduate school application. Invited panelist by the National NSSLHA board. Virtual presentation and panel discussion.
3. Rout, A. (June 2021). Effect of COVID-19 on Speech and Hearing academic programs: An international perspective. Invited panel member (virtual mode) at the National Seminar of COVID-19 at JSS Medical College, India.
4. Rout, A. (January 2021). Twenty-first century signal processing in hearing aids: what is the evidence of benefit? Keynote presentation at the International Society of Audiological Medicine, Virtual Conference.
5. Rout, A. and Logan, K. (Invited). Problem Solving and Information Exchange – Program Directors 101. Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) annual conference. New Orleans, LA.
6. Rout, A. (March 2019). What Can Eyes Tell About Cognitive Load? Application of Pupillometry in Audiology. Invited online presentation at the National Seminar on Cognition, Speech, Language, and Hearing, Mysuru, India.

7. Rout, A. (January 2018). Listening Effort in Hearing Aid Users. Invited plenary presentation at the annual convention of the Indian Speech and Hearing Association, Mysuru, India.
8. Rout, A. (April 2018). Hearing Aid Technology: Clinical Application in Adult and Pediatric Fittings. Invited keynote presentation (online) at the annual meeting of the Speech and Hearing Association of West Bengal, Kolkata, India.
9. Rout, A. (April 2018). Impact of Digital Hearing Aids on Listening Effort and Fatigue. Invited presentation (online) at the National Seminar on Neurocognitive Audiology, Mysuru, India.
10. Rout, A. (Aug 17, 2016). Recent Advances in Hearing Aid Technology. Invited Webinar Presentation at the National Seminar on Optimization of Hearing Aid Outcomes. All India Institute of Speech and Hearing, Mysore, India.
11. Rout, A. (September 2015). Advanced signal processing features in hearing aids: why some do not work as well as others? Lamar University, Beaumont, TX.
12. Rout A. (May 2014). Is reaction time an accurate measure of listening fatigue in hearing aid users? Invited presentation at the National Acoustical Laboratories (NAL), Sydney, Australia.
13. Rout, A. (December 2012). Advanced signal processing features in hearing aids: why some do not work as well as others? All India Institute of Speech and Hearing, University of Mysore, India.
14. Rout, A. (December 2012). Outcomes with advanced digital hearing aids: Sound solutions for noisy problems. Invited lecture at the Institute of Health Sciences, Bhubaneswar, India.
15. Rout, A. (Dec 2010). Open-fit digital hearing instruments: five core issues for the clinician. International Symposium of Audiological Medicine, Bhubaneswar, India.
16. Rout, A. (June 2006). Recent developments in hearing aid technology. *National Institute for the Hearing Handicapped*, Mumbai, India.
17. Rout, A. (May 2004). Electroacoustic testing of advanced digital hearing aids. *Annual Convention of Hearing Healthcare Providers of California*, Palm Springs, CA.
18. Rout, A. (October 2003). ANSI testing of digital hearing aids – Options and limitations. *Annual Convention of International Hearing Society*, St. Paul, MN.

### **Regional / State / Local Presentations**

1. Casilli, S., Laprelle, S., Rout, A. (April 2022). Comparison of internet based at-home hearing tests to clinical audiometric tests. Honors Capstone presentation, James Madison University.
2. Compton, A.E. and Rout, A. (Oct 2019). Speech understanding and listening effort in noise with a new speech processing algorithm. Ruth Symposium in Audiology and Hearing Science, James Madison University.
3. Wagner, S., Rout, A., and Lakshmi, M.S. (March 2019). Effect of Hair Covering on Directional Benefit. Annual convention of the Speech and Hearing Association of Virginia, Richmond, VA.
4. Lakshmi, M.S. and Rout, A. (Oct 2018). Digital Noise Reduction Hearing Aids: What is the Evidence of Benefit in Adults? Ruth Symposium in Audiology and Hearing Science, James Madison University.

5. Lakshmi, M.S., Rout, A., Dellinger, A., and Smaldino, J. (Oct 2017). Consumer perception of personal sound amplification products (PSAPs): A preliminary text mining report. Poster presented at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
6. Browning, L., Nie, Y., Rout, A., and Heiner, M. (March 2018). Audiologists' Preferences in Programming Cochlear Implants: A preliminary report. Poster presented at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
7. Smaldino, J. and Rout, A. (June 2017). Development of a questionnaire using the ABC model to assess attitudes toward hearing aids. Presented at the Appalachian Spring Conference, Mountain Home, TN.
8. Leidy, H. and Rout, A. (Oct 2016). Effect of Noise Exposure on Reaction Time. Podium presentation at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
9. O'Shaughnessy, C., Rout, A., and Smaldino, J. (Oct 2016). Hearing aid non-users' attitudes toward hearing aids. Podium presentation at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
10. Barry, C. and Rout, A. (Oct 2016). Comparison of noise reduction in mid-level versus premium digital hearing aids. Podium presentation at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
11. Rout, A. (October 2015). Listen effort and fatigue: Clinical implications in hearing aid fitting. Podium presentation at the Ruth Symposium in Audiology and Hearing Science, James Madison University.
12. Hulvey, B.I. and Rout, A. (October 2014). Effect of auditory fatigue on reaction time of normal hearing listeners. Poster presented at the Ruth Symposium, James Madison University.
13. Sabri, K.A. and Rout, A. (October 2014). Effects of adaptive frequency lowering on phoneme identification and sound quality in hearing aids. Poster presented at the Ruth Symposium, James Madison University.
14. Ripley, E.A., and Rout, A. (October 2013). The effects of auditory and visual distraction on preferred background noise level in hearing impaired listeners. Poster presented at the Ruth Symposium, James Madison University.
15. McDermott, J.A., Rout, A., Halling, D.H., and Salib, E.H. (March 2013). Auditory, visual, vibrotactile feedback and iPod listening levels. Poster presentation at the annual conference of the Speech and Hearing Association of Virginia.
16. Rout, A. (October 2012). Coefficient of agreement in pairwise comparison: Application in hearing aid research. Podium presentation at the Ruth Symposium, James Madison University.
17. Rout, A. (October 2011). Acceptable noise levels in normal hearing and hearing-impaired listeners. Presented at *The Ruth Symposium*, James Madison University, Harrisonburg, VA.
18. Salib, E.H., Halling, D.C., Angilletta, J., and Rout, A. (October 2011). Visual, auditory, and vibrotactile feedback for hearing conservation with personal stereo users. Presented at the *Annual Faculty Research Day of the College of Integrated Science and Technology*, James Madison University, VA.

19. Rout, A. (October 2009). Wind noise management through digital signal processing. *Innovations in Clinical Communication Sciences Conference*. James Madison University, Harrisonburg, VA.
20. Rout, A. (March 2009). Wind noise reduction in digital hearing aids. *Annual convention of the Speech and Hearing Association of Virginia*, Norfolk, VA.
21. Rout, A., Goldman, J.J, Ryals, B.M, and Halling, D.C. (October 2009). Acceptable Noise Levels for Clear, Conversational, and Fast Speech, *Annual Faculty Research Day of the College of Integrated Sciences and Technology*, James Madison University, Harrisonburg, VA.
22. Halling, D.C., Knox, C., Salib, E., and Rout, A. (October 2009). The Effect of Visual Feedback of Sound Intensity on Preferred iPod Listening Levels. *Annual Faculty Research Day of the College of Integrated Sciences and Technology*, James Madison University, Harrisonburg, VA.
23. Rout, A., and Billari, S.L. (October 2008). Assessment of Hearing Aid Benefit in Low Socioeconomic Population. *Annual Faculty Research Day of the College of Integrated Sciences and Technology*, James Madison University, Harrisonburg, VA.
24. Rout, A. (September 2007). Real Ear Measurements for Verification of Hearing Aid Fitting. *Annual Meeting of the American Academy of Otolaryngology*, Washington, DC.
25. Rout, A. (October 2007). Digital hearing Aids: What Every Audiologist Should Know. *Innovations in Clinical Communication Sciences Conference*, James Madison University, Harrisonburg, VA.
26. Rout, A. (October 2006). Advanced signal processing features in hearing aids: Why some do not work as well as others? *Innovations in Clinical Communication Sciences Conference*, James Madison University, Harrisonburg, VA.
27. Rout, A., Xu, L., and Bond, B.L. (April 2003). Effect of group delay on the perception of hearing aid user's own voice quality. *Presented at the Annual Showcase of College of Health and Human Services*, Ohio University.
28. Rout, A. (May 2002). TILL, BILL, and MoNICA – The past, present and future of noise reduction in hearing aids. *Presented at the Ohio University Regional Conference on Hearing, Speech and Language Sciences*, Athens, OH.
29. Butala, R, V., Bond, B.L., Scott, T.M., and Rout, A. (May 2002). Processing delay in digital hearing aids and its clinical application. *Presented at the Ohio University Regional Conference on Hearing, Speech and Language Sciences*, Athens, OH.
30. Rout, A. (March 2002). Noise reduction strategies in smart hearing aids. *Presented at the Annual Convention of the Ohio Speech, Language and Hearing Association*, Dayton, OH.

## GRANTS

- James Madison University College of Health and Behavioral Studies mini-grant, (\$1,000.00), AY 2013-14
- James Madison University International Development Grant, (\$1,000.00), AY 2013-14
- James Madison University CISAT International Grant, (\$2,000.00), AY 2011-12.
- James Madison University College of Integrated Science and Technology Faculty Development Research Grant, (\$3,100.00), 7/08-6/09, Role: PI.
- James Madison University College of Integrated Science and Technology mini-grant, (\$940.00), 05/08

- James Madison University College of Integrated Science and Technology mini-grant, (\$900.00), 05/07
- Ohio University Research Committee, OURC02-014. *Tolerable Limits of Processing Delay in Digital hearing Aids*, (\$4,987.22), 6/02 – 4/03, Role: PI.
- Purdue Research Foundation, grant # 690/1353-3204. *Evaluation of a Speech Recognition Based Noise Reduction Algorithm in Hearing Aid Related Applications* (Amy T. Neel, PI). (\$25,716.00), 8/99 - 7/01. Role: Co-PI.
- American Academy of Audiology Research Awards Program, *Performance of a Spectral Enhancement Algorithm in Combination with a Directional Microphone*. (\$2,500.00), 10/99 - 10/00. Role: PI.

### **Unfunded Grant Applications**

- American Speech Language and Hearing Association 2010 New Investigator Research Grant Competition. *The Effects of Real-ear Verification on Subjective and Objective Measures of Hearing Aid Benefit*. (\$ 4,897.00). Not funded.
- Mosier Fellowship, James Madison University. *Perceptible Delay in Digital Aids*, (\$3000.00). Not funded.
- American Academy of Audiology Research Awards Program, *Phoneme Recognition before and after Hearing Aid fitting*. (\$2,500.00). Not funded.

## **TEACHING**

### **James Madison University, Course Professor**

1. Advanced Hearing Aid Selection and Fitting (CSD 622)
2. Audiologic Assessment (CSD 514)
3. Geriatric Audiology (CSD 710)
4. Introduction to Hearing Aids (CSD 551)
5. Introduction to Audiology (CSD 301)
6. Cochlear Implants (CSD 720)
7. Instrumentation (CSD 511)
8. Doctoral Dissertation (CSD 920)
9. Independent Study (CSD 718)
10. Professional Seminars in Audiology (CSD 810 and 820)

### **Ohio University, Course Professor**

1. Introduction to Amplification
2. Hearing Aid Selection and Fitting
3. Advanced Hearing Science
4. Advanced Aural Rehabilitation
5. Undergraduate Hearing Science
6. Psychosocial Aspects of Deafness
7. Audiological Procedures for SLPs

8. Industrial Audiology
9. Undergraduate Aural Rehabilitation

**Purdue University**, Graduate Teaching Assistant

1. Introduction to Hearing Aids
2. Advanced Hearing Aid Selection and Fitting
3. Advanced Diagnostic Assessments in Audiology
4. Acoustical Bases of Speech & Hearing