

**CURRICULUM VITAE**  
**Karen A. Doherty, Ph.D.**

**Professional Address**

Communication Sciences and Disorders  
Syracuse University  
805 S. Crouse Ave.  
Syracuse, NY 13244-2280  
(315) 443-5662  
e-mail: kadohert@syr.edu

**Education**

University of Rhode Island	B.S.	Communicative Disorders	1985
University of Connecticut	M.S.	Audiology	1987
University of Wisconsin-Madison	Ph.D.	Audiology	1994

**Professional Experience**

Associate Professor, Department of Communication Sciences & Disorders, Syracuse University  
2001- present

Institute for Sensory Research Member, Syracuse University 2002- present  
Gerontology Faculty Affiliate, Syracuse University, 2007- present

Assistant Professor, Department of Communication Sciences & Disorders, Syracuse University  
1996-2001

Visiting Assistant Professor, University of Rochester, School of Medicine and Dentistry –  
Otolaryngology Division, 2000-2001

Research Associate (postdoctoral work), Syracuse University, 1994-1996

University of Wisconsin-Madison, Waisman Center

Research Assistant in the Auditory Behavioral Research Lab (Dr. Robert Lutfi) 1990-1994  
Research Assistant in Language Lab (Dr. Robin Chapman) 1993-1994

University of Wisconsin-Madison, Doctoral Student, Department of Education Doctoral Training,  
1989-1991

Clinical Audiologist, Wethersfield Hearing Center, Wethersfield, CT, 1987-1989

## **Teaching Experience**

Syracuse University, Communication Sciences & Disorders (1995-present)

- Freshmen Forum
- Advanced Clinical Audiology
- Hearing Aids I
- Hearing Aids II
- Fundamentals of Hearing Science
- Psychoacoustics
- Speech Perception and Psychoacoustics

University of Wisconsin- Madison: Department of Communicative Disorders (1992-1993)

- Introduction to Audiology
- Introduction to Communicative Disorders

## **Supervising Experience**

Syracuse University- Gebbie Speech and Hearing Clinic (1995-1996)

Waisman Center, University of Wisconsin-Madison (1992-1995)

Weathersfield Hearing Center- supervised University of Connecticut students (1988)

## **Awards**

Department of Health and Human Services Fellowship, University of Connecticut (1987)

Department of Education Traineeship, University of Wisconsin- Madison (1989 - 1991)

Partners of the Americas Meritorious Service Award (1991)

Rotary International Group Study Exchange Scholarship - Indonesia (1993)

National Student Speech-Language Hearing Association local chapter outstanding faculty member award (2000)

Excellence in Graduate Education Faculty Recognition Award (2007)

## **Grants**

Partners of the Americas, Washington, D.C. - *Health Grant for Orphans in Nicaragua* (1991)

American Speech-Language-Hearing Foundation New Investigator Award (\$4,000)

*“Weighting Strategies Listeners Use To Perceive Speech”* (1995)

National Institutes of Health (NIDCD)-F32 Postdoctoral grant (\$21,334) *“Weighting Strategies Used to Perceive Speech”* (1996-1997) Grant # F32 DC00212-01A1

National Organization of Hearing Research (NOHR) (\$10,000) “*Exploration of a New Method for Maximizing the Benefit of Hearing Aids*” (1998)

SSI International (\$20,000) “*Speech Recognition of Time-Compressed Speech*” (1998-1999)

National Institutes of Health (NIDCD) – Program project grant (TDIC - \$4,500,000) (Co-PI; 15% effort) “*Intensity Effect in the Auditory and Tactile Systems*”. April 1996-April 2001.

Vision Grant; Syracuse University (\$12,600) 1999-2000

Deafness Research Foundation (DRF) (\$20, 000) “*Effects of age on using spectral information in speech.*” 2001-2002

Schnellner Grant; Syracuse University (\$4,000) “*Relationship Between Hearing Aid Knowledge and Hearing Aid Satisfaction*” 2003

National Institutes of Health (NIDCD) (\$286,518) (Co-PI) “*Physiologically-based signal processing schemes*” (2003-2004). Grant # R21 DC006057

National Organization of Hearing Research (NOHR) (\$20,000) “*Sparse Spectral Processing for Listeners with Hearing Loss* ” (2006)

Gerontology Center Summer Seed Grant, Syracuse University (\$5,000) “*The Effect of Age on How Listeners Process Speech*” (2007).

### **Professional Service**

Audiology Consultant, S.U.N.Y Health Science Center at Syracuse, NY.

Comprehensive health study on premature infants 1995-1996

Consultant on a series of five articles on hearing loss and hearing aids published in the Sunday Herald Journal, Syracuse, NY 1999-2000.

Editorial Consultant for Hearing, Journal of Speech and Hearing Research, 1996-2003

Adhoc Reviewer for Experimental Aging Research 2002

ASHA Student Research Travel Shadow Mentor 2003

Adhoc Reviewer for Ear and Hearing, 1999- 2002

Adhoc Reviewer for Journal of the Acoustical Society of America, 1996-present

Guest Section Editor for Ear and Hearing 2002- 2006

Adhoc Reviewer for Journal of Speech and Hearing Research, 2003- present

Adhoc Reviewer for American Journal of Audiology 2005- present

Department of Veteran Affairs: Scientific Review and Evaluation Board  
Committee Member 2005-2007

Section editor at-large for Ear and Hearing 2007- present

American Academy of Audiology Honors Committee 2009-2012

### **School and University Service**

SU School of Education Research Apprenticeship Committee 1996-1998; 2000-2001

Department of Communication Sciences and Disorders –

Comprehensive Exams Committee (Chair) 1997-1999; member 2000-present

SU School of Education Scholarship Committee 1998-2000

SU School of Education Teaching Committee 2000-2001

Arts and Sciences Freshmen Forum Leader 2004

Department of Communication Sciences and Disorders –

Admissions Committee 1997-1999; 2002- present; Chair of admissions 2001;

Depart. of Communication Sciences and Disorders-Departmental Bylaws Committee 2002-present

Syracuse Hearing Center Committee member 2006-2007

Faculty Mentor 2005- present

Chair, Faculty Search Committee, Dept of Communication Sciences and Disorders 2008

Admissions Committee 1996- 2008 (Chair 1998, 2001, 2002, 2008)

Associate Chair, Dept of Communication Sciences and Disorders, SU 2007-present

## **Published Papers**

- Lutfi, R. A., & Doherty, K. A. (1994). Effect of component- relative-entropy on the discrimination of simultaneous tone complexes. Journal of the Acoustical Society of America, 96, 3443-3450.
- Doherty, K. A. & Lutfi, R. A. (1996). Spectral weights for overall level discrimination in listeners with sensorineural hearing loss. Journal of the Acoustical Society of America, 99,1053-1058.
- Lutfi, R.A., Doherty, K.A., and Oh, E. (1996). Psychometric functions for the discrimination of spectral variance. Journal of the Acoustical Society of America, 100, 2258-2265.
- Doherty, K. A. & Turner, C.W. (1996). Use of a correlational method to estimate a listener's weighting function for speech. Journal of the Acoustical Society of America, 100, 3769-3773.
- Lutfi, R.A. & Doherty, K.A. (1997). Modeling level discrimination of broadband signals by listeners with sensorineural hearing loss. In W. Jesteadt (Ed.), Modeling sensorineural hearing loss. New Jersey: Lawrence Erlbaum Associates, Inc.
- Turner, C.W. & Doherty, K.A. (1997). Temporal masking and the “active process” in normal and hearing-impaired listeners. In W. Jesteadt (Ed.), Modeling sensorineural hearing loss. New Jersey: Lawrence Erlbaum Associates, Inc.
- Huckins, S.C., Turner, C.W., Doherty, K.A., Fonte, M.M. & Szeverenyi, N.M. (1998). Functional Magnetic Resonance Imaging of blood flow patterns in human auditory cortex in response to speech. Journal of Speech, Language and Hearing Research, 41, 538-548.  
\* *Cited by The Hearing Journal as one of the best hearing science papers published in 1998.*
- Turner, C.W., Tanaka, C., Knapp, J., Kwon, B. & Doherty, K.A. (1998). Frequency weighting functions for NST speech materials as estimated by a correlational method. Journal of the Acoustical Society of America, 104, 1580-1585.
- Doherty, K.A. & Lutfi, R.A. (1999). Level discrimination of single tones in a broadband signal by normal-hearing and hearing-impaired listeners. Journal of the Acoustical Society of America, 105, 1831-1840.
- Shi, L., Carney L.H. and Doherty, K.A. (2006). Correction of the Peripheral Spatiotemporal Response Pattern: A Potential New Signal-Processing Strategy. Journal of Speech, Language and Hearing Research, 49, 848-855.
- Anzalone, M. C., Calandruccio, L., Doherty, K. A., & Carney, L. H. (2006). Determination of the Potential Benefit of Time-Frequency Gain Manipulation. Ear and Hearing, 27(5), 480-492.
- Shi, L.F., Doherty, K. A., & Zwislocki, J. J. (2007). Aided Loudness Growth and Satisfaction with Everyday Loudness Perception in Compression Hearing-Aid Users. Journal of American Academy of Audiology, 18, 206- 219.

Shi, L. F., Doherty, K. A., Kordas, T. M., & Pellegrino, J. T. (2007). Short- and Long-Term Hearing-Aid Benefit and User Satisfaction: A Comparison between Two Fitting Protocols. Journal of American Academy of Audiology, 18 (6), 482-495.

\* Cited by *The Hearing Journal Special Issue: Honoring the Year's Best Articles (June 2008) as one of the best hearing aid papers published in 2007.*

Calandruccio, L., and Doherty, K. A. (2007). Spectral weighting functions for sentences measured by a correlational method. Journal of the Acoustical Society of America, 121, 3827- 3836.

Calandruccio, L., Doherty, K. A., Carney, L. H., & Kikkeri, H. (2007). Perception of temporally processed speech by hearing-impaired listeners. Ear and Hearing, 28 (4), 512-523.

Calandruccio, L., and Doherty, K. A. (2008). Spectral weighting strategies for hearing-impaired listeners measured using a correlational method. Journal of the Acoustical Society of America, 123, 2367-2378.

Shi, L. and Doherty, K.A. (2008). Effect of Dynamic Compression Characteristics and Reverberation on Aided Speech Perception. Journal of Speech, Language and Hearing Research, 51 (5), 1-13.

Desjardins, J. L. and Doherty, K.A. (2009). Do experienced hearing aid users know how to correctly use their hearing aids? American Journal of Audiology, 8, 1-8.

### **Presented Papers**

Doherty, K. A., & Lutfi, R. A. (1991). Preliminary data on an auditory infogram. American Speech-Language-Hearing Association Annual Meeting, Atlanta, Ga.

Doherty, K.A., Barrett, K. & Goldstein, R. (1991). Effect of sample size on early event-related potentials. American Speech-Language-Hearing Association Annual Meeting, Atlanta, Ga.

Doherty, K. A., & Lutfi, R. A. (1992). Pure-tone infograms measured in listeners with sensorineural hearing loss. Abstracts of the Fifteenth Midwinter Research Meeting Association for Research in Otolaryngology, St. Petersburg Beach, Florida.

Doherty, K. A., & Lutfi, R. A. (1992). Efficiency of analytic versus synthetic listening in spectral pattern discrimination. 124th Meeting of the Acoustical Society of America, New Orleans, Louisiana.

Nellis, R.A., Doherty, K.A. & Pearson, K. (1992). Orphans, hearing loss, Wisconsin/Nicaragua: A partnership. American Speech-Language-Hearing Association Annual Conference, San Antonio, Texas.

- Doherty, K. A., & Lutfi, R. A. (1993). Spectral weighting functions in hearing-impaired listeners using COSS analysis. American Speech-Language-Hearing Association Annual Conference, Los Angeles, CA.
- Lutfi, R. A., & Doherty, K. A. (1994). The role of component- relative entropy in the discrimination of simultaneous tone complexes. 127th Meeting of the Acoustical Society of America, Cambridge, Massachusetts.
- Doherty K. A. & Lutfi, R. A. (1995). Efficiency of selective listening by normal-hearing and hearing-impaired listeners. 129th Meeting of the Acoustical Society of America, Washington, DC.
- Lutfi, R. A & Doherty, K. A. (1995). Modeling level discrimination of broadband signals by listeners with sensorineural hearing loss. Modeling Sensorineural Hearing Loss- Boys Town Conference, Omaha, Nebraska.
- Turner, C. W. & Doherty, K. A. (1995). Temporal masking and the "active process" in normal and hearing-impaired listeners. Modeling Sensorineural Hearing Loss- Boys Town Conference, Omaha, Nebraska.
- Doherty, K.A. & Turner, C.W. (1995). Effect of hearing loss on the use of speech cues. Hearing Aid Research and Development, National Institute of Health, Bethesda, Maryland.
- Huckins, S.C., Turner, C.W., Doherty, K.A. & Szeverenyi, N.C. (1996). Functional Magnetic Resonance Imaging of blood flow patterns in human auditory cortex in response to speech. Abstracts of the Nineteenth Midwinter Research Meeting Association for Research in Otolaryngology, St. Petersburg Beach, Florida.
- Turner, C. W. & Doherty, K. A. (1996). Frequency-weighting functions for speech recognition using a correlational approach. Issues in Advanced Hearing Aid Research, Lake Arrowhead, California.
- Doherty, K.A. and Turner, C.W. (1996). Weighting Strategies listeners use to perceive speech. American Speech-Language-Hearing Association Annual Conference, Seattle, WA.
- Page, A., Chapman, R., & Doherty, K.A. (1997). Screening tympanometry in Down Syndrome children and adults. American Academy of Audiology, Ft. Lauderdale, FL.
- Hogan, C.A. & Doherty, K.A. (1997). A Comparison of two methods that estimate how listeners use various frequency regions of speech. Hearing Aid Research and Development, National Institute of Health, Bethesda, Maryland.
- Doherty, K.A. & Hogan, C.A. (1997). Importance of speech bands as estimated from two methods. American Speech-Language-Hearing Association Annual Conference, Boston, MA.

- Doherty, K.A. (1998). Listening strategies used to process complex auditory signals. SUNY Health Science Center Neuroscience Seminar, Syracuse, NY.
- Doherty, K.A. (1998). Amplification: Advances in science and instrumentation. SUNY Health First Annual Summer Symposium Communication Disorder Unit SUNY Health Science Center, Syracuse, NY.
- Doherty, K.A. (1998). Research Town Meeting. American Speech-Language-Hearing Association Fall Conference, San Antonio, Texas.
- Doherty, K.A., Sproveri, L. & Zubrowski, T. (1999). Manipulation of spectral information in speech. American Auditory Society Meeting, Scottsdale, AZ.
- Doherty, K.A. (1999). Strategies listeners use to process complex auditory signals: Potential application for fitting hearing aids. Bill Wilkerson Center Seminar, Vanderbilt University, Nashville, TN.
- Doherty, K.A., Zubrowski, T & Piskosz, M. (1999). Recognition of time-compressed speech. NYSSLHA Convention, Syracuse, NY.
- Doherty, K.A. (1999) Auditory processing strategies normal-hearing and hearing-impaired listeners use to perceive speech. Lake Ontario Hearing Meeting, Syracuse, NY.
- Doherty, K.A. (2000) Use of amplification for processing spectral information in speech. University of Maryland, College Park , Maryland.
- Doherty, KA and Kordas, T. (2000). Aided and unaided use of spectral information in speech. American Auditory Society Meeting, Scottsdale, AZ.
- Kordas, T. and Doherty, K.A. (2000). Listening strategies used to process amplified speech. American Speech-Language-Hearing Association Annual Conference, Washington D.C.
- Doherty, K.A. and Kordas, T. (2000). Hearing-impaired listeners' response times and patterns of speech errors. American Speech-Language-Hearing Association Annual Conference, Washington D.C.
- Doherty, K.A., Desjardins, J. , and Huckins, S. (2001). Application of fMRI Using Central Auditory Processing Tests. American Speech-Language-Hearing Association Annual Conference, New Orleans, Louisiana.
- Doherty, K.A. and Duffus, L. (2002). Factors that contribute to age-related changes on speech in noise tasks. American Speech-Language-Hearing Association Annual Conference, Atlanta, Georgia

- Doherty, K.A. and Shi, L. (2003). Speech error patterns of normal-hearing and hearing-impaired listeners. New York State Speech Language Hearing Association Conference, Latham, NY.
- Shi, L. and K.A. Doherty (2003). Loudness Growth as a function of WDRC amplification American Speech-Language-Hearing Association Annual Conference, Chicago, IL.
- Shi, L. , Carney,L.H. & Doherty, K.A. (2004). Correcting Sound for the Hearing-Impaired: A Physiologically-Based Signal-Processing Strategy. American Auditory Society Meeting, Scottsdale, AZ.
- Carney,L.H., Shi, L. , & Doherty, K.A. (2004). A hearing-aid signal-processing scheme based on the temporal aspects of compression. 147th Meeting of the Acoustical Society of America, New York, New York.
- Doherty, K. A., Shi, L., Kordas,, T. M., Pellegrino, J. T. (2004). Hearing aid fitting protocols: adjustments in amplification and patient satisfaction. American Speech-Language-Hearing Association Annual Conference, Philadelphia, PA.
- Anzalone, M. C., Doherty, K.A. and Carney, L.H. (2005). Potential benefit to intelligibility of time-frequency gain manipulation. American Auditory Society Meeting, Scottsdale, AZ.
- Calandruccio, L., Doherty, K. A., Kikkeri, H.N., and Carney, L.H. (2005). Perception of temporally processed speech by hearing-impaired listeners. American Auditory Society Meeting, Scottsdale, AZ.
- Calandruccio, L., Kikkeri, H.N. Carney, L.H., and Doherty, K. A (2005). Temporally processed speech – preference and intelligibility results of listeners with hearing impairment. Lake Ontario Auditory Neuroscience (LOAN) meeting, McMaster University, Hamilton, ON
- Shi, L., Doherty, K.A., Kordas,, T. M., Pellegrino, J. T. (2005). Short & Long-Term Hearing-Aid Satisfaction Using Two Fitting Protocols. American Speech-Language-Hearing Association Annual Conference, San Diego,CA.
- Lalor, K. A., Calandruccio, L. and Doherty, K. A (2006). How listeners use information in sentences versus vowel consonants. Mayfest, Syracuse University, Syracuse, N.Y.
- Calandruccio, L. and Doherty, K. A. (2006). Spectral weighting strategies for listeners with normal hearing. American Auditory Society Meeting, Scottsdale, AZ.
- Shi, L. and Doherty, K.A. (2006). Effect of Dynamic Compression Characteristics on Listeners' Perception of Reverberant Speech. International Hearing Aid Research Conference. Lake Tahoe, CA

- Calandruccio, L. and Doherty, K. A. (2006). How Listeners With & Without Hearing Loss Process Sentences. American Speech-Language-Hearing Association Annual Conference, Miami, FL.
- Shi, L. and Doherty, K.A. (2006). Syllabic and Dual Compression hearing aid settings: A field study. American Speech-Language-Hearing Association Annual Conference, Miami, FL.
- Calandruccio, L., and Doherty, K. A. (2007). Effect of overall level on spectral weighting strategies for speech. American Auditory Society Meeting, Scottsdale, AZ.
- Doherty, K. A. and Desjardins, J. (2007). A novel test for assessment of practical hearing aid skills. American Auditory Society Meeting, Scottsdale, AZ.
- Sled, A. and Doherty, K.A. (2007). Presentation level effects on listeners' weighting strategies for speech. American Speech-Language-Hearing Association Annual Conference, Boston, MA.
- Doherty, K. A. and Desjardins, J. (2007). Relationship between practical and self reported hearing aid knowledge. American Speech-Language-Hearing Association Annual Conference, Boston, MA.
- Desjardins, J.L., Calandruccio, L. and Doherty, K.A. (2008). Aging effects on the processing of spectral information in speech. American Auditory Society Meeting, Scottsdale, AZ.
- Doherty, K.A. (2008). The Aging Ear. Summer Institute: Age and engagement in the classroom. Syracuse University, Syracuse, NY
- Doherty, K.A. and Desjardins, J. L. (2008). Age effects on listening strategies used to process time-compressed speech. American Speech-Language-Hearing Association Annual Conference, Chicago, IL.
- Doherty, K.A., Sled, A. and Calandruccio, L (2009). Spectral weighting strategies for speech features at various presentation levels American Auditory Society Meeting, Scottsdale, AZ.
- Desjardins, J., Jenner, A., Huckins, S., Doherty, K. (2009). Functional neuroanatomy associated with auditory temporal processing in older adults. American Auditory Society, Scottsdale, AZ.
- Milczarski, B.A., Smith, R.L. and Doherty, K.A. (2009). Simulating hair-cell adaptation in cochlear implant processors.

**Licensures and Certifications**

Certificate of Clinical Competence in Audiology (CCC-A), 1988 - present

New York State Audiology License, 1994 - present

New York State Hearing Aid Dispensing License, 1994 - present

**Professional Affiliations**

American-Speech-Language-Hearing Association

Acoustical Society of America

American Auditory Society

Central New York Speech-Language-Hearing Association