

CURRICULUM VITAE

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Education:

1970-1972 Postdoctoral Fellow, Institute for Perception, Soesterberg, The Netherlands, Psychophysics
1966-1970 Ph.D., University of California, San Diego, California, Psychology
1960-1965 B.A., Haverford College, Haverford, Pennsylvania, Psychology

Employment:

2003-present Heuser Hearing Research Endowed Chair, University of Louisville
2003-present Professor of Surgery, University of Louisville
2003-present Professor of Psychology & Brain Sciences, University of Louisville
2001-2002 Deputy Director, Waisman Center, University of Wisconsin-Madison.
1989-2000 Associate Director, Waisman Center, University of Wisconsin-Madison.
1984-2003 Professor of Psychology, University of Wisconsin-Madison.
1981-1984 Professor of Psychology and Communicative Disorders, Northwestern University.
1976-1981 Associate Professor of Psychology and Communicative Disorders, Northwestern University.
1975-1976 Assistant Professor of Psychology and Communicative Disorders Northwestern University.
1973-1975 Assistant Professor of Audiology, Northwestern University.
1972-1973 Research Psychologist, Center for Human Information Processing, University of California-San Diego.
1970-1972 NSF Postdoctoral Fellow, Institute for Perception, Soesterberg, Netherlands.
1967-1970 NIH Predoctoral Fellow, University of California.
1966-1967 Graduate Research Assistant, Dr. David M. Green, University of California at San Diego
1965-1966 Psychology Department Assistant, Haverford College.

Other Professional Activities:

National Review Committee Service:

1980-1984 NIH Communicative Disorders Review Committee (Study Section), N.I.N.C.D.S.
1982, 1987-1990 National Science Foundation Advisory Committee, Sensory Sciences Panel.

Editorships:

1979-1984 Associate Editor for Psychological and Physiological Acoustics, Journal of the Acoustical Society of America.

Ad-Hoc Reviewer Service (within last 5 years):

Journal of the Acoustical Society of America
Journal of Neuroscience Methods
Nature
Nature: Neuroscience
Science
Ear and Hearing
Journal of Speech and Hearing Research
Perception and Psychophysics
Behavior Research Methods and Instrumentation
NIDCD (site visits and ad-hoc reviews)
NICHD (site visits)
NIMH
National Science Foundation
Air Force Office of Scientific Research

Society Memberships:

Fellow, Acoustical Society of America
Member, Sigma Xi, AAUP, ARO, AAAS, ASHA, SRCD
American Statistical Association

National Committee Memberships:

1984-1987 Chairman, Technical Committee on Physiological and Psychological Acoustics, Acoustical Society of America.
1977-1984 Committee on Hearing and Bioacoustics (CHABA), National Research Council.
1983-1987 Technical Committee on Physiological and Psychological Acoustics, Acoustical Society of America.
1974-1977 Technical Committee on Physiological and Psychological Acoustics, Acoustical Society of America.
1978 Consultant, U.S. House of Representatives Committee on Assassinations.

Honors:

1976-1982 G.U.V. (Honorary society of experimental psychologists)

Research Grants Awarded:

2001-2006	Co-PI	\$5,375,731	NICHD	Center Grant, "Wisconsin Center on Mental Retardation -Core Support"
2001	Co-PI	\$36,000	UW Center for Human Performance	Research Grant "Predicting Outer Ear Acoustics from Photographs"
1999-2004	PI	\$584,888	NICHD	Research Grant "Hearing Assessment in Preschool and School-Aged Children"
1999-2004	Co-PI	\$790,386	NIDCD	Program Project Grant, Project 5: "Studies of Human Sound Localization"
1997-2001	PI	\$277,772	NASA	Research Grant "Psychophysical Evaluation of Three-Dimensional Auditory Displays"
1997	PI	\$25,000	Rockwell Semi-Conductor	Research Grant, "Large Sample HRTF Measurements"
1996-2001	Co-PI	\$4,135,458	NICHD	Center Grant, "Wisconsin Center on Mental Retardation -Core Support"
1996-2000	PI	\$188,248	ONR	Research Grant, "Enhancing Situational Awareness with Virtual Auditory Displays"
1996	PI	\$30,000	Rockwell Semi-Conductor	Research Grant, "3D Audio Research"

1994-1999	Co-PI	\$536,951	NIDCD	Program Project Grant, Project 5: "Studies of Human Sound Localization"
1994-1997	PI	\$316,837	NASA	Research Grant, "Psychophysical Evaluation of Three-Dimensional Auditory Displays"
1992-1999	PI	\$397,765	NICHHD	Research Grant "Hearing Assessment in Preschool and School-Aged Children"
1992-1994	PI	\$159,998	ONR	Research Grant "Development and Evaluation of High Resolution Virtual Auditory Displays"
1991-1995	Co-PI	\$3,359,590	NICHHD	Center Grant, "Wisconsin Center on Mental Retardation -Core Support"
1991-1994	PI	\$402,370	NASA	Research Grant "Psychophysical Evaluation of 3-Dimensional Auditory Displays"
1989-1994	Co-PI	\$209,091	NIDCD	Program Project Grant, Project 9: "Studies of Human Sound Localization"
1989-1992	PI	\$267,982	NICHHD	Research Grant "Hearing Assessment in Preschool and School-Aged Children"
1988-1991	PI	\$239,314	NASA	Research Grant "Psychophysical Evaluation of 3-Dimensional Auditory Displays"
1988-1989	PI	\$53,106	AFOSR	Contract (MacAuley-Brown) "Field Measurement of Head Related Transfer Function"
1987-1990	PI	\$363,000	NSF	Shared Equipment Grant "Neurosciences Research Computing Network"
1987-1988	PI	\$34,966	NIHR	Research Grant "Hearing Problems in Children: New Techniques for Assessment and Early Intervention"
1987-1989	PI	\$38,635	DRF	Research Grant "Development of complex Auditory Skills in Non-Compromised Children and in Children with Developmental Disabilities"
1986-1988	PI	\$62,500	NASA	Research Grant "Rules for Simulation of Auditory Space Over Headphones"
1985-1986	PI	\$213,999	AFOSR	Individual Equipment Grant "High Speed Precision Digital Signal Processing System"
1984-1987	PI	\$358,174	NINCDS	Research Grant "Human Sound Localization"
1979-1984	PI	\$250,000	NSF	Research Grant "Auditory Space Perception"
1975-1980	PI	\$150,000	NINCDS	Teacher-Investigator Award: "Pitch Perception"
1974-1979	PI	\$185,000	NINCDS	Research Grant "Auditory Spectral Pattern Perception - Pitch Perception"

Publications:

Refereed Journal Articles:

46. Lutfi, R. A., Kistler, D. J., Wightman, F. L., & Callahan, M. R. (2003). Psychometric functions for informational masking. Journal of the Acoustical Society of America, 114, 3273-3282.
45. Lewis, J. W., Wightman, F. L., Brefczynski, J. A., Phinney, R. E., Binder, J. R., & DeYoe, E. A. (2003). Human brain regions involved in recognizing environmental sounds. Cerebral Cortex, in press.
44. Wightman, F. L., Callahan, M. R., Lutfi, R. A., Kistler, D. J., & Oh, E. (2003). Children's detection of pure-tone signals: Informational masking with contralateral maskers. Journal of the Acoustical Society of America, 113, 3397-3305.
43. Lutfi, R. A., Kistler, D. J., Oh, E. L., Wightman, F. L., & Callahan, M. R. (2003). One factor underlies age-related differences in informational masking. Perception & Psychophysics, 65, 396-406.
42. Oh, E. L., Wightman, F. L., & Lutfi, R. A. (2001). Children's detection of pure-tone signals with random multitone maskers. Journal of the Acoustical Society of America, 109, 2888-2895.

41. Langendijk, E.H.A., Wightman, F. L., & Kistler, D. J. (2001). Sound localization in the presence of one or two distracters. Journal of the Acoustical Society of America, 109, 2123-2134.
40. Zahorik, P. A., & Wightman, F. L. (2001). Loudness constancy with varying sound source distance. Nature Neuroscience, 4, 78-83.
39. Wightman, F. L., & Kistler, D. J. (1999). Resolution of front-back ambiguity in spatial hearing by listener and source movement. The Journal of the Acoustical Society of America, 105, 2841-2853.
38. Wightman, F. L., & Kistler, D. J. (1998). Of vulcan ears, human ears and 'earprints.' Nature Neuroscience, 1, 337-339.
37. Willihnganz, M. S., Stellmack, M. A., Lutfi, R. A., & Wightman, F. L. (1997). Spectral weights in level discrimination by preschool children: Synthetic listening conditions. Journal of the Acoustical Society of America, 101, 2803-2810.
36. Stellmack, M. A., Willihnganz, M. S., Wightman, F. L., & Lutfi, R. A. (1997). Spectral weights in level discrimination by preschool children: Analytic listening conditions. Journal of the Acoustical Society of America, 101, 2811-2821.
35. Wightman, F. L. & Kistler, D. J. (1997). Monaural sound localization revisited. Journal of the Acoustical Society of America, 101, 1050-1063.
34. Allen, P., & Wightman, F. L. (1995). Effects of signal and masker uncertainty on children's detection. Journal of Speech and Hearing Research, 38, 503-511.
33. Allen, P., & Wightman, F. L. (1994). Psychometric functions for children's detection of tones in noise. Journal of Speech and Hearing Research, 37, 205-215.
32. Wenzel, E. M., Arruda, M., Kistler, D. J. & Wightman F. L. (1993). Localization using nonindividualized head-related transfer functions. Journal of the Acoustical Society of America, 94, 111-123.
31. Wightman, F. L., & Kistler, D. J. (1992). The dominant role of low-frequency interaural time differences in sound localization. Journal of the Acoustical Society of America, 91, 1648-1661.
30. Kistler, D. J., & Wightman, F. L. (1992). A model of head-related transfer functions based on principal components analysis and minimum-phase reconstruction. Journal of the Acoustical Society of America, 91, 1637-1647.
29. Allen, P., & Wightman, F. L. (1992). Spectral pattern discrimination by children. Journal of Speech and Hearing Research, 35, 222-235.
28. Wightman, F. L., & Kistler, D. J. (1989). Headphone simulation of free-field listening II: psychophysical validation. Journal of the Acoustical Society of America, 85, 868-878.
27. Wightman, F. L., & Kistler, D. J. (1989). Headphone simulation of free-field listening I: stimulus synthesis. Journal of the Acoustical Society of America, 85, 858-867.
26. Wightman, F. L., Allen, P., Dolan, T. R., Kistler, D. J., & Jamieson, D. (1989). Temporal resolution in children. Child Development, 60, 611-624.
25. Sorkin, R. D., Wightman, F. L., Kistler, D. J., & Elvers, G. C. (1989). An exploratory study of the use of movement-correlated cues in an auditory heads-up display. Human Factors, 31, 161-166.
24. Allen, P., Wightman, F. L., Kistler, D. J., & Dolan, T. R. (1989). Frequency resolution in children. Journal of Speech and Hearing Research, 32, 317-322.
23. Wenzel, E. M., Wightman, F. L., & Foster, S. H. (1988). Development of a three-dimensional auditory display system. SIGCHI Bulletin, 20, 52-57.
22. Lutfi, R. A., & Wightman, F. L. (1985). A comparison of psychophysical tuning curves obtained using bandpass and modulated noise. Hearing Research, 17, 289-291.

21. Raz, I. R., & Wightman, F. L. (1984). Adaptive estimation of phoneme boundaries and selective adaptation for speech. Perception and Psychophysics, 36, 21-24.
20. McFadden, D., & Wightman, F. L. (1983). Audition: Some relations between normal and pathological hearing. Annual Review of Psychology, 34, 95-128
19. Krulee, G. K., Tondo, D., & Wightman, F. L. (1983). Speech perception as a multi-level processing system. Journal of Psycholinguistic Research, 12, 531-554.
18. Gordon-Salant, S., & Wightman, F. L. (1983). Speech competition effects on synthetic stop-vowel perception by normal and hearing-impaired listeners. Journal of the Acoustical Society of America, 73, 1756-1765.
17. Fitzgibbons, P., & Wightman, F. L. (1982). Gap detection in normal and hearing-impaired listeners. Journal of the Acoustical Society of America, 72, 761-765.
16. Hawkins, D. B., & Wightman, F. L. (1980). Interaural time discrimination ability of listeners with sensorineural hearing losses. Audiology, 19, 495-507.
15. Grantham, D. W., & Wightman, F. L. (1979). Auditory motion after effects. Perception and Psychophysics, 26, 403-408.
14. Grantham, D. W., & Wightman, F. L. (1979). Detectability of a pulsed tone in the presence of a masker with time-varying interaural correlation. Journal of the Acoustical Society of America, 65, 1509-1517.
13. Grantham, D. W., & Wightman, F. L. (1978). Detectability of varying interaural temporal differences. Journal of the Acoustical Society of America, 63, 511-523.
12. Block, M., & Wightman, F. L. (1977). A statistically-based measure of the acoustic reflex and its relation to stimulus loudness. Journal of the Acoustical Society of America, 61, 120-125.
11. Patterson, R. D., & Wightman, F. L. (1976). Residue pitch as a function of component spacing. Journal of the Acoustical Society of America, 59, 1450-1459.
10. Green, D. M., Wier, C. C., & Wightman, F. L. (1975). Gold and Pumphrey revisited, again. Journal of the Acoustical Society of America, 57, 935-938.
9. Wightman, F. L., & Green, D. M. (1974). The perception of pitch. American Scientist, 62(2), 208-215.
8. Wightman, F. L. (1973). The pattern-transformation model of pitch. Journal of the Acoustical Society of America, 54, 407-416.
7. Wightman, F. L. (1973). Pitch and stimulus fine-structure. Journal of the Acoustical Society of America, 54, 397-406.
6. Leshowitz, B., & Wightman, F. L. (1972). On the importance of considering the signal's frequency spectrum: some comments on Macmillan's "Detection and recognition of increments and decrements in auditory intensity" experiment. Perception and Psychophysics, 12, 209-210.
5. Yost, W. A., Wightman, F. L., & Green, D. M. (1971). Lateralization of filtered clicks. Journal of the Acoustical Society of America, 50, 1526-1531
4. Wightman, F. L. (1971). Detection of binaural tones as a function of masker bandwidth. Journal of the Acoustical Society of America, 50, 623-636. This paper was based on a Ph.D. thesis of the same title, University of California, San Diego, 1970.
3. Norman, D. A., Phelps, R., & Wightman, F. L. (1971). Some observations on underwater hearing. Journal of the Acoustical Society of America, 50, 544-548.
2. Leshowitz, B., & Wightman, F. L. (1971). On-frequency masking with continuous sinusoids. Journal of the Acoustical Society of America, 49, 1180-1190.

1. Wightman, F. L. (1969). Binaural masking with sine-wave maskers. Journal of the Acoustical Society of America, *45*, 72-78.

Book Chapters:

10. Wightman, F. L. & Kistler, D. J. (1997). Factors affecting the relative salience of sound localization cues. In R. Gilkey and T. Anderson (Eds.), Binaural and Spatial Hearing, (pp. 1-23). Mahwah, NJ: Lawrence Erlbaum Associates, Inc..
9. Wightman, F. L. & Jenison, R. (1995). Auditory Spatial Layout. In W. Epstein & S. J. Rogers (Eds.), Handbook of Perception and Cognition, Volume 5: Perception of Space and Motion, (pp. 365-399). New York: Academic Press.
8. Wightman, F. L., & Kistler, D. J. (1993). Sound localization. In W. Yost, A. Popper and R. Fay (Eds.), Springer Handbook of Auditory Research: Human Psychophysics, (pp. 155-192). New York: Springer-Verlag.
7. Wightman, F. L., & Allen, P. (1992). Individual differences in auditory capability among preschool children. In L. A. Werner & E. W. Rubel (Eds.), Developmental Psychoacoustics, (pp. 113-133). Washington, DC: American Psychological Association.
6. Wightman, F. L., Kistler, D. J., & Perkins, M. E. (1987). A new approach to the study of human sound localization. In W. A. Yost and G. Gourevitch (Eds.), Directional Hearing, (pp. 26-48). New York: Springer-Verlag.
5. Wightman, F. L. (1982). Psychoacoustic correlates of hearing loss. In D. Henderson, R. Salvi, & R. Hamernik (Eds.), New Perspectives on Noise-Induced Hearing Loss, (pp. 375-394). New York: Raven Press.
4. Wightman, F. L. (1981). Pitch perception: An example of auditory pattern recognition. In D. J. Getty & J. H. Howard, Jr. (Eds.), Auditory and Visual Pattern Recognition, (pp. 3-25). Hillsdale: Erlbaum Press.
3. Wightman, F. L., & Kistler, D. J. (1980). A new "look" at auditory space perception. In G. van den Brink and F. A. Bilsen (Eds.), Psychophysical, Physiological, and Behavioral Studies in Hearing, (pp. 441-448). Delft: Delft University Press.
2. Wightman, F. L. (1978). The minicomputer and research in hearing. In M.S. Mayzner & T. R. Dolan (Eds.), Minicomputers in Sensory and Information Processing Research, (pp. 161-193). Hillsdale: Erlbaum Press.
1. Wightman, F. L., McGee, T., & Kramer, M. (1977). Factors influencing frequency selectivity in normal and hearing-impaired listeners. In E. F. Evans & J. P. Wilson (Eds.), Psychophysics and Physiology of Hearing (pp. 295-310). New York: Academic Press.

Conference Proceedings:

14. Wightman, F. L., Kistler, D. J., & Zahorik, P. A., (2001). Issues and non-issues in the production of high-resolution auditory virtual environment. In M. J. Smith, G. Salvendy, D. Harris, & R. J. Koubek (Eds.), Proceedings of the 9th Human-Computer Interaction International Conference: Usability Evaluation and Interface Design, Volume 1, New Orleans. (pp. 594-596). Mahwah, New Jersey: Lawrence Erlbaum Associates.
13. Wightman, F. L., Kistler, D. J., Langendijk, E. H. A., Macpherson, E. A., & Zahorik, P. A. (1997). Role of sound localization in human navigation. In Michael K. McBeath (Ed.), Spatial Navigational Principles used by Humans, Animals, and Machines. (Unpublished conference proceeding).
12. Zahorik, P. A., Wightman, F. L., & Kistler, D. J. (1995). On the discriminability of virtual and real sound sources. Proceedings of the ASSP (IEEE) Workshop on applications of Signal Processing to Audio and Acoustics. New York: IEEE Press.
11. Zahorik, P. A., Kistler, D. J., Wightman, F. L. (1995). Sound localization in varying virtual acoustic environments. In G. Kramer (Ed.), Proceedings of the Second International Conference on Auditory Display, ICAD '94, Santa Fe, NM, 179-186.

10. Wightman, F. L., & Kistler, D. J. (1993). Multidimensional Scaling Analysis of Head-Related Transfer Functions. Proceedings of the ASSP (IEEE) Workshop on Applications of Signal Processing to Audio and Acoustics. New York: IEEE Press.
9. Wightman, F. L., & Kistler, D. J. (1991). Localization of virtual sound sources synthesized from model HRTFs. Proceedings of the ASSP (IEEE) Workshop on Applications of Signal Processing to Audio and Acoustics. New York: IEEE Press.
8. Wenzel, E. M., Wightman, F. L., & Kistler, D. J. (1991). Localization of nonindividualized virtual acoustic display cues. Proceedings of the CHI'91 ACM Conference on Computer-Human Interaction (pp. 351-359). New York: ACM Press.
7. Wightman, F. L., & Kistler, D. J. (1990). Hearing in three dimensions: sound localization. Proceedings of the AES 8th International Conference: The Sound of Audio (pp. 21-26). New York: AES Press.
6. Wenzel, E. M., Foster, S. H., Wightman, F. L., & Kistler, D. J. (1989). Realtime synthesis of localized auditory cues. Proceedings of the CHI'89, ACM Conference on Computer Human Interaction. New York: ACM Press.
5. Wenzel, E. M., Foster, S. H., Wightman, F. L., & Kistler, D. J. (1989). Realtime digital synthesis of localized auditory cues over headphones. Proceedings of the ASSP (IEEE) Workshop on Applications of Signal Processing to Audio and Acoustics. New York: IEEE Press.
4. Wenzel, E. M., Wightman, F. L., & Foster, S. H. (1988). A virtual display system for conveying three-dimensional acoustic information. Proceedings of the Human Factors Society, 32, 86-90.
3. Wenzel, E. M., Foster, S. H., & Wightman, F. L. (1988). Development of a three-dimensional auditory display system. Proceedings of the CHI'88, ACM Conference on Human Factors in Computing Systems. New York: ACM Press.
2. Wightman, F. L. (1972). Pitch as auditory pattern-recognition. In B. L. Cardozo (Ed.), Symposium on Hearing Theory 1972, (pp. 161-171). Eindhoven, Holland: IPO.
1. Wightman, F. L. (1971). A model of perceived pitch based on weighted autocorrelation. Proceedings of the Seventh International Congress on Acoustics, Budapest, 361.

Book Reviews:

1. Wightman, F. L. (1998). Understanding the development of hearing. Contemporary Psychology, 43, 418-419.

Abstracts of Conference Presentations:

94. Lutfi, R. A., Kistler, D. J., Callahan, M. R., & Wightman, F. L. Psychometric functions for informational masking. (2003). Journal of the Acoustical Society of America, 113, 2288.
93. Wightman, F. L., Callahan, M. A., & Kistler, D. J. (2003). A cocktail-party listening experiment with children. Journal of the Acoustical Society of America, 113, 2208-2209.
92. Zahorik, P. A., Wightman, F. L., Ives, D. T., & Kistler, D. J. (2003). Precedence effects for varying source and echo locations. Abstracts of the 26th Midwinter Meeting, Association for Research in Otolaryngology.
91. Yu, G., Litovsky, R.Y., & Wightman, F.L. (2002). Localization of noise bursts in the medium plane: Effects of duration and level. Journal of the Acoustical Society of America, 111, 2356.
90. Lewis, J.W., Wightman, F.L., Junion Dienger, J.L., DeYoe, E.A. (2001). fMRI activation in response to the identification of natural sounds. Society for Neuroscience Abstracts, 27, Program No. 512.9.
89. Lutfi, R. A., Kistler, D. J., Oh, E. L., Callahan, M. R., Wightman, F. L. & Alexander, J. M. (2001). One factor underlies individual differences in informational masking. Journal of the Acoustical Society of America, 109, 2467.

88. Callahan, M. R., Wightman, F. L., & Lutfi, R. A. (2000). Informational masking in preschool and school-aged children. Abstracts of the 23rd Midwinter Meeting, Association of Research in Otolaryngology.
87. Wightman, F. L. & Kistler, D. J. (1999). Sound localization with unilaterally degraded spectral cues. Journal of the Acoustical Society of America, 105, 1162.
86. Wightman, F. L. & Kistler, D. J. (1999). Explaining individual differences in head-related transfer functions. Journal of the Acoustical Society of America, 105, 1036.
85. Oh, E. L., Wightman, F. L., & Lutfi, R. A. (1999). The effect of spatial separation on information masking in preschool children. Abstracts of the 22nd Midwinter Meeting, Association for Research in Otolaryngology.
84. Langendijk, E. H. A., Wightman, F. L., & Kistler, D. J. (1999). Sound localization in the presence of one or two distracters. Abstracts of the 22nd Midwinter Meeting, Association for Research in Otolaryngology.
83. Wightman, F. L. & Kistler, D. J. (1997). Perceptual validation of multimedia sound systems. Journal of the Acoustical Society of America, 102, 3097.
82. Wightman, F. L. & Kistler, D. J. (1997). Sound localization in the presence of multiple distracters. Journal of the Acoustical Society of America, 101, 3105.
81. Wightman, F. L. & Tucker, T. (1996). Accurate three-dimensional sound reproduction over headphones using Toltec processing. Journal of the Acoustical Society of America, 100, 2601-2602.
80. Zahorik, P., Wightman, F. L., and Kistler, D. J. (1996). The fidelity of virtual auditory displays. Journal of the Acoustical Society of America, 99, 2596.
79. Wightman, F. L. & Kistler, D. J. (1996). The perceptual relevance of individual differences in head-related transfer functions. Proceedings of Forum Acusticum 1996, Acta Acustica, 82, S92.
78. Wightman, F. L. & Kistler, D. J. (1996). Individual differences in human sound localization behavior. Journal of the Acoustical Society of America, 99, 2470.
77. Lutfi, R. A., & Wightman, F. L. (1996). Guessing or confusion?: Analytic predictions for two models of target-distracter interference in children. Abstracts of the 19th Midwinter Meeting, Association for Research in Otolaryngology, 142.
76. Popelka, G. R., Neely, S., Wightman, F. L., Miller, J. D., & Johnson, D. H. (1996). Science, scholarship, and communication via the internet. Abstracts of the 19th Midwinter Meeting, Association for Research in Otolaryngology, 204.
75. Stellmack, M. A., Willihnganz, M. S., Lutfi, R. A., & Wightman, F. L. (1995). Listening strategies of adults and children in discriminating target level differences as a function of distracter level. Abstracts of the 18th Midwinter Meeting, Association for Research in Otolaryngology, 60.
74. Wightman, F. L., Kistler, D. J., Foster, S. H., Abel, J. (1995). A comparison of head-related transfer functions measured deep in the ear canal and at the ear canal entrance. Abstracts of the 18th Midwinter Meeting, Association for Research in Otolaryngology, 61.
73. Wightman, F. L., & Kistler, D. J. (1994). The importance of head movements for localizing virtual auditory display objects. In G. Kramer (Ed.), Proceedings of the Second International Conference on Auditory Display, ICAD '94 (p. 283), Santa Fe, NM.
72. Wightman, F. L., Kistler, D. J., & Andersen, K. (1994). Reassessment of the role of head movements in human sound localization. Journal of the Acoustical Society of America, 95, 3003.
71. Jenison, R. L., Wightman, F. L., & Kistler, D. J. (1994). Self-organizing model of auditory maps. Abstracts of the 17th Midwinter Meeting, Association for Research in Otolaryngology, 70.
70. Wightman, F. L., Kistler, D. J., & Arruda, M. (1992). Perceptual consequences of engineering compromises in synthesis of virtual auditory objects. Journal of the Acoustical Society of America, 92, 2332.

69. McKinley, R. L., Ericson, M., Perrott, D., Brungart, D., Gilkey, R., & Wightman, F. L. (1992). Minimum audible angles for synthesized localization cues presented over headphones. Journal of the Acoustical Society of America, 92, 2297.
68. Arruda, M., Kistler, D. J., & Wightman, F. L. (1992). Origin and analysis of front-back confusions in human judgements of apparent sound direction. Abstracts of the 15th Midwinter Research Meeting, Association for Research in Otolaryngology, 68.
67. Wightman, F. L., Kistler, D. J., & Arruda, M. (1991). Monaural localization, revisited. Journal of the Acoustical Society of America, 89, 1995.
66. Kistler, D. J., & Wightman, F. L. (1990). Principal components analysis of head-related transfer functions. Journal of the Acoustical Society of America, 88, S98.
65. Wightman, F. L., & Kistler, D. J. (1990). Acoustical factors involved in classification of sound source position. ONR Conference on Bioacoustic Signal Classification, St. Petersburg Beach.
64. Wightman, F. L. (1990). Creating three-dimensional auditory space with headphones. Journal of the Acoustical Society of America, 87, 421.
63. Allen, P., & Wightman, F. L. (1990). Spectral resolution in children: More precision from repeated stimulus presentation. Abstracts of the 13th Midwinter Research Meeting, Association for Research in Otolaryngology, 170.
62. Wightman, F., Kistler, D. J., & Arruda, M. (1989). Hierarchy of sound localization cues revealed by experiments in a simulated free-field. Abstracts of the 12th Midwinter Research Meeting, Association for Research in Otolaryngology, 65.
61. Wightman, F. L., & Kistler, D. J. (1989). Acoustic determinants of the localizability of auditory objects. Meeting of the Midwestern Psychological Association.
60. Allen, P., & Wightman, F. L. (1989). Spectral pattern discrimination in children. Journal of the Acoustical Society of America, 85, S37.
59. Wightman, F. L., Kistler, D. J., Arruda, M., & Schwister, L. (1988). Sound localization without interaural time or intensity differences. Journal of the Acoustical Society of America, 83, S122.
58. Wightman, F. L., Kistler, D. J., & Arruda, M. (1988). Measurement and interpretation of head-related transfer functions. Sound Localization by Human Observers Symposium Proceedings. CHABA, National Academy Press.
57. Wightman F. L., & Kistler, D. J. (1988). Application of digital signal processing techniques to research on sound localization. Journal of the Acoustical Society of America, 83, S16-17.
56. Wightman, F. L., Allen, P., Kistler, D. J., & Dolan, T. R. (1988). Use of video games to assess auditory skills in preschool children. Abstracts from Proceedings of 8th IASSMD Congress, Trinity College, Dublin, Ireland.
55. Wenzel, E. M., Wightman, F. L., Kistler, D. J., & Foster, S. H. (1988). Acoustic origins of individual differences in sound localization behavior. Journal of the Acoustical Society of America, 84, S79.
54. Wenzel, E. M., Wightman, F. L., & Foster, S. H. (1988). Application of auditory spatial information to virtual display systems. Sound Localization by Human Observers Symposium Proceedings. CHABA, National Academy Press.
53. Wightman, F. L., Dolan, T. R., Allen, P., & Jamieson, D. (1987). Temporal resolution in preschool children. Journal of the Acoustical Society of America, 81, S34.
52. Wightman, F. L., Dolan, T. R., Allen, P., & Jamieson, D. (1987). Assessment of complex auditory perceptual skills in non-compromised children and children with developmental disabilities. Abstracts of the Tenth Midwinter Research Meeting, Association for Research in Otolaryngology, 93.
51. Wightman, F. L. (1987). Fundamentals of digital signal processing. Asha, 29, 70.

50. Wightman, F. L. (1987). Laboratory computing in an evolving hardware/software environment. Asha, 29, 65.
49. Allen, P., Wightman, F. L., & Kistler, D. J. (1987). Frequency resolution in preschool children. Asha, 29, 88.
48. Wightman, F. L., Perkins, M. E., & Allen, P. (1986). Spectral profile discrimination in the hearing impaired. Abstracts of the Ninth Midwinter Research Meeting, Association for Research in Otolaryngology, 147.
47. Wightman, F. L., Perkins, M. E., & Allen, P. (1985). Spectral profile analysis in the hearing impaired. Journal of the Acoustical Society of America, 78, S41.
46. Perkins, M. E., & Wightman, F. L. (1985). "Intensity attention bands" in normal and impaired listeners. Journal of the Acoustical Society of America, 77, S64.
45. Perkins, M. E., Kistler, D. J., & Wightman, F. L. (1984). Model of human sound localization based on spectral pattern recognition. Journal of the Acoustical Society of America, 75, S88.
44. Wightman, F. L., Raz, I., Velde, T., & Grose, J. (1983). Choice of stimulus parameters for measurement of auditory functions. Journal of the Acoustical Society of America, 74, S41.
43. Wightman, F. L., Kistler, D. J., & Walzcak, N. B. (1983). Localization in man -- importance of outer ear structures. Journal of the Acoustical Society of America, 73, S1.
42. Raz, I., Wightman, F. L., Grose, J., & Velde, T. (1983). Relations among auditory functions in normal listeners. Journal of the Acoustical Society of America, 74, S41.
41. Gordon-Salant, S., & Wightman, F. L. (1981). Speech perception by hearing-impaired listeners: Effects of speech maskers. Journal of the Acoustical Society of America, 69, S122.
40. Wightman, F. L., & Raz, I. (1980). Frequency selectivity as a function of sound pressure level. Journal of the Acoustical Society of America, 67, S8.
39. Wightman, F. L., & Kistler, D. J. (1980). Auditory space perception. Journal of the Acoustical Society of America, 68, S17.
38. Wightman, F. L. (1980). Frequency and temporal analysis in the hearing-impaired. Journal of the Acoustical Society of America, 68, S27.
37. Gordon-Salant, S., & Wightman, F. L. (1980). Perception of rising and falling F2 transitions in speech stimuli. Journal of the Acoustical Society of America, 67, S26.
36. Wightman, F. L., & Raz, I. (1979). Psychoacoustic measures of hearing impairment. Journal of the Acoustical Society of America, 66, S71.
35. Fitzgibbons, P. J., & Wightman, F. L. (1979). Temporal resolution in normal and hearing-impaired listeners. Journal of the Acoustical Society of America, 65, S133.
34. Wightman, F. L., & McAdams, S. E. (1978). Pitch of complex tones for normal and hearing-impaired listeners. Journal of the Acoustical Society of America, 64, S39.
33. Wightman, F. L. (1978). Forward masking as a measure of spectral resolution in hearing-impaired listeners. Journal of the Acoustical Society of America, 63, S2.
32. Raz, I., & Wightman, F. L. (1978). An adaptive procedure for estimating phoneme-boundaries: Application to selective adaptation for speech. Journal of the Acoustical Society of America, 64, S19.
31. McAdams, S. E., & Wightman, F. L. (1978). Subharmonic pitch extraction or pitch memory? Journal of the Acoustical Society of America, 64, S39.

30. Krause, S. E., Fisher, H. B., & Wightman, F. L. (1978). Developmental use of vowel duration in perception and production. Journal of the Acoustical Society of America, 64, S114.
29. Humes, L. E., & Wightman, F. L. (1978). Further investigation of the relation between aural overload and TTS in man. Journal of the Acoustical Society of America, 63, S65.
28. Hawkins, D. B., & Wightman, F. L. (1978). Interaural time discrimination in cochlear-impaired listeners. Journal of the Acoustical Society of America, 63, S52.
27. Grantham, D. W., & Wightman, F. L. (1978). Detectability of a pulsed tone in the presence of a masker with time-varying interaural correlation. Journal of the Acoustical Society of America, 63, S31.
26. Wightman, F. L., Grantham, D. W. & Fowler, C. (1977). Existence region of dichotic noise pitch. Journal of the Acoustical Society of America, 62, S24.
25. Grantham, D. W., & Wightman, F. L. (1977). Discrimination of a moving auditory "dot" from a stationary auditory "line". Journal of the Acoustical Society of America, 61, S62.
24. Wightman, F. L., & Queen, D. (1976). Perceptual consequences of array design. Journal of the Acoustical Society of America, 61, S42.
23. McGee, T. M., Wightman, F. L., & Kramer, M. B. (1976). Relations between suppression and masking in normal and hearing-impaired listeners. Journal of the Acoustical Society of America, 60, S103.
22. Kramer, M. B., & Wightman, F. L. (1976). Two-tone suppression in hearing-impaired listeners. Journal of the Acoustical Society of America, 60, S103.
21. Grantham, D. W., & Wightman, F. L. (1976). Measurement of a binaural temporal transfer function. Journal of the Acoustical Society of America, 60, S116.
20. Grantham, D. W., & Wightman, F. L. (1976). Detection of sinusoidally modulated interaural time differences. Journal of the Acoustical Society of America, 59, S22.
19. Wightman, F. L., Kramer, M. B., & McGee, T. (1975). Psychophysical tuning curves in forward masking. Journal of the Acoustical Society of America, 58, S34.
18. Wightman, F. L. (1975). Frequency selectivity in pure-tone forward masking. Journal of the Acoustical Society of America, 57, S5.
17. Sachs, R. M., & Wightman, F. L. (1975). Measurements of the distortion tone $2f_1-f_2$ in normal hearing and high-frequency hearing-loss subjects. Journal of the Acoustical Society of America, 57, S26.
16. Block, M. G., & Wightman, F. L. (1975). Quantification of the acoustic reflex and its relation to stimulus loudness. Journal of the Acoustical Society of America, 58, S72.
15. Wightman, F. L. (1974). Evaluation of pitch-strength predictions of the pattern-transformation model of pitch. Journal of the Acoustical Society of America, 55, S58.
14. Sachs, R. M., & Wightman, F. L. (1974). Threshold dips and cubic difference tone perception. Journal of the Acoustical Society of America, 55, S57.
13. Green, D. M., Wier, C. C., & Wightman, F. L. (1974). "Pumphrey and Gold Revisited," again. Journal of the Acoustical Society of America, 56, S38.
12. Wightman, F. L. & Houtgast, T. (1973). Monaural unmasking. Journal of the Acoustical Society of America, 53, S376.
11. Wightman, F. L. (1973). Binaural detection in forward and backward masking. Journal of the Acoustical Society of America, 54, S309.

10. Wightman, F. L. (1973). The pattern-transformation model of pitch. Journal of the Acoustical Society of America, 53, S315.
9. Wightman, F. L., & Houtgast, T. (1972). Binaural critical bandwidth as a function of signal bandwidth. Journal of the Acoustical Society of America, 51, S124.
8. Wightman, F. L., & Green, D. M. (1971). The case of the missing MLD. Journal of the Acoustical Society of America, 49, S102.
7. Wightman, F. L. (1971). Lateralization of filtered clicks. Journal of the Acoustical Society of America, 50, S88.
6. Wightman, F. L., & Leshowitz, B. (1970). Off-frequency tonal masking. Journal of the Acoustical Society of America, 47, S106.
5. Wightman, F. L. (1970). Signal splatter and the MLD. Journal of the Acoustical Society of America, 48, S86.
4. Leshowitz, B., & Wightman, F.L. (1970). On-frequency tonal masking. Journal of the Acoustical Society of America, 47, S106.
3. Wightman, F. L. (1969). MLDs with narrow-band noise maskers. Journal of the Acoustical Society of America, 45, S335.
2. Wightman, F. L. (1967). Negative MLDs with gated sine-wave masking. Journal of the Acoustical Society of America, 42, S1180.
1. Wightman, F. L., & Green, D. M. (1966). Effect of duration on detection of a noise signal. Journal of the Acoustical Society of America, 40, S1250.