—— Curriculum Vitae ——

1. Name

Susan E. Voss (née Susan E. Lawser)

2. Contact Information

Office Address:
Smith College
Picker Engineering Program
100 Green Street
Northampton, MA 01063
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Home Address:
89 Ridgewood Terrace
Northampton, MA 01060
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3. Education

1998 **Ph.D.** Speech and Hearing Sciences, Harvard–MIT Division of Health Sciences and Technology (HST), Massachusetts Institute of Technology. Effects of tympanic-membrane perforations on middle-ear sound transmission: measurements, mechanisms, and models. Thesis supervisors: John J. Rosowski, William T. Peake, & Saumil N. Merchant.

1995 **M.S.** Electrical Engineering & Computer Science, Massachusetts Institute of Technology.

1991 **B.S.** Engineering, Brown University. *magna cum laude*

4. Awards and Honors

2024	Faculty Teaching Award from the students of Smith College and the SGA
2013	American Auditory Society's Young Investigator Honor
2002	Frontiers in Education New Faculty Fellow
1995	Morris Joseph Levin Award for Best Masterworks Oral Thesis Presentation
1992–1998	AT&T Graduate Research Program for Women Grant
1991	Tau Beta Pi National Laureate Award
1991	Sigma Xi Society
1990	Tau Beta Pi Society
1990	U.S. Olympic Committee Tuition Assistance Grant

5. Employment and Appointment History

2017–present	Achilles Professor of Engineering	Smith College
2013–2016	Director of Engineering	Smith College
2012–2017	Professor of Engineering	Smith College
2007–2012	Associate Professor of Engineering	Smith College
2006–2012	Scientist, Neurology Service	Massachusetts General Hospital
2001–2007	Assistant Professor of Engineering	Smith College
2001–2015	Lecturer, Otology and Laryngology	Harvard Medical School
2000	Instructor, Otology and Laryngology	Harvard Medical School
2000	Research Scientist	MIT, Research Laboratory of Electronics
1999–2015	Research Associate, Otolaryngology	Massachusetts Eye and Ear Infirmary
1998–2000	Postdoctoral Associate	MIT Research Laboratory of Electronics
1998	Recitation and Lab Instructor	MIT Electrical Engineering & Computer Science
1992 (summer)	Senior Technical Associate	AT&T Laboratories, Acoustics Research Group

6. Grants Received and Consulting Work

Grants

2024–present	PI, National Institutes of Health R15DC014129-03 ($421,141). Integrating data from a wideband acoustic immittance database to develop machine learning models that characterize pathology in auditory measurements.
2019–2024	PI, National Institutes of Health R15DC014129-02 ($387,220). Expansion of normative database for wideband acoustic immittance measures to include children and abnormal ears and analyses of data across studies and underlying assumptions.
2014–2019	PI, National Institutes of Health R15DC014129-01 ($334,817). Development of a normative database for wide-band acoustic immittance measures.
2012–2015	Co-PI, National Space Biomedical Research Institute ($35,582). Comparison of continuous non-invasive intracranial pressure measurement.
2007–2013	PI, National Science Foundation CAREER Award ($400,000). CAREER: Acoustic energy flow through normal and abnormal middle ears.
2007	PI (Subcontract), Mimosa Acoustics, NIH SBIR ($36,617). Non-invasive instrument for monitoring changes in intracranial pressure.
2005–2009	PI, NIH 1 R15 DC007615-01 ($191,157). Middle-ear assessment via reflectance measurements.
2001	PI, InterMath MiniGrant (NSF DUE-9555414) via COMAP ($3,000). Mathematics and its applications to interdisciplinary contexts.
1999	Fellow, Harvard Medical School 50th Anniversary Scholars in Medicine Fellowship ($25,000). Support for early-career translational research in auditory science.

Consulting

2020–2024	NASA Envihab Project: Brain-Related Assessments for Investigating the Neurophysiology of Spaceflight-Associated Neuro-ocular Syndrome (BRAIN-SANS). PI: Gary Strangman, Massachusetts General Hospital. Funded by NASA.
2010	Consultant to Hearium Labs.
2004–2005	Consultant to Natus Medical, Inc., San Carlos, CA.
2004	Consultant to SonaMed Corp., Waltham, MA.
2001–2005	Consultant on NIH R01 Grant: Understanding Otoacoustic Emissions. PI: Christopher Shera.

7. Publications

** **Denotes undergraduate author**

Refereed Publications

1. **(2025) Voss SE**, Remenschneider AK, Farrar RM**, Myoung S, and Horton NJ. Comprehensive measurements and analyses of ear canal geometry from late infancy through late adulthood: Age-related variations and implications for basic science and audiological measurements. *Trends in Hearing*, **29**. doi:10.1177/23312165251345572

2. **(2023)** Sun J**, Horton NJ, and **Voss SE**. Absorbance measurements from normal-hearing ears in the National Health and Nutrition Examination Survey, 2015–2016 and 2017–2020. *Ear and Hearing*, **44**(5):1282–1288. doi:10.1097/AUD.0000000000001358

3. **(2023)** Balouch AP**, Bekhazi K**, Durkee HE**, Farrar RM**, Sok M**, Keefe DH, Remenschneider AK, Horton NJ, and **Voss SE**. Measurements of ear-canal geometry from high-resolution CT scans of human adult ears. *Hearing Research*, **434**:1–12. doi:10.1016/j.heares.2023.108782

4. **(2020) Voss SE**, Horton NJ, Fairbank KE**, Xia L**, Tinglin RK**, Girardin KD. Measurements of ear-canal cross-sectional areas from live human ears with implications for wideband acoustic immittance measurements. *J. Acoust. Soc. Am.*, **148**(5):3042–3051. doi:10.1121/10.0002358

5. **(2019) Voss SE**. Resource Review: An online wideband acoustic immittance (WAI) database and corresponding website. *Ear and Hearing*, **40**(6):1481. doi:10.1097/AUD.0000000000000790

6. **(2016) Voss SE**, Herrmann BS, Horton NJ, Amadei EA**, Kujawa SG. Reflectance measures from infant ears with normal hearing and transient conductive hearing loss. *Ear and Hearing*, **37**(5):560–571. doi:10.1097/AUD.0000000000000293

7. **(2016)** Williams MA, Malm J, Eklund A, Horton NJ, and **Voss SE**. Distortion product otoacoustic emissions and intracranial pressure during CSF infusion testing. *Aerospace Medicine and Human Performance*, **87**(10):844–851. doi:10.3357/AMHP.4572.2016

8. **(2014)** Bershad EM, Urfy MZ, Pechacek** A, McGrath** M, Calvillo E, Horton NJ, and **Voss SE**. Intracranial pressure modulates distortion product otoacoustic emissions: A proof of principle study. *Neurosurgery*, **75**(4):445–455. doi:10.1227/NEU.0000000000000449

9. **(2014)** Abur D[**], Horton NJ, and **Voss SE**. Intra-subject variability in power reflectance. *Journal of the American Academy of Audiology*, **25**(5):441–448. doi:10.3766/jaaa.25.5.3

10. **(2013) Voss SE**, Stenfelt S, Neely ST, Rosowski JJ. Factors that introduce intrasubject variability into ear-canal absorbance measurements. *Ear and Hearing*, **34**:60S–64S. doi:10.1097/AUD.0b013e31829cfd64

11. **(2013)** Nakajima HH, Rosowski JJ, Shahnaz N, and **Voss SE**. Assessment of ear disorders using power reflectance. *Ear and Hearing*, **34**:48S–53S. doi:10.1097/AUD.0b013e31829c964d

12. **(2012) Voss SE**, Merchant GR[**], Horton NJ. Effects of middle-ear disorders on power reflectance measured in cadaveric ear canals. *Ear and Hearing*, **33**(2):195–208. doi:10.1097/AUD.0b013e31823235b5

13. **(2010)** Merchant GR[**], Horton NJ, and **Voss SE**. Normative reflectance and transmittance measurements on healthy newborn and one-month-old infants. *Ear and Hearing*, **31**(6):746–754. doi:10.1097/AUD.0b013e3181e68e68

14. **(2010) Voss SE**, Adegoke MF[**], Horton NJ, Sheth KN, Rosand J, Shera CA. Posture systematically alters ear-canal reflectance and DPOAE properties. *Hearing Research*, **263**(1–2):43–51. doi:10.1016/j.heares.2010.03.003

15. **(2008) Voss SE**, Horton NJ, Woodbury RR[**], Sheffield KN[**]. Sources of variability in reflectance measurements on normal cadaver ears. *Ear and Hearing*, **29**(4):651–665. doi:10.1097/AUD.0b013e318174f07c

16. **(2007) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. Non-ossicular signal transmission in human middle ears: Experimental assessment of the acoustic route with perforated tympanic membranes. *J. Acoust. Soc. Am.*, **122**(4):2135–2153. doi:10.1121/1.2769617

17. **(2007) Voss SE**, Horton NJ, Shea CA[**], Smith AH[**]. Sources of variability in reflectance measurements on normal human ears. In: Huber A. and Eiber A. (eds.), *Proceedings of the 4th International Symposium on Middle Ear Mechanics in Research and Otology*; 2006 July 27–30, Zurich, Switzerland. World Scientific, 2007, pp.78–86. doi:10.1142/9789812708694 0010

18. **(2006) Voss SE**, Horton NJ, Tabucchi THP[**], Folowosele F[**], Shera CA. Posture-induced changes in distortion-product otoacoustic emissions and the potential for noninvasive monitoring of changes in intracranial pressure. *Neurocritical Care*, **4**(3):251–257. doi:10.1385/NCC:4:3:251

19. **(2006)** Mehta RP, Rosowski JJ, **Voss SE**, O'Neil E, Merchant SN. Determinants of hearing loss in perforations of the tympanic membrane. *Otol. Neurotol*, **27**(2):136–143. doi:10.1097/01.mao.0000176177.17636.53

20. **(2005) Voss SE**, Herrmann BS. How does the sound pressure generated by circumaural, supraaural, and insert earphones differ for adult and infant ears? *Ear and Hearing*, **26**(6):636–650. doi:10.1097/01.aud.0000189717.83661.57

21. **(2005)** Stepp CE[**], and **Voss SE**. Acoustics of the human middle-ear air space. *J. Acoust. Soc. Am.*, **118**(2):861–871. doi:10.1121/1.1974730

22. **(2004) Voss SE**, Shera CA. Simultaneous measurement of middle-ear input impedance and forward/reverse transmission in cat. *J. Acoust. Soc. Am.*, **116**:2187–2198. doi:10.1121/1.1785832

23. **(2002) Voss SE**, Ellis GW. Applying learner-centered pedagogy to an engineering circuit-theory class at Smith College. *Proceedings of Frontiers in Education (FIE)*, 2002.

24. **(2001) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. Middle-ear function with tympanic-membrane perforations. I. Measurements and mechanisms. *J. Acoust. Soc. Am.*, **110**:1432–1444. doi:10.1121/1.1394195

25. **(2001) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. Middle-ear function with tympanic-membrane perforations. II. A simple model. *J. Acoust. Soc. Am.*, **110**:1445–1452. doi:10.1121/1.1394196

26. **(2001) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. How do tympanic-membrane perforations affect human middle-ear sound transmission? *Acta Otolaryngol.*, **121**(3):169–173. doi:10.1080/000164801300043343

27. **(2000) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. Acoustic responses of the human middle ear. *Hearing Research*, **150**(1–2):43–69. doi:10.1016/S0378-5955(00)00177-5

28. **(2000) Voss SE**, Rosowski JJ, Merchant SN, Thornton AR, Shera CA, Peake WT. Middle-ear pathology can affect the ear-canal sound pressure generated by audiologic earphones. *Ear and Hearing*, **21**(4):265–274. doi:10.1097/00003446-200008000-00001

29. **(2000) Voss SE**, Rosowski JJ, Shera CA, Peake WT. Acoustic mechanisms that determine the ear-canal sound pressures generated by earphones. *J. Acoust. Soc. Am.*, **107**(3):1548–1565. doi:10.1121/1.428440

30. **(1998)** Merchant SN, Ravicz ME, **Voss SE**, Peake WT, Rosowski JJ. Middle ear mechanics in normal, diseased and reconstructed ears. *J. Laryngol. Otol.*, **112**(8):715–731. doi:10.1017/S0022215100141568

31. **(1997)** Merchant SN, Ravicz ME, Puria S, **Voss SE**, Whittemore KR, Peake WT, Rosowski JJ. Analysis of middle-ear mechanics and application to diseased and reconstructed ears. *Am. J. Otol.*, **18**(2):139–154.

32. **(1996) Voss SE**, Rosowski JJ, Peake WT. Is the pressure difference between the oval and round windows the effective acoustic stimulus for the cochlea? *J. Acoust. Soc. Am.*, **100**(3):1602–1616. doi:10.1121/1.416062

33. **(1994) Voss SE**, Allen J. Measurement of acoustic impedance and reflectance in the human ear canal. *J. Acoust. Soc. Am.*, **95**(1):372–384. doi:10.1121/1.408329

Conference Proceedings (Peer reviewed)

1. **(2024) Voss SE**, Remenschneider AK, Farrar RM**, Feng JJ**, Myoung S, and Horton NJ. The ear canal is neither a cylinder nor a horn: What are the acoustical consequences? *Mechanics of Hearing Conference*, University of Michigan. https://zenodo.org/records/14261071

2. **(2024) Voss SE**, Sun J**, and Horton NJ. Online database of published wideband acoustic immittance (WAI) measurements. *Mechanics of Hearing Conference*, University of Michigan. https://zenodo.org/records/13334749

3. **(2024)** Merchant GR, Horton NJ, and **Voss SE**. Exploring the effect of sensorineural hearing loss on wideband acoustic immittance using the NHANES dataset. *Mechanics of Hearing Conference*, University of Michigan. https://zenodo.org/records/13826851

4. **(1997)** Merchant SN, Ravicz ME, **Voss SE**, Puria S, Peake WT, Rosowski JJ. Middle ear mechanics in normal, diseased and reconstructed ears. In: Huttenbrink KB, editor. *Proceedings of the International Workshop on Middle Ear Mechanics in Research and Otosurgery*; 1996 Sept 19–22; Dresden, Germany. Dresden University of Technology; 1997. p. 175–182.

5. **(1997)** Rosowski JJ, Merchant SN, Ravicz ME, **Voss SE**, Caradonna D, Cunningham MJ, Peake WT. Analysis of acoustic mechanisms in middle-ear pathology and reconstruction. In: Huttenbrink KB, editor. *Proceedings of the International Workshop on Middle Ear Mechanics in Research and Otosurgery* ; 1996 Sept 19–22; Dresden, Germany. Dresden University of Technology; 1997. p. 183–190.

Invited Publications

1. **(2013) Voss SE**, Nakajima HH, Huber AM, Shera CA. Function and acoustics of the normal and diseased middle ear. In: Puria S, Fay RR, Popper AN, editors. *The Middle Ear: Science, Otosurgery, and Technology.* Springer Handbook of Auditory Research. New York: Springer.

Other Publications

1. **Voss SE**, Rosowski JJ, Merchant SN, Peake WT. "Correlation of impedance at the TM with stapes velocity? Reply to the letter of D. H. Keefe." Letter to the Editor, Hearing Research. 2001; 159:153-154.

Conference Abstracts

1. **(2025)** Siegel JH, **Voss SE**, Neely ST. Acoustic admittance at the eardrum estimated from canal measurements. *Assoc. Res. Otolaryngol. Abstracts*, 2025.

2. **(2025) Voss SE**, Remenschneider AK, Farrar RM**, Horton NJ. Ear canal geometry from infancy through old age. *American Auditory Society*, Abstracts 2025.

3. **(2024)** Feng JJ**, and **Voss SE**. Effects of ear canal geometry on wideband acoustic immittance measurements. *American Auditory Society*, Abstract #087, 2024.

4. **(2024) Voss SE**, Thoolen S., Frett T., Strangman G. BRAIN-SANS: What do DPOAEs tell us about intracranial pressure changes during experiments designed to understand SANS?. *Human Research Program Investigators' Workshop*, Abstract #1649551, 2024.

5. **(2023)** Myoung S, Bekhazi K**, Farrar RM**, Sok M**, Remenschneider AK, Horton NJ, and **Voss SE**. Systematic changes in ear-canal geometry from infancy to old age. *American Auditory Society*, Abstracts 2023.

6. **(2023)** Thoolen S., Zhang Q., Ivkovic V., **Voss SE**, Moestl S., Frett T., Tank J., Wu J., Bershad E., Strangman G. Brain-SANS: Brain-related assessments for investigating the neurophysiology of SANS – 2023 UPDATE. *Human Research Program Investigators' Workshop*, Abstract #1133-000156, 2023.

7. **(2022)** Myoung S, Horton NJ, and **Voss SE**, Remenschneider AK. Pediatric ear canal size as a function of age: Implications for transcanal endoscopic ear surgery. *4th World Congress on Endoscopic Ear Surgery*, Kyoto, Japan, December 5–8, 2022.

8. **(2022) Voss SE**, Myoung S, Balouch AP**, Durkee HE**, Sok M**, Remenschneider AK, Keefe DH, Horton NJ. Ear-canal geometry measurements from human CT scans: New method and preliminary results. *Middle-Ear Mechanics in Research and Otology (MEMRO)*, Ninth International Symposium, University of Colorado Boulder, June 2022.

9. **(2022)** Balouch AP**, Durkee HE**, Sok M**, Remenschneider AK, Keefe DH, Horton NJ, and **Voss SE**. Method to measure ear-canal geometry from human temporal bone CT scans. *American Auditory Society*, Abstracts 2022.

10. **(2022)** Thoolen S., Zhang Q., Ivkovic V., **Voss SE**, Moestl S., Frett T., Tank J., Wu J., Bershad E., Strangman G. Brain-SANS: Brain-related assessments for investigating the neurophysiology of SANS. *Human Research Program Investigators' Workshop*, Abstract #1133-000156, 2022.

11. **(2020)** Rosenstein SL**, Balouch AP**, Horton NJ, and **Voss SE**. Titan and HearID WAI measurements in an artificial ear. *American Auditory Society*, Abstracts 2020.

12. **(2020)** Balouch AP**, Rosenstein SL**, Horton NJ, and **Voss SE**. Titan and HearID WAI measurements in the same human ears. *American Auditory Society*, Abstracts 2020.

13. **(2020)** Fairbank K**, Horton NJ, and **Voss SE**. Quantification of ear-canal cross-sectional area to improve absorbance measurements. *Assoc. Res. Otolaryngol. Abstracts*, PS 198, 2020.

14. **(2018) Voss SE**, Horton NJ. Ear-canal area depends on age and gender: applications to WAI measurements. *American Auditory Society*, Abstracts 2018.

15. **(2017) Voss SE**, Girardin K, Zhang Y**, Xia L**, Nei J**, Horton NJ. Wideband acoustic immittance: Effects of measurement equipment, age, gender, and ear-canal area. *American Auditory Society*, Abstracts 2017.

16. **(2017)** Yarrington T**, Horton NJ, and **Voss SE**. Publicly accessible database for wideband acoustic immittance measures. *American Auditory Society*, Abstracts 2017.

17. **(2015)** Williams MA, **Voss SE**, Horton NJ, Malm J, and Eklund A. Comparison of invasive ICP measurements to distortion product otoacoustic emissions (DPOAE) in adults during infusion testing for INPH. *International Society for Hydrocephalus and CSF Disorders*, Banff, September 2015.

18. **(2015)** Pontes MAB**, Horton NJ, and **Voss SE**. Development of a database for wideband acoustic immittance (WAI) measures. *American Auditory Society*, Abstracts 2015.

19. **(2014) Voss SE**, Abur D**, Kassaye H**, Horton NJ. Comparisons of reflectance measurements across measurement sessions, instruments, and ages. *Spring meeting of the Acoustical Society of America*, 2014.

20. **(2014)** Williams MA, Malm J, Eklund A, **Voss SE**, Hamilton DR, Ebert D, Levine BD. Comparison of continuous non-invasive and invasive intracranial pressure measurements. *NASA Human Research Program Investigators' Workshop*, Galveston, TX, 2014.

21. **(2014)** Heidary G, Hollander JN, Milliren CE, Zhou GW, Fayad M, and **Voss SE**. Non-invasive assessment of intracranial pressure using otoacoustic emissions in pediatric patients with idiopathic intracranial hypertension. *American Association for Pediatric Ophthalmology and Strabismus Meeting*, Palm Springs, CA, 2014.

22. **(2013)** Urfy MZ, **Voss SE**, Rao CPV, Suarez JI, Calvillo E, Pechacek A**, McGrath M**, Fong A, Georgiadis AL, Bershad EM. Distortion product otoacoustic emissions for non-invasive intracranial pressure assessment. *Neurocritical Care Society Meeting*, Philadelphia, PA, 2013.

23. **(2013) Voss SE**, Abur D**, Horton NJ. Intra-subject variability in power reflectance. *Eastern Auditory Retreat*, Massachusetts Eye and Ear Infirmary, 2013.

24. **(2013)** Abur D**, Horton NJ, and **Voss SE**. Exploring intersubject and intrasubject variability in absorbance. *American Auditory Society*, Abstracts 2013.

25. **(2012) Voss SE**, Herrmann BS, Horton NJ, Amadei EA**, Parson J**, Kujawa SG. Reflectance measurements on normal and fluid-filled newborn ears. *American Auditory Society*, Abstracts 2012.

26. **(2011)** Parson J**, Herrmann BS, Horton NJ, Kujawa SG, and **Voss SE**. Update on reflectance measurements on normal and fluid-filled newborn ears. *Eastern Auditory Retreat*, Yale University, 2011.

27. **(2010) Voss SE**, Merchant GR**, Horton NJ. Effects of middle-ear disorders on ear canal reflectance measures in human cadaver ears. *Spring meeting of the Acoustical Society of America*, 2010.

28. **(2010)** Amadei EA**, Herrmann BS, Horton NJ, Gibbons S, Theisen M, Vidal C, Kujawa SG, and **Voss SE**. Reflectance measurements on newborn ears with fluid. *American Auditory Society*, Abstracts 2010.

29. **(2009) Voss SE**, Adegoke MF**, Sheth KN, Horton NJ, Rosand J, Shera CA. Detecting changes in intracranial pressure using reflectance and otoacoustic emissions. *Middle-Ear Mechanics in Research and Otology*, Fifth International Symposium, Stanford University, June 2009.

30. **(2009)** Merchant GR**, **Voss SE**, Horton NJ. Normative reflectance measurements on healthy newborn and one-month-old infants. *American Auditory Society*, Abstracts 2009.

31. **(2008) Voss SE**, Moonshiram D**, Horton NJ. Effects of middle-ear pathologies on energy reflectance measurements. *American Auditory Society*, Abstracts 2008.

32. **(2008)** Adegoke MF**, **Voss SE**, Horton NJ, Raza Y**, Shera CA. DPOAE measurement analysis in the complex plane. *American Auditory Society*, Abstracts 2008.

33. **(2007)** Sheth KN, Horton N, Shera C, Rosand J, and **Voss SE**. Detecting changes in intracranial pressure non-invasively using otoacoustic emissions. *Intracranial Pressure Conference*, July 2007.

34. **(2007) Voss SE**, Horton NJ, Woodbury RR**, Sheffield KN**. Sources of variability in reflectance measurements on normal cadaver ears. *American Auditory Society*, Abstracts 2007.

35. **(2007)** Lim CM**, Bauer JT**, Horton NJ, and **Voss SE**. Investigation of parameters that maximize low-frequency DPOAEs. *American Auditory Society*, Abstracts 2007.

36. **(2006) Voss SE**, Horton NJ, Woodbury RR**, Shea CA**. Sources of variability in reflectance measurements on normal human ears. *Middle-Ear Mechanics in Research and Otology*, Fourth International Symposium, University Hospital Zurich, July 2006.

37. **(2006)** Woodbury RR[**], Horton NJ, and **Voss SE**. Effect of measurement location on reflectance measurements in human cadaver ears. *American Auditory Society*, Abstracts 2006.

38. **(2006) Voss SE**, Horton NJ, Tabucchi THP[**], Folowosele F[**], Shera CA. Noninvasive detection of changes in intra-cranial pressure using distortion-product otoacoustic emissions. *Assoc. Res. Otolaryngol. Abstracts*, 2006.

39. **(2006)** Miller A, Shera CA, and **Voss SE**. Analysis of a technique for measuring the transmission matrix of the middle ear. *Assoc. Res. Otolaryngol. Abstracts*, 2006.

40. **(2005) Voss SE**, Herrmann BS. Sound pressures generated by earphones: Adult versus infant ears. *American Auditory Society*, Abstracts 2005.

41. **(2004)** Stepp CE[**], and **Voss SE**. Acoustics of the middle-ear air space in human ears. *American Auditory Society*, Abstracts 2004.

42. **(2002) Voss SE**, Shera CA. Simultaneous measurement of DPOAEs, middle-ear input impedance, and forward/reverse middle-ear transmission in cat. *Assoc. Res. Otolaryngol. Abstracts*, 2002; 585:153.

43. **(2002)** Shea CA[**], and **Voss SE**. Inter-subject vs. intra-subject variability in ear-canal impedance and reflectance of living human ears. *Assoc. Res. Otolaryngol. Abstracts*, 2002; 589:154.

44. **(2000) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. How do tympanic-membrane perforations affect human middle-ear sound transmission? *Collegium Otorhinolaryngologicum Amicitiae Sacrum Abstracts*, 2000; 7:55.

45. **(1999) Voss SE**, Rosowski JJ, Merchant SN, Thornton AR, Peake WT. How do middle-ear pathologies affect sound pressures generated by earphones? *Assoc. Res. Otolaryngol. Abstracts*, 1999; 802:202.

46. **(1998) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. How do tympanic-membrane perforations cause conductive hearing loss? *Assoc. Res. Otolaryngol. Abstracts*, 1998; 263:66.

47. **(1997) Voss SE**, Rosowski JJ, Merchant SN, Peake WT. How do tympanic-membrane perforations affect human middle-ear sound transmission? *Assoc. Res. Otolaryngol. Abstracts*, 1997; 194:49.

48. **(1996)** Ravicz ME, **Voss SE**, Merchant SN, Rosowski JJ. An upper bound on human-cochlea compressibility. *Assoc. Res. Otolaryngol. Abstracts*, 1996; 227:57.

49. **(1994) Voss SE**, Rosowski JJ, and Peake WT. Is the pressure difference between the oval and round windows the stimulus for cochlear responses? *Assoc. Res. Otolaryngol. Abstracts*, 1994; 347:87.

8. Concerts, Performances, and Exhibitions

None

9. Scholarly Lectures and Other Professional Presentations

Invited Major Presentations

1. **(2018)** Engineering & hearing: Sound transmission through the ear. Chaired Professor Lecture for the Achilles Professor of Engineering, April 3, 2018. Smith College, Northampton, MA.

2. **(2017)** Noninvasive clinical measures based on middle-ear mechanics. Invited speaker at the Speech and Hearing Bioscience and Technology 25th Anniversary Scientific Program, October 2017. Boston, MA.

3. **(2016)** Bridging the humanities & sciences: The story of engineering at Smith College. Keynote speaker at the AALAC Workshop on Engineering Connections in the Liberal Arts College Environment, May 2016. Macalester College.

4. **(2015)** Wide band reflectance: Technical aspects and clinical applications. Presenter for CEU seminar, June 1, 2015. Syracuse University, Syracuse, NY.

5. **(2013)** Translational research: Engineering, clinical relevance, and the liberal arts. Invited Young Investigator Talk at the American Auditory Society Meeting, 2013. Scottsdale, AZ.

6. **(2010)** Ear-canal based energy reflectance: The detection of fluid in newborn ears. Massachusetts Eye and Ear Audiology Department Continuing Education Unit, Boston, MA.

7. **(2008)** Ear-canal based energy reflectance: Can we detect fluid in newborn ears? Massachusetts Eye and Ear Audiology Department Continuing Education Unit, Boston, MA.

8. **(2007)** Detecting changes in intracranial pressure using emissions from the inner ear. CIMIT Forum (Center for Integration of Medicine & Innovative Technology), Massachusetts General Hospital, Boston, MA.

9. **(2005)** HST impact – translational education: From Boston to beyond. HST (r)evolution: Celebrating 35 years of bench to bedside, Harvard Medical School, Boston, MA.

10. **(2001)** Earphone calibration: A problem in the assessment of hearing in pathological ears. Invited presentation at the American Speech-Language-Hearing Association. Presented by Dr. John J. Rosowski.

11. **(2000)** How do tympanic-membrane perforations affect human middle-ear sound transmission? Collegium Oto-rhino-laryngologicum Amicitiae Sacrum Meeting, Washington, D.C.

12. **(1999)** Mechanisms of hearing loss in tympanic membrane perforations. The Second International Symposium on Middle-ear Mechanics in Research and Otosurgery. Sponsored by the Harvard Medical School Department of Continuing Education and the Massachusetts Eye and Ear Department of Otolaryngology.

13. **(1999)** Earphone calibration: A potential problem in the assessment of hearing in post-surgical ears. The Second International Symposium on Middle-ear Mechanics in Research and Otosurgery. Sponsored by the Harvard Medical School Department of Continuing Education and the Massachusetts Eye and Ear Department of Otolaryngology.

14. **(1997)** How do tympanic-membrane perforations cause conductive hearing loss? Invited talk at the International Otopathology Society, Boston, MA.

Seminars and Colloquia

1. **(2023)** Engineering and hearing: Sound transmission through the ear. Invited seminar talk for the Physics Department at Davidson College, North Carolina.

2. **(2020)** Measurements of ear-canal cross sectional area and their application to improving wideband acoustic immittance measurements. Invited talk at the Technical University of Denmark, Department of Electrical Engineering, Kongens Lyngby, Denmark.

3. **(2020)** Understanding differences in WAI measurements from the HearID and Titan systems. Work in Progress Talk at the Auditory Physics Group, Caruso Department of Otolaryngology, Keck School of Medicine, University of Southern California.

4. **(2019)** Wideband acoustic immittance measurements on normal ears: Understanding the effects of ear-canal area, age, sex, and measurement equipment. Invited Colloquium Talk at Boys Town National Hospital.

5. **(2019)** Measurements of ear-canal cross sectional area and their application to improving wideband acoustic immittance measurements. Invited Work in Progress Presentation at the Eaton Peabody Lab of the Massachusetts Eye and Ear Infirmary.

6. **(2017)** Wideband acoustic immittance measurements on human ears. Invited Seminar on Auditory Physiology at the Eaton Peabody Lab of the Massachusetts Eye and Ear.

7. **(2013)** Detection of changes in intracranial pressure using DPOAEs. Invited Seminar on Auditory Physiology at the Eaton Peabody Lab of the Massachusetts Eye and Ear.

8. **(2013)** Newborn hearing screening: Why are there so many false positives? Liberal Arts Luncheon Talk at Smith College.

9. **(2012)** Factors that introduce intrasubject variability into ear-canal reflectance measurements. Invited talk at the Eriksholm Workshop on Wideband Absorbance Measures of the Middle Ear, Portland, OR.

10. **(2011)** Update on reflectance measurements on normal and fluid-filled newborn ears. Invited Hearing Research Seminar at Boston University.

11. **(2010)** Reflectance measures on human cadaver ears: Sources of variability and effects of middle-ear disorders. City University of New York Hearing Science Laboratory.

12. **(2008)** Using otoacoustic emissions to monitor changes in intracranial pressure. Johns Hopkins University Center for Hearing and Balance Seminar.

13. **(2007)** Detecting changes in intracranial pressure using otoacoustic emissions from the ear. MIT Speech Communication Group Seminar.

14. **(2007)** It's not exactly brain surgery: Monitoring intracranial pressure through the ear. Liberal Arts Luncheon Talk at Smith College.

15. **(2005)** Detecting changes in intracranial pressure using emissions from the inner ear. Grand Rounds Talk at Children's Hospital, Boston, MA.

16. **(2005)** Detecting changes in intracranial pressure using emissions from the inner ear. Sigma Xi Talk at Smith College.

17. **(2005)** Auditory-based detection of changes in intracranial pressure with DPOAEs. Massachusetts Eye and Ear Infirmary Eaton Peabody Laboratory Work in Progress Seminar.
18. **(2004)** Earphone calibration: A problem in the assessment of hearing in pathological ears. Massachusetts Eye and Ear Infirmary Audiology Department Seminar.
19. **(2004)** Engineering and the liberal arts at Smith College. New Haven Smith College Alumnae Club.
20. **(2001)** Did Horton hear the Who? Physics Colloquium at Mount Holyoke College.
21. **(2001)** How Horton heard the Who. Sigma Xi Talk at Smith College.
22. **(2000)** Anchoring engineering science at Smith College. Invited Talk at Smith College.
23. **(2000)** Better hearing through engineering. Invited Talk at Smith College.
24. **(2000)** Effects of tympanic-membrane perforations on middle-ear sound transmission: Measurements, mechanisms, and models. Invited Hearing Research Seminar at Boston University.
25. **(1998)** Effects of tympanic-membrane perforations on middle-ear sound transmission. HST Biomedical Engineering Seminar (HST 590).
26. **(1996)** How to write your master's thesis. Invited Lecture at MIT's Electrical Engineering and Computer Science program.
27. **(1994)** Is the pressure difference between the oval and round windows of the cat cochlea the stimulus for cochlear response? Biomedical Engineering Seminar HST 590.

10. Other Professional Activities

2025	Member of Acoustical Society of America's working group responsible for revising the acoustic immittance standard ANSI S3.39
2023–present	Associate Editor, *Trends in Hearing*
2022	Invited Panelist — Career Paths for SHBT Graduates, SHBT 30th Anniversary Symposium, Massachusetts Eye and Ear, Boston, MA
2022	Guest Faculty, 9th International Middle Ear Mechanics Meeting, University of Colorado, Boulder
2020	Co-leader, mentoring session Teaching and Research, 43rd Midwinter Meeting, Association for Research in Otolaryngology, San Jose, CA
2019	External Reviewer, Engineering Program at Elon University
2019	Panelist — The Future of Undergraduate Engineering Education, Elon University
2018	Instructor, Smith College SSEP: developed and taught Engineering, Energy & the Environment
2017	Completed Emerge Massachusetts Candidate Training Program
2013–2016	Oversaw ABET responsibilities and successful re-accreditation, Smith College Picker Engineering Program

2001–2013	Editor-at-Large, *Ear and Hearing*
2010, 2011	Instructor, Smith College SSEP: developed and taught Biomedical Engineering: Measuring How Your Body Works
2010	Co-organizer, Special Session on Acoustic Impedance of the Ear, Acoustical Society of America and NOISE-CON Joint Meeting
2009	Scientific Committee Member, 5th International Middle Ear Mechanics Meeting, Stanford University
2008	Computer Engineering Advisory Board Member, Brown University
2002, 2007, 2014	Ad-hoc Member, NIH AUD Study Section
2005	Member, IEEE Engineering in Medicine and Biology Society Education Committee (EMBS)
Ongoing	**Regular Reviewer:** *Journal of the Acoustical Society of America*, *Ear and Hearing*, *Trends in Hearing*
Ongoing	**Occasional Reviewer:** *Journal of Speech, Language and Hearing Research*, *Hearing Research*, *Journal of Engineering Education*, *BioMed Central ENT Disorders*, *Medical Engineering & Physics*, *Journal of Rehabilitation Research and Development*, *Journal of Applied Physiology*, *Computer Medical Imaging and Graphics*, *JARO*, *Clinical Otolaryngology*, *International Journal of Audiology*, *Journal of Biomechanics*, *International Journal for Numerical Methods in Biomedical Engineering*

11. Professional Memberships

2002–present	American Auditory Society	Member
2007–present	The Institute of Electrical and Electronics Engineers (IEEE)	Senior Member
2001–2007	The Institute of Electrical and Electronics Engineers (IEEE)	Member
2001–present	American Society for Engineering Education	Member
1999–present	Acoustical Society of America	Member
1994–present	Association for Research in Otolaryngology	Member

12. Committee Memberships and other College Service

Smith College

2023–2024	Smith College Committee on Grievance (elected)
2021–2023	Smith College Faculty Board of Counselors (appointed)
2020–2023	Smith College Committee on Mission and Priorities (elected)
2018–2019	Smith College Committee on Academic Priorities (elected)
2016	Search Committee Member for Senior Class Dean & Associate Dean of the College
2013–2016	Director of the Picker Engineering Program
2011–2014	Smith College Committee on Academic Priorities (elected)
2007–2010	Smith College Committee on Faculty Compensation and Development (elected)
2007–2010	Smith College Transportation Committee (appointed)
2006	Smith College Grievance Committee (elected)
2005–2009	Quantitative Skills Committee (appointed): Member
2008–2009	Quantitative Skills Committee (appointed): Chair

2004–2007	Molecular Sciences & Engineering Building User's Group Committee (appointed)
2001–2002	Quantitative Skills Committee (appointed)
2001–2002	Smith College Science Planning Committee (appointed)

Picker Engineering Program

2017–2023	Member: Assessment & Standards Subcommittee
2022–2023	Member: Engineering Faculty Search Committee
2021	Member: Lecturer Search Committee
2019	Member: Visiting Professor Search Committee
2013–2020	Faculty Advisor to National Society of Black Engineers (NSBE)
2012–2013	Design Clinic Adjunct Faculty Search Committee Member
2011–2012	Chair: Assistant Professor Search Committee
2003–2010	Creator and Faculty Advisor of Engineering Honor Society Tau Beta Pi
2006–2009	Chair: Curriculum Operations Committee
2007–2008	Assistant Professor Search Committee Member
2006–2007	Assistant Professor Search Committee Member
2006	Laboratory Instructor Search Committee Member
2004–2005	Director Search Committee
2001–2002	Clare Boothe Luce Assistant Professor Search Committee

Smith College Student Advising

Year	Total Advisees	Liberal Arts	Major
2024–2025	19	0	19
2023–2024	17	1	16
2022–2023	22	2	20
2021–2022	19	2	17
2020–2021	22	2	20
2019–2020	22	0	22
2018–2019	25	4	21
2017–2018	16	0	16
2016–2017	14	0	18
2015–2016	18	1	17
2014–2015	16	2	14
2013–2014	21	11	10
2012–2013	15	11	4
2011–2012	19	12	7
2010–2011	5*	5	0
2009–2010	4*	0	4
2008–2009	9	2	7
2007–2008	12	8	4
2006–2007	9	6	3
2005–2006	13	6	7
2004–2005	14	0	14
2003–2004	11	0	11

Year	Total Advisees	Liberal Arts	Major
2002–2003	16	10	6
2001–2002	15	11	4

Five-College Community

2006–2007 Search Committee Member, Gupta Chaired Professorship, University of Massachusetts Electrical and Computer Engineering Department

Harvard-MIT Division of Health Sciences and Technology (HST)

2000 Member, HST Admissions Committee
1995 Student Member, HST Admissions Committee
1993–1995 Student Member, Curriculum Committee, Speech and Hearing Sciences Program
1992–1993 Student Member, Biomedical Engineering and Physical Sciences Committee

13. Teaching Record

Course Teaching, Smith College

2024–2025 EGR 220: Circuit Theory and Circuit Theory Laboratory
2023–2024 EGR 220: Circuit Theory and Circuit Theory Laboratory
2023–2024 EGR 100: Engineering for Everyone (Energy and the Environment)
2023–2024 EGR 320: Signals and Systems
2022–2023 EGR 220: Circuit Theory and Circuit Theory Laboratory
2022–2023 EGR 100: Engineering for Everyone (Energy and the Environment)
2022–2023 EGR 320: Signals and Systems
2021–2022 EGR 220: Circuit Theory and Circuit Theory Laboratory
2021–2022 EGR 100: Engineering for Everyone (Energy and the Environment)
2021–2022 EGR 320: Signals and Systems
2020–2021 EGR 100: Engineering for Everyone (Energy and the Environment), 3 sections
2020–2021 EGR 320: Signals and Systems
2019–2020 EGR 320: Signals and Systems
2019–2020 EGR 322: Acoustics
2018–2019 EGR 220: Circuit Theory (2 sections) and Circuit Theory Laboratory (2 labs)
2018–2019 EGR 100: Engineering for Everyone (Energy and the Environment)
2017–2018 EGR 320: Signals and Systems
2017–2018 EGR 100: Engineering for Everyone (Energy and the Environment)
2016–2017 EGR 220: Circuit Theory and Circuit Theory Laboratory (2 labs)
2015–2016 EGR 322: Acoustics
2015–2016 EGR 320: Signals and Systems
2014–2015 EGR 322: Acoustics
2014–2015 EGR 100: Engineering for Everyone (Energy and the Environment)
2014–2015 EGR 320: Signals and Systems
2013–2014 EGR 320: Signals and Systems

2013–2014	EGR 100: Engineering for Everyone (Energy and the Environment)
2012–2013	EGR 220: Circuit Theory and Circuit Theory Laboratory (2 sections)
2012–2013	EGR 320: Signals and Systems and Signals and Systems Laboratory (2 sections)
2011–2012	EGR 322: Acoustics
2011–2012	EGR 220: Circuit Theory and Circuit Theory Laboratory (3 sections)
2010–2011	EGR 320: Signals and Systems and Signals and Systems Laboratory (2 sections)
2009–2010	EGR 100: Engineering for Everyone (Introduction to Engineering, 2 sections)
2008–2009	EGR 320: Signals and Systems and Signals and Systems Laboratory
2008–2009	EGR 100: Engineering for Everyone (Introduction to Engineering)
2008–2009	EGR 191: Engineering Forum
2007–2008	EGR 320: Signals and Systems and Signals and Systems Laboratory
2007–2008	EGR 220: Circuit Theory and Circuit Theory Laboratory
2007–2008	EGR 191: Engineering Forum
2006–2007	EGR 390: Acoustics
2006–2007	EGR 220: Circuit Theory and Circuit Theory Laboratory
2005–2006	EGR 100: Engineering for Everyone
2005–2006	EGR 380: Neuroengineering
2005–2006	EGR 320: Signals and Systems
2005–2006	EGR 321: Digital Signal Processing
2004–2005	EGR 320: Signals and Systems
2003–2004	EGR 220: Circuit Theory
2003–2004	EGR 380: Neuroengineering
2003–2004	EGR 320: Signals and Systems
2003–2004	EGR 400: Digital Signal Processing
2002–2003	EGR 100: Introduction to Engineering
2002–2003	EGR 220: Circuit Theory and Circuit Theory Laboratory
2001–2002	EGR 100: Introduction to Engineering
2001–2002	EGR 320: Signals and Systems
2001	EGR 220: Circuit Theory and Circuit Theory Laboratory

Honors Theses Supervised, Smith College

2024–2025	**Jiayi Sun** Using Deep Learning Approaches to Identify Leaky Wideband Acoustic Immittance (WAI) Measurements
2024–2025	**Anisha Jain** Classifying Wideband Acoustic Immittance Measurements with CNNs via Wasserstein GANs
2023–2024	**Jessica Feng** Effects of Ear Canal Geometry on Normative Adult WAI Measurements
2020–2021	**Auden Balouch** Describing the Geometry of the Ear Canal from CT Scans
2016–2017	**Jingping Nie** Wideband Acoustic Immittance Measurements and Time Domain Reflectance
2016–2017	**Lu Xia** The Effects of Age, Gender, Race and Ear Canal Area on Normative Adult WAI Measures
2015–2016	**Yezhezi (Michelle) Zhang** WAI Measurements: Effects of Age, Gender, Race, and Equipment
2015–2016	**Wendy Jiang** Measurement of the Maximum Sound Pressure Level Generated by the iPhone 6s

2012–2013 **Mary McGrath** A Network Model for Auditory Changes to Intracranial Pressure

2012–2013 **Huimin Ji** Design of a Portable Data Acquisition System to Measure Sound Exposure from MP3 Headphones

2011–2012 **Adina-Elena Draghici** Design of a Portable System to Measure MP3 Player Sound Pressure Levels

2009–2010 **Modupe Adegoke** Novel Method of Analysis for DPOAE Magnitude and Phase

2009–2010 **Elizabeth Amadei** Reflectance Measurements on Newborn Ears with Fluid

2008–2009 **Gabrielle Merchant** Normative Reflectance Measurements on Healthy Newborn Babies

2005–2006 **Rebecca Woodbury** Effect of Measurement Location on Reflectance Measurements in Human Cadaver Ears

2005–2006 **Yamama Raza** Auditory-Based Detection of Changes in Intracranial Pressure: DPOAE, TEOAE, and Impedance Measurements

2004–2005 **Fope Folowosele** Auditory-Based Detection of Changes in Intracranial Pressure: Control of Middle-Ear Static Pressure

2004–2005 **Taronne Tabucchi** Auditory-Based Detection of Changes in Intracranial Pressure: Otoacoustic Emissions Measurements

2004–2005 **Jie Zheng** Development of a Personalized Equalizer for People with Presbycusis

2003–2004 **Cara Stepp** The Acoustics of the Human Middle-Ear Air Space

2001–2002 **Rebecca Segal** Building a Data Acquisition System for Research on the Auditory System

Ph.D. Dissertation Committees, Outside of Smith College

2020 **Kren Nørgaard** Reflectance Measurement Techniques for Hearing Diagnostics
Technical University of Denmark, Department of Electrical Engineering

2019 **Salwa Masud** Automatic Diagnosis of Mechanical Ear Pathologies Using Structure-Based Modeling and Machine Learning Techniques
Harvard University, Division of Medical Sciences, Speech and Hearing Bioscience and Technology

2017 **Sarah R. Robinson** Effects of the Ear-Canal Geometry and Middle-Ear Pressure on Wideband Acoustic Reflectance
University of Illinois at Urbana-Champaign, Electrical Engineering and Computer Science

Student Research Supervised, Smith College (S includes summer)

2025 (S) Annika Wells ’27 SURF: “Measurements of ear canal geometry on infant ears”

2025 (S) Kat Wajerski ’27 SURF: “Measurements of ear canal geometry on infant ears”

2025 (S) Catherine Lu ’27 SURF: “Development of machine learning models to detect acoustic leaks in WAI measurements”

2025 (S) Negin Mansoori ’26 SURF: “Measurements & models of acoustic leaks in WAI measures”

2024–2025	Negin Mansoori ’26 Special Studies: “Experimental Platform to study acoustic leaks in WAI measures”
2024–2025	Victoria Scott ’27 STRIDE Student: “Experimental Platform to study acoustic leaks in WAI measures”
2024	Iris Gao ’25 Special Studies: “Development of a dataset for application of machine learning to WAI measurements”
2024	Seyeon Lim ’26 Special Studies: “Development of a dataset for application of machine learning to WAI measurements”
2023–2024	Serena Geroe ’24 Special Studies: “Guitar Pedal Design and Fabrication”
2023–2024	Jiayi Sun ’25 “Data analysis and formatting for WAI database” 2023–
2024	Rebecca Farrar ’25 “Measurement of ear canal areas via CT scans”
2023–2024 (S)	Rebecca Farrar ’25 “Measurement of ear canal areas via CT scans”
2022–2023 (S)	Rebecca Farrar ’25 “Measurement of ear canal areas via CT scans”
2022–2023 (S)	Karen Bekhazi ’25 “Measurement of ear canal areas via CT scans” 2022–
2023	Mealaktey Sok ’24 “Measurement of ear canal areas via CT scans”
2022–2023 (S)	Jessica Feng ’24 “Development of a method to generate a 3D-printed ear canal from a CT scan”
2022 (S)	Maya Gilliom ’25 “Development of a method to generate a 3D-printed ear canal from a CT scan”
2022–2023 (S)	Jiayi Sun ’25 “Data analysis and formatting for WAI database”
2021–2022	Hannah Durkee ’22 “Measurement of ear canal areas via CT scans”
2021–2022	Mealaktey Sok ’24 “Measurement of ear canal areas via CT scans”
2021 (S)	Hannah Durkee ’22 “Measurement of ear canal areas via CT scans”
2021 (S)	Mealaktey Sok ’24 “Measurement of ear canal areas via CT scans”
2020–2021	Julia Clark ’21 “Data analysis and formatting for WAI database”
2020 (S)	Auden Balouch ’21 “Measurement of ear canal areas via CT scans”
2020 (S)	Julia Clark ’21 “Data analysis and formatting for WAI database”
2020 (S)	Keane Ny (Amherst College) “Development of the Shiny App for WAI the database”
2020	Julia Clark ’21 “Data analysis and formatting for WAI database”
2019 (S)	Katie Fairbank ’21 “Analysis of ear canal areas via digitized molds and CT scans”
2019 (S)	Sylvie Rosenstein ’21 “Comparison of WAI measurement systems”
2019 (S)	Auden Balouch ’21 “Comparison of WAI measurement systems”
2018–2019	Margaret Guo ’19 “Quantification of differences in WAI from Titan and HearID systems”
2018–2019	Katie Fairbank ’21 “Measurement of ear canal areas via digitized molds and CT scans”
2018–2019	Lauren Tinglin ’21 “Measurement of ear canal areas via digitized molds and CT scans”
2018	Yuhan Wen ’20 “WAI database management”
2018	Noor Kan ’20 “WAI database management”
2018 (S)	Katie Fairbank ’21 “Measurement of ear canal areas via digitized molds and CT scans”
2018 (S)	Lauren Tinglin ’21 “Measurement of ear canal areas via digitized molds and CT scans”
2018 (S)	Yuhan Wen ’20 “Data analysis and formatting for WAI database”

2018 (S)	Margaret Guo ’19 “Quantification of differences in WAI from Titan and HearID systems”
2018 (S)	Sandy Shi ’20 “Quantification of differences in WAI from Titan and HearID systems”
2016–2017	Tinli Yarrington ’18 “Development of a database for WAI measurements”
2016 (S)	Lu Xia ’17 “Measurement of ear canal cross sectional area”
2016 (S)	Jingping Nie ’17 “Calculation of time domain reflectance in human ears”
2016 (S)	Tinli Yarrington ’18 “Development of a database for WAI measurements”
2016 (S)	Melody Owen (Amherst College ’17) “Statistical analysis examples from WAI database website”
2016 (S)	Andrew Kim (Amherst College ’18) “Development of Shiny App for WAI measurements website”
2015–2016 (S)	Wendy Jiang ’16 “Development of a database for WAI measurements”
2015–2016	Annie Murillo ’16 “Measurement of Ear-Canal reflectance”
2015–2016	Lu Xia ’17 “Measurement and Analysis of Ear-Canal reflectance”
2015 (S)	Wendy Jiang ’16 “Development and population of a database for wai measures”
2015 (S)	Annie Murillo ’16 “WAI measurements: preparing three methods for measurements on subjects”
2015 (S)	Audrey Ong ’16 “WAI measurements: preparing three methods for measurements on subjects”
2014–2015	Lu Xia ’17 “Measurements of wideband acoustic immittance with three methods”
2014–2015	Yezhezi (Michelle) Zheng ’16 “Measurements of wideband acoustic immittance with three methods”
2014–2015	Melinda Pontes ’15 “Development of a data base for wideband acoustic immittance measures”
2014 (S)	Melinda Pontes ’15 “Development of a data base for wideband acoustic immittance measures”
2013–2014	Hiwot Kassaye ’14 “Ear-canal reflectance measures: Effects of canal area”
2013–2014	Defne Abur ’14 “Ear-canal reflectance measures: Effects of measurement instrument”
2013 (S)	Hiwot Kassaye ’14 “Ear-canal reflectance measures”
2013 (S)	Defne Abur ’14 “Ear-canal reflectance measures”
2012–2013	Defne Abur ’14 “Reflectance variability on adult ears”
2011–2012 (S)	Mary McGrath ’13 “Measurements of DPOAEs and TM displacement to monitor ICP”
2011–2012 (S)	Alina Pechacek ’13 “Measurements of DPOAEs and TM displacement to monitor ICP”
2011–2012	Defne Abur ’14 “Meaurements of reflectance to determine intrasubject variability”
2011–2012	Erika Miquel ’15: STRIDE Student: “Meaurements of reflectance to determine intrasubject variability”
2011 (S)	Mary McGrath ’13 “Relationships between DPOAEs and ICP”
2011	Jenika Parson ’13: AMES STUDENT: “Analysis of newborn energy reflectance measures”
2011	Defne Abur ’14 “Analysis of newborn energy reflectance measures”
2011	Jayna Shea ’12 “Development of a system to measure MP3-player sound exposure”
2011	Hiwot Kassaye ’14 “Development of a system to measure MP3-player sound exposure”
2010	Sanita Dhaubanjar ’13 “Design of a low-cost EKG instrument”

2010	Sanita Dhaubanjar ’13 “Use of the Parallax Propeller microcontroller within a biomedical engineering course for high school students”
2009	Emma Dalton ’10 “Independent study in Acoustics”
2008	Gabrielle Merchant ’09 “Measurements of reflectance on human cadaver ears with middle-ear pathologies”
2007–2008	Hannah Dym ’11: STRIDE STUDENT: “Optimization of a probe for measurement of energy reflectance in newborn ears”
2007–2008	Modupe Adegoke ’10: “Optimization of parameters for low-frequency DPOAE measurements” and “Analysis of DPOAE phase angles related to detection of changes in ICP”
2006–2007	Jillian Bauer ’09: “Optimization of parameters for low-frequency DPOAE measurements”
2007	Modupe Adegoke ’10: Auditory-based detection of changes in intracranial pressure: Measurements on hospital ICU patients
2007	Jillian Bauer ’09: Auditory-based detection of changes in intracranial pressure: Measurements on hospital ICU patients
2007	Dooshaye Moonshiram ’08: Measurements of reflectance on human cadaver ears with middle-ear pathologies
2007	Dooshaye Moonshiram ’08 Special Studies: Modeling the middle ear
2006	Dooshaye Moonshiram ’08 Special Studies: Application of noise-cancellation technologies to ICU DPOAE measurements
2006	Ashley Smith ’07: Statistical analysis of human auditory responses: Emissions, impedances, and reflectances
2006	Kathryn Sheffield ’07: Measurements of reflectance on human cadaver ears with middle-ear pathologies
2006	Chan Monopisey Lim ’08: Auditory-based detection of changes in intracranial pressure: Measurements on hospital ICU patients
2006	Diana Chiyangwa ’08: Auditory-based detection of changes in intracranial pressure: Measurements on hospital ICU patients
2005	Eleanor Ory ’06: Calculation of ear-canal area from impedance measurements
2005	Elyse Steiner ’07: Development of a system to couple sound and static pressure to the ear canal
2004–2005	Krystal Locke ’05: Do air- and bone-conducted stimuli elicit the same cochlear response?
2003	Susan Strom ’04: Set up of system to measure impedance/reflectance on human cadaver ears
2003	Meraia Racule ’06: Recording of audiograms via traditional and novel equipment
2002	Fatima Toor ’04: Development of a novel system to measure hearing thresholds
2001–2002	Caitlyn Shea ’04: Measurement and analysis of reflectance in living human ears
2001	Meghan Taugher ’04: Measurement of reflectance in living human ears

Course Teaching, MIT Department of Electrical Engineering and Computer Science

1998	Recitation Instructor under Professor Dennis Freeman 6.021J Quantitative Physiology: Cells and Tissues
1994	Teaching Assistant under Professor Jacob White 6.003 Signals and Systems

Course Teaching, Harvard-MIT Division of Health Sciences & Technology

1999	Instructor with Dr. Christopher Shera HST-750 Modeling Issues in Speech and Hearing
1994	Teaching Assistant under Professor William Peake HST-714J Acoustics of Speech and Hearing