

**CURRICULUM VITAE
RUTH A. BENTLER**

PERSONAL DATA

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EDUCATIONAL AND PROFESSIONAL HISTORY

Higher Education

1987	Ph.D. University of Iowa	Speech Pathology and Audiology
1973	M.A. University of Iowa	Speech Pathology and Audiology
1972	B.S. University of Iowa	Speech and Hearing Science
1969	San Jose College San Jose, California	
1968-69	University of Hawaii Honolulu, Hawaii	
1967-68	University of Iowa Iowa City, Iowa	

Professional and Academic Position

2002	Professor Department of Speech Pathology and Audiology University of Iowa
1995	Associate Professor Department of Speech Pathology and Audiology University of Iowa
1988	Assistant Professor Department of Speech Pathology and Audiology University of Iowa
1978	Instructor Department of Speech Pathology and Audiology University of Iowa
1973	Clinical Audiologist Otologic Medical Services Iowa City, Iowa

1972 Teaching Assistant for Hearing Loss and Audiometry
Teaching Assistant for Hearing Science
University of Iowa

Memberships

Iowa Conference for the Hearing Impaired
American Auditory Society
Iowa Speech-Language-Hearing Association
American Speech-Language-Hearing Association
Gerontological Society of America
Sigma Xi
American Academy of Audiology
Acoustical Society of America
Academy of Rehabilitative Audiology
International Society of Audiology

Certification & Licensure

American Speech-Language-Hearing Association, Certificate of Clinical
Competence in Audiology (#000285239-02)
State of Iowa, Certificate of License in Audiology (A36)
State of Iowa, Certificate of License in Hearing Aid Dispensing (00065)

Awards and Recognition

2000 - Fellow of the American Speech, Language, and Hearing Association
2001 - Editors Award, American Speech, Language and Hearing Association
2001 - Distinguished Service Award, University of Iowa Board in Control of Athletics
2005 - Erskine Fellow, University of Canterbury

SCHOLARSHIP**Publications or Creative Works**

- * = senior author, major contribution
- ** = equal contribution
- *** = secondary contribution
- **** = minor contribution

Book/Book Chapters (invited)

- *Bentler, R.A. & Wu, Y-H. (2009). Developments in hearing aid technology and verification techniques. In *Advanced Practice in Adult Audiologic Rehabilitation: International Perspectives*. San Diego: Plural Press.
- *Bentler, R.A. & Mueller H.G. (2009). Hearing Aids. In Katz Handbook of Clinical Audiology 6th Edition. Baltimore: Williams & Wilkins.
- *Bentler, R.A. (2000). Amplification for the hearing impaired child. In J.G. Alpiner and P.A. McCarthy (Eds.), Rehabilitative Audiology: Children and Adults (3rd ed.) Baltimore: Williams & Wilkins.
- *Bentler, R.A. (1996). What to look for in a hearing aid evaluation. In C. Flexer, D. Wray, R. Leavitt, & R. Flexer (Eds.), A Guide to Career Development and Post-Secondary Education for Persons Who Are Hard of Hearing. Washington, DC: Alexander Graham Bell Association.
- *Bentler, R.A. (1994). Future trends in verification strategies. In M. Valente (Ed.), Strategies for Selecting and Verifying Hearing Aids (pp. 343-362). New York, NY: Thieme & Stratton.
- *Bentler, R.A. (1993). Amplification for the hearing impaired child. In J.G. Alpiner and P.A. McCarthy (Eds.), Rehabilitative Audiology: Children and Adults (2nd ed.) (pp. 72-105). Baltimore: Williams & Wilkins.

Published Book Reviews (invited)

- *Bentler, R.A. (1993, November). [Review of W. Paschell (1992). Do-it-yourself listening and signaling devices for people with hearing impairment. Wheaton, MD: William Paschell.] American Speech-Language-Hearing Association, 49.
- *Bentler, R.A. (1989, February). [Review of R.J. Roeser, M.P. Downs (Eds.) (1988). Auditory disorders in school children. New York: Thieme Medical Publishers, Inc.] American Speech-Language-Hearing Association, 53-54.
- *Bentler, R.A. (1988, February). [Review of J.G. Alpiner, & P. McCarthy, (Eds.) (1987). Rehabilitative audiology: Children and adults. Baltimore, MD: Williams and Wilkins.] American Speech-Language-Hearing Association, 61.

Journal Articles (refereed)

- **Kiessling, J., Keidser, G., Bentler, R. (In Press). A multi-site evaluation of a proposed test for verifying hearing aid maximum output. International Journal of Audiology.
- ***Wu, Y-S., Bentler, R.A. (In Press). Impact of Visual Cues on Directional Benefit and Preference: Part 2 – Field Tests. Ear and Hearing.
- ***Wu, Y-S., Bentler, R.A. (In Press). Impact of Visual Cues on Directional Benefit and Preference: Part 1 – Laboratory Tests. Ear and Hearing.
- ***Wu, Y-S., Bentler, R.A. (In Press). Using a signal cancellation technique involving impulse response to assess directivity of hearing. Journal of the Acoustical Society of America.
- *Bentler, R., Wu, Y-H., Kettel, J., Hurtig, R. (2008). Digital Noise Reduction: Outcomes from field and lab studies. International Journal of Audiology, 47(8): 447-460.
- **Ou, H., Bentler, R.A., Dunn, C. (2008). Comparison of unilateral cochlear implant adult users and those that use hearing aids and cochlear implants in opposite ears by Satisfaction with Amplification in Daily Life (SADL) scale. Journal of the American Academy of Audiology, 19(11).
- **Henning, R. & Bentler, R. (2008). Compression and the short-term dynamic range of speech. Journal of Speech-Language-Hearing Research, 51:471-484.
- **Wu, Y-H., Bentler, R.A. (2007). Using a signal cancellation technique to assess adaptive directivity of hearing aids. Journal of the Acoustical Society of America 122: 496-511.
- ***Shin, M, Wang, S., Bentler, R., He, S. (2007). New feedback detection method for performance evaluation of hearing aids. Sound and Vibration 302: 350-360.
- ***Dittberner, A.B. & Bentler, R.A. (2007). Predictive measures of directional benefit. Part 1: A three-dimensional, instrument-based approach to estimating the Directivity Index (DI). Ear & Hearing, 28(1):46-61.
- **Dittberner, A.B. & Bentler, R.A. (2007). Predictive measures of directional benefit. Part 2: Verification of different approaches to estimating directional benefit. Ear & Hearing, 28(1): 26-45.
- *Bentler, R.A., Chiou (2006). Digital Noise Reduction: An Overview. Trends in Amplification, 10(2):71-82.
- ***Palmer, C., Bentler, R. & Mueller, H.G. (2006). Amplification and the perception of annoying and aversive sounds. Trends in Amplification, 10(2):95-104.
- *Bentler, R., Palmer, C., & Mueller, H.G. (2006). Evaluation of a second-order directional microphone hearing aid: Speech perception outcomes. Objective test measures. Journal of American Academy of Audiology, 17: 179-189.
- ***Palmer, C., Bentler, R. & Mueller, H.G. (2006). Evaluation of a second-order directional microphone hearing aid: Self-report outcomes. Self-Report outcomes. Journal of American Academy of Audiology, 17: 190-201.

- *Bentler, R.A. (2005). Effectiveness of directional microphones and noise reduction schemes in hearing aids: A systematic review of the evidence. Journal of American Academy of Audiology, 16:477-488
- **Mueller, H.G., and Bentler, R.A. (2005). Fitting hearing aids using clinical measures of loudness discomfort levels: A systematic review of effectiveness. Journal of American Academy of Audiology, 16:465-476.
- **Henning, R. & Bentler, R. (2005). Compression-dependent differences in hearing aid gain between speech and non speech signals. Ear and Hearing, 26(4), 409-422.
- *Bentler, R., Tubbs, J., Egge, J., Flamme, G., & Dittberner, A. (2004). Evaluation of an adaptive directional system in a dsp hearing aid. American Journal of Audiology, 13, 73-79.
- *Bentler, R., Egge, J., Tubbs, J., Dittberner, A. & Flamme, G. (2004). Quantification of directional benefit across different polar response patterns. Journal of the American Academy of Audiology, 15, 649-659.
- *Bentler, R., Palmer, C. & Dittberner, A. (2004). Hearing in noise: Comparison of listeners with normal and (aided) impaired hearing. Journal of the American Academy of Audiology, 15, 216-225.
- *Bentler, R., Niebuhr, D., Johnson, T., & Flamme, G. (2003). Impact of digital labeling on outcome measures. Ear & Hearing, 24, 215-224.
- ***Warner, R. & Bentler, R. (2002). Threshold of discomfort for complex stimuli: Acoustic and sound quality predictors. Journal of Speech-Language-Hearing Research, 45(5),1016-1026 .
- **Novick, M., Bentler, R., Dittberner, A., & Flamme, G. (2001). The effects of release time and directionality on unilateral and bilateral hearing aid fittings in complex sound fields. Journal of the American Academy of Audiology, 12, 493-504.
- *Bentler, R.A. & Nelson, J.A. (2001). Effect of spectral shaping on loudness discomfort. Journal of the American Academy of Audiology, 12(9), 462-470.
- *Bentler, R. & Cooley, L. (2001). An examination of several characteristics that affect the prediction of OSPL90. Ear & Hearing, 22, 3-20.
- *Bentler, R.A. (2000). List equivalency and test-retest reliability of the Speech in Noise (SIN) test. American Journal of Audiology: A Journal of Clinical Practice, 9, 3-10. *Editors Award*
- *Bentler, R.A. & Duve, M. (2000). Comparison of hearing aids over the 20th Century. Ear and Hearing, 21, 625-639.
- *Bentler, R. & Kramer, S. (2000). Guidelines for choosing an outcome measure. Ear & Hearing, 21, 37S-49S.
- ***Cox, R., Hyde, M., Gatehouse, S., Noble, W., Dillon, H., Bentler, R., Stephens, S.D.G., Arlinger, S., Beck, L., Bess, F., Gagne, J-P, Hallberg, L., Kramer, S., Kricos, P., &

- Wilkerson, D. (2000). Optimal outcome measures, research priorities, and international cooperation. Ear and Hearing, 21, 106S-115S.
- ****Humes, L., Christiansen, L., Thomas, T., Bess, F., Hedley-Williams, A., & Bentler, R. (1999). Comparison of the aided performance and benefit provided by a linear hearing aid and a two-channel wide dynamic range compression hearing aid. Journal of Speech and Hearing Research, 42, 65-79.
- ***Turner, C. & Bentler, R. (1998). Does hearing aid benefit change over time? Journal of the Acoustical Society of America, 104(6), 3673-3674.
- **Harnack Knebel, S. & Bentler, R.A. (1998). Comparison of two digital hearing aids. Ear and Hearing, 19(4), 280-289.
- ***Valente, M., Bentler, R., Kaplan, H., Seewald, R., Trine, T., & Van Vliet, D. (1998). Guidelines for Hearing Aid Fitting for Adults. American Journal of Audiology: A Journal of Clinical Practice, 7(1), 5-13.
- *Bentler, R.A., & Nelson, J. (1997). Assessing the effect of varying release time in a 2-channel AGC hearing aid. American Journal of Audiology: A Journal of Clinical Practice, 6(1), 43-51.
- ****Arlinger, S., Gatehouse, S., Bentler, R.A., Byrne, D., Cox, R.M., Dirks, D.D., Humes, L., Neuman, A., Ponton, C., Robinson, K., Silman, S., Summerfield, A.Q., Turner, C.W., Tyler, R.S., & Willott, J.F. (1996). Report of the Eriksholm Workshop on auditory deprivation and acclimatization. Ear and Hearing, 17(3), 87S-98S.
- ****Turner, C.W., Humes, L.E., Bentler, R.A., & Cox, R.M. (1996). A review of past research on changes in hearing aid benefit over time. Ear and Hearing, 17(3), 14-28.
- **Ricketts, T.A., & Bentler, R.A. (1996). Effect of stimulus type and bandwidth on loudness perception measured by categorical scaling. Journal of the Acoustical Society of America, 99(4), 2281-2287.
- **Ricketts, T.A., & Bentler, R.A. (1995). Impact of "standard" earmold on RECD. American Journal of Audiology: A Journal of Clinical Practice, 4(1), 43-45.
- *Bentler, R.A., Curry, J.J., Hawkins, D.B., Massie, S.L.T., & Parker-Bright, K. (1994). Guidelines for Fitting and Measuring FM Systems. American Speech-Language-Hearing Association, Rockville Pike, Maryland.
- *Bentler, R.A. (1993). Satisfaction with current noise reduction circuits. American Journal of Audiology: A Journal of Clinical Practice, 2 (1), 51-53.
- *Bentler, R.A., Anderson, C.V., Niebuhr, D., & Getta, J. (1993). A longitudinal study of noise reduction circuits. Part II: Subjective Measures. Journal of Speech and Hearing Research, 36(4), 820-831.
- *Bentler, R.A., Anderson, C.V., Niebuhr, D., & Getta, J. (1993). A longitudinal study of noise reduction circuits. Part I: Objective Measures. Journal of Speech and Hearing Research, 36(4), 808-819.

- *Bentler, R.A., & Pavlovic, C.V. (1992). Addendum to: Transfer functions and correction factors used in hearing aid evaluation and research. Ear and Hearing, 13(3), 284-286.
- **Ricketts, T., & Bentler, R. (1992). Comparison of two digitally programmable hearing aids. Journal of the American Academy of Audiology, 3 (2), 101-112.
- *Bentler, R.A. (1991). Programmable hearing aid product review. American Journal of Audiology: A Journal of Clinical Practice, 1(1), 25-28.
- ****Macpherson, B.J., Elfenbein, J.L., Schum, R.L., & Bentler, R.A. (1991). Thresholds of discomfort in children. Ear and Hearing, 12(3), 184-190.
- *Bentler, R.A. (1991). Response to "The resonance frequency of the external canal in children". Ear and Hearing, 12(2), 89-90.
- *Bentler, R.A., & Pavlovic, C.V. (1989). Comparison of discomfort levels obtained with pure tones and multitone complexes. Journal of Acoustical Society of America, 86, 126-132.
- *Bentler, R.A., & Pavlovic, C.V. (1989). Transfer functions and correction factors used in hearing aid evaluation and research. Ear and Hearing, 10(1), 58-63.
- ***Elfenbein, J., Bentler, R.A., Davis, J., & Niebuhr, D. (1988). Status of school children's hearing aids related to monitoring practices. Ear and Hearing, 9(4), 166-174.
- ***Tyler, R.S., & Bentler, R.A. (1987). Tinnitus maskers and hearing aids for tinnitus. Seminars in Hearing, 49-62.
- ****Davis, J.M., Elfenbein, J., Schum, R., & Bentler, R.A. (1986). The effects of mild and moderate hearing impairments on language, educational, and psychosocial behavior. Journal of Speech and Hearing Disorders, 51(1), 53-63.
- ****Hawkins, D., Shepard, N., Bentler, R.A., & Davis, J. (1981). An alternative to direct hearing aid dispensing for university training programs. Asha, 23(6), 435-438.

Published Proceedings (refereed)

- *Bentler, R.A. (2007) Audiometric Considerations for Hearing Aid Fitting (and Success) Proceedings of Hearing Care for Adults: An International Conference. Chicago, IL.
- *Bentler, R. & Niebuhr, D. (1999). Verification: Issues and Implementation. Proceedings of the 'Remediating Pediatric Hearing Loss Through Amplification: Taking Science into the Clinic' Pittsburgh Conference. Trends in Amplification. New York: Woodland Publications.
- *Bentler, R.A. (1991). Clinical implications and limitations of current noise reduction designs. Report of the Second Vanderbilt/VA Conference on Amplification for the Hearing Impaired (pp. 79-91). Parkton, MD: York Press.

Journal Articles (non-refereed)

- Bentler, R. (2009, In Press). Update on hearing aid technology. China Journal of Otolaryngology
- Keidser, G., Kiessling, J., & Bentler, R. (2009, In Press). Is the hearing instrument to blame when the environment gets really noisy? Hearing Review.
- Kiessling, J., Keidser, G., Bentler, R., Muller, M. (2009, In Press). The Output Verification Test – a step towards a tool to clinically verify the output of hearing instruments. Hearing Review.
- Bentler, R. (2009, In Press). Now what does the evidence tell us? Siemens Pediatric Update Newsletter.
- Stiles, D., Bentler, R., McGregor, K. (2008). Effects of directional microphone on children's recognition and fast-mapping of speech presented from the rear azimuth. Hearing Journal, 61(11), 22-25.
- Mueller, H.G., Bentler, R.A., & Wu, Y-H. (2008). Maximum output in hearing aids. Hearing Journal, 61(2), 40-47.
- Bentler, R.A., Wu, Y-S, & Jeon, J. (2006). Effectiveness of directional microphones in open-canal fittings. Hearing Journal, 59(11), 40-47.
- *Bentler, R. (2003). Directional microphone hearing aids: A rising technology with bright promise. Hearing Journal, 56(11), 9-10.
- *Bentler, R. A. & Dittberner, A. B. (2003). Better listening ahead as directional technology advances. Hearing Journal, 56(11), 52-53.
- **Dittberner, A. & Bentler, R.A. (2003). Interpreting the Directivity Index (DI). Hearing Review, 10 (6), 16-21.
- **Mueller, H.G., & Bentler, R.A. (2002). How loud is allowed revisited. Hearing Journal, 55(1), 10-14.
- *Bentler, R. (2001). Bernafon Smile™ Clinical Trial Results. Audiology Insight.
- *Bentler, R. (2000). Accepting New Truths in Hearing Aids. Audiology Online.com
- *Bentler, R. (2000). Efficacy of digital hearing aids. Audiology Insight.
- *Bentler, R. (1999). Amplification Update: Where are we going? Special Interest Division 7: Aural Rehab and its Instrumentation Newsletter.
- *Bentler, R., Turner, C., & Holte, L. (1999). An update on the acclimatization issue. Hearing Journal, 52(11), 44-48.
- *Bentler, R. & Dittberner, A. (1998). Outcome measures: Where should the focus be? Hearing Journal, 51(9), 46-51

**Mardorf, J. & Bentler, R. (1998). Relating well-being to successful hearing aid use in older adults. Hearing Journal, 51(7), 39-44.

*Bentler, R.A. (1998). In defense of higher technology. Hearing Journal, 51(2), 10-13.

*Bentler, R.A. (1994). CICs: Some practical considerations. Hearing Journal, 47(11), 37-43.

**Mueller, H.G. & Bentler, R.A. (1994). Measurements of TD: How Loud is Allowed? Hearing Journal, 47(1), 10, 42-44.

Grants

Research Grant Support

Active Support

NIDRR (CFDA # 84.133.E-1) Department of Education
Rehabilitation Engineering Research Center on Hearing Enhancement
Two Projects Sub-Contracted: 1) **A Randomized Clinical Trial (RCT) of Three Levels of Service Provision Following Hearing Aid Issuance;** 2) **Directional Microphones: A Systematic Evaluation of Directional Microphones in Natural Environment**

10/01/08-9/30/13

PI #1; CO-PI #2 (\$849,198.51)

35% effort

R01 DC009560 (National Institutes of Health, NIDCD)

Moderators and Functional Outcomes in Children with Mild-to-Severe Hearing Loss

08/01/08-07/31/13

CO-PI: J Bruce Tomblin, PhD, Mary Pat Moeller, PhD

10% Effort

NIDCD SBIR SF424 Phase II Contract.

A Method for Wind Noise Suppression in Hearing Aids.

11/01/07-10/30/09

Principal Investigator (\$144,332).

20% effort.

Unitron Hearing Ltd.

Impact of User Control versus Traditional Fitting on Hearing Aid Outcomes.

11/01/08-10/31/09

Principal Investigator (\$40,489 + 100 devices)

5% effort + 2 student stipends

Siemens Hearing Instruments.

Impact of Digital Noise Reduction (DNR) on Pediatric Performance and Preference.

05/01/07-12/30/09

Principal Investigator (\$55,000).

One Student Stipend