# LORRAINE A. DELHORNE, M.S.

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### POSITIONS AND EMPLOYMENT

1/11-present	Senior Research Scientist, Hearing Research Center, Boston University, Boston, MA
9/06-12/10	Research Associate, Hearing Research Center, Boston University, Boston, MA
9/98-present	Lecturer, Boston University, Sargent College, Boston, MA
9/97-7/12	Research Scientist, MIT, RLE Sensory Communication Group, Cambridge, MA
9/82-9/97	Research Specialist, MIT, RLE Sensory Communication Group, Cambridge, MA

### **OTHER PROFESSIONAL ACTIVITIES**

Chairperson, Internal Review Board for the Use of Human Subjects, Sensimetrics Corp., Malden, MA Reviewer, *Ear and Hearing Journal*Reviewer, *Journal of the Acoustical Society of America* 

## **EDUCATION**

Ashland College, Ashland, OH	B.A.	Speech and Hearing
Washington University, St. Louis, MO	M.S.	Speech and Hearing

## **PUBLICATIONS**

- Reed, C.M, Delhorne LA, and Durlach NI (1986). The Reception of Sign Language Through the Tactile Sense, University of Rochester Cognitive Science Technical Report No. 32, 39: (A).
- Farrar CL, Reed CM, Ito Y, Durlach NI, Delhorne LA, Zurek PM, and Braida LD (1987). Spectral-shape Discrimination. I. Results From Normal-Hearing Listeners for Stationary Broadband Noises. J. Acoust. Soc. Am. 81, 1085-1092.
- Zurek PM, and Delhorne LA (1987). Consonant Reception in Noise by Listeners with Mild and Moderate Sensorineural Hearing Impairment, J. Acoust. Soc. Am. 82, 1548-1559.
- Rabinowitz WM, Houtsma AJM, Durlach NI, and Delhorne, LA (1987). Multidimensional Tactile Displays: Identification of Vibratory Intensity, Frequency, and Contactor area. J. Acoust. Soc. Am. 82, 1243-1252.

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- Reed CM, Delhorne LA, and Durlach NI (1987). Tactile Reception of Fingerspelling and Sign Language. J. Acoust. Soc. Am., Suppl. 1, 82, S24 (A).
- Durlach, NI, Delhorne, LA, Wong, A, Ko, WY, Rabinowitz, WM, and Hollerbach, JM (1989). Manual Discrimination and Identification of Length by the Fingerspan Method. Perception and Psychophysics 46, 29-38.
- Reed, CM, Durlach, NI, Delhorne, LA, Rabinowitz, WM and Grant KW (1989). Research on Tactual Communication of Speech: Ideas, Issues and Findings, in Special Monograph on Sensory Aids for Hearing-Impaired Persons. NS McGarr (Ed), The Volta Review 91, 65-78.
- Reed, CM, Delhorne, LA, Durlach, NI, Fischer, S (1990). A Study of the Tactual and Visual Reception of Fingerspelling. J. Speech Hearing Res. 33, 786-797.
- Reed, CM, Rabinowitz, WM, Durlach, NI, Delhorne, LA, Braida, LD, Pemberton, JC, Mulcahey, BD and Washington, DL (1990). Analytic Study of the Tadoma Method: Improving Performance Through the Use of Supplementary Tactual Display. J. Speech Hearing Res. 35, 450-465.
- Reed, CM, Durlach, NI and Delhorne, LA (1992). Natural Methods of Tactual Communication, prepared as chapter for book entitled <u>Tactile Aids for the Hearing Impaired</u>. IR Summers (Ed), London: Whurr Publishers Limited.
- Reed, CM, Durlach, NI and Delhorne, LA (1992). The Tactual Reception of Speech, Fingerspelling and Sign Language by the Deaf-Blind. Society for Information Display Digest of Technical Papers, Volume XXIII, 102-105.
- Rabinowitz, WM, Eddington, DK, Delhorne, LA, and Cuneo, PA (1992). Relations among Several Measures of Speech Reception in Subjects using a Cochlear Implant. J. Acoust. Soc. Am. Oct. 1992.
- Uchanski, RM, Delhorne. LA, Dix, AK, Braida, LD, Reed, CM and Durlach, NI (1992). Automatic Speech Recognition to Aid the Hearing Impaired. Prospects for the Automatic Generation of Cued Speech. J. Rehab. Res. And Dev. 31:20-41.
- Reed, CM, Durlach, NI and Delhorne, LA (1993). Historical Overview of Tactile Aid Research <u>Proc. Int. Conf. OnTactile Aids, Hearing Aids, and Cochlear Implants.</u> A. Risberg, S. Felicetti, G. Plant and K. -E.Spens, eds. Department of Speech Communication and Music Acoustics, KTH, Stockholm, Sweden, pages 1-10.
- Reed, CM, Delhorne, LA and Durlach NI (1993). Results Obtained with Tactaid II and Tactaid VII.

  <u>Proc. Int. Conf. on Tactile Aids, Hearing Aids, and Cochlear Implants</u>. A. Risberg, S. Felicetti,
  G. Plant and K. -E. Spens, eds. Department of Speech Communication and Music Acoustics,
  KTH, Stockholm, Sweden, pages 149-155.
- Reed, CM, Delhorne, LA, Durlach, NI, Fischer, S (1995). A Study of the Tactual Reception of Sign Language. J. Speech and Hearing Res. 38,477-489.

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- Perkell, J, Manzella, J, Wozniak, J, Matthies, M, Lane, H, Svirsky, M, Guiod, P, Delhorne, L, Short, P, MacCollin, M and Mitchell, C. (1995). Changes in Speech Production Following Hearing Loss Due to Bilateral Acoustic Neuromas. Proceedings of the XIIIth International Congress of Phonetic Sciences, Stockholm, Sweden.
- Reed, CM and Delhorne, LA (1995). Current Results of a Field Study of Adult Users of Tactile Aids. Seminars in Hearing 16(4), 305-315.
- Delhorne, LA, Besing, JM, Durlach, NI and Reed, CM (1998). Tactual Cued Speech as a Supplement to Speechreading. Cued Speech Journal, Addendum to Volume VI. Pp. 71-87.
- Fischer, SD, Delhorne, LA and Reed, CM (1999). Effects of Rate of Presentation on the Reception of American Sign Language. J. Speech and Hearing Res. 42(3), 568-582.
- Bratakos, MS, Reed, CM, Delhorne, LA and Denesvich, G (2000). A Single-Band Envelope Cue as a Supplement to Speechreading of Segmentals: A Comparison of Auditory versus Tactual Presentation. Ear and Hearing 22, 225-235.
- Reed, CM and Delhorne, LA (2003). The Reception of Environmental Sounds through Wearable Tactual Aids. Ear and Hearing 24,528-538.
- Tan, HZ, Reed, CM, Delhorne, LA, Durlach, NI and Wan, N (2003). Temporal Masking of Multidimensional Tactual Stimuli, J. Acoust. Soc. Am. 114 (6), 3295-3308.
- Reed, CM and Delhorne, LA (2003). The Reception of Environmental Sounds through Cochlear Implants. Ear and Hearing 26, 48-61.
- Reed, CM and Delhorne, LA (2006). A Study of the Combined Use of a Hearing Aid and Tactual Aid in an Adult with Profound Hearing Loss, The Volta Review 106, 171-193.
- Ghitza, O, Messing, D, Delhorne, L, Braida, L, Bruckert, E, and M. M. Sondhi. (2007). Towards Predicting Consonant Confusions of Degraded Speech. In: Hearing From Basic Research to Applications. B. Kollmeier, G. Klump, V. Hohmann, U. Langeman, M. Mauermann, S. Uppenkamp and J. Verhey (Eds.). Springer-Verlag.
- Messing, DP, Delhorne, LA, Bruckert, E, Braida, LD and Ghitza, O (2009). A Non-linear Efferent-Inspired Model of the Auditory System: Matching Human Confusions in Stationary Noise, Speech Communication.
- Desloge JG, Reed CM, Braida LD, Perez ZD, Delhorne LA (2010). Speech Reception by Listeners with Real and Simulated Hearing Impairment: Effects of Continuous and Interrupted Noise, J. Acoust. Soc. Am.128(1), 342-59..
- Desloge JG, Reed CM, Braida LD, Perez ZD and Delhorne LA and (2011). Temporal Modulation Transfer Functions for Listeners with Real and Simulated Hearing Loss. J. Acoust. Soc. Am. 129, 3884-96.

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- Desloge JG, Reed CM, Braida LD, Perez ZD and Delhorne LA (2011). Temporal Masking Functions for Listeners with Real and Simulated Hearing Loss, J. Acoust. Soc. Am. 130, 915-32.
- Desloge JG, Reed CM, Braida LD, Perez ZD and Delhorne LA (2012). Auditory-Filter Characteristics for Listeners with Real and Simulated Hearing Impairment. Trends Amplif. 16, 19-39.
- Goldwworthy, RL, Delhorne, LA, Braida, LD, Reed, CM. (2013). Relations between Psychoacoustic and Phoneme Identification Measures in Normal Hearing and Cochlear Implant Users. Trends in Amplif..