

**Ishan Sunilkumar Bhatt**  
**Communication Sciences and Disorders**  
Report includes January 1, 2008 to August 31, 2021  
Curriculum Vitae as of August 31, 2021

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Campus Address: 125D Wendell Johnson, University of Iowa  
Phone: 319-335-8728  
E-mail: [Ishan-Bhatt@uiowa.edu](mailto:Ishan-Bhatt@uiowa.edu)

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## **EDUCATION AND PROFESSIONAL HISTORY**

### **Higher Education**

- 2013            **PhD**, Hearing Sciences and Genetics, University of North Carolina at Greensboro  
**Dissertation:** A polymorphism in human estrogen-related receptor beta (ESRR $\beta$ ) predicts audiometric temporary threshold shift
- 2010            **MASLP**, Masters in Audiology and Speech-Language Pathology, Maharashtra University of Health Sciences  
**Thesis:** A Pilot Study Comparing Click-Evoked ABR and Toneburst-Evoked ABR in Patients with NIHL, Presbycusis, and Ototoxicity
- 2008            **BASLP**, Bachelor of Audiology and Speech-Language Pathology, Maharashtra University of Health Sciences

### **Professional and Academic Positions**

- 2020 – Present    **Associate Professor, Department of Communication Sciences and Disorders**, University of Iowa
- 2014 – 2020      **Assistant Professor, Department of Communication Sciences and Disorders**, University of Iowa
- 2009 – 2013      **Research Assistant, Department of Communication Sciences and Disorders**, University of North Carolina at Greensboro
- 2008 – 2010      **Clinical Audiologist, National Institute of Speech and Hearing Disability**, India

### **Honors and Awards**

- 2018            **Teacher of the Year**, Northern Arizona University
- 2017            **ASHA Meritorious Poster Submission Award**, American Speech-Language and Hearing Association
- 2015            **Summer Scholarship Award**, Northern Arizona University
- 2013            **Academic Achievement Award**, University of North Carolina at Greensboro
- 2013            **Graduate Research Award**, University of North Carolina at Greensboro
- 2010            **Academic excellence (Gold Medal)**, Maharashtra University of Health Sciences
- 2009            **Academic excellence (Silver Medal)**, Maharashtra University of Health Sciences

### **Memberships**

- 2017 - Present    American Auditory Society
- 2017 - Present    American Academy of Audiology
- 2014 - Present    American Speech-Language-Hearing Association
- 2013 - 2014      American Society of Human Genetics

**TEACHING****Courses Taught at the University of Iowa**

<b>Term</b>	<b>Course#</b>	<b>Title</b>	<b>Ten-Day Enrollment</b>	<b>Final Enrollment</b>
Fall 2021	CSD:3993:5128	Research Practicum	1	1
Fall 2021	CSD:6290:0001	Auditory Evoked Potentials	6	6
Fall 2021	CSD:3185:0001	Hearing Loss and Audiometry	88	88
Spring 2021	CSD:7238:0001	Capstone Requirement	4	4
Spring 2021	CSD:7238:0001	Pediatric Audiology	6	6
Fall 2020	CSD:6247:0001	Medical Audiology	6	6
Fall 2020	CSD:6290:0001	Auditory Evoked Potentials	6	6

**Courses Taught at the Northern Arizona University**

<b>Term</b>	<b>Course#</b>	<b>Title</b>	<b>Ten-Day Enrollment</b>	<b>Final Enrollment</b>
Summer 2020	CSD: 456: 001	Survey of Audiology	40	40
Summer 2020	CSD: 556: 001	Audiology for SLPs	32	32
Summer 2020	CSD: 376: 001	Hearing Science	85	85
Spring 2020	CSD: 508: 001	Neurobiology	37	37
Spring 2020	CSD: 456: 001	Survey of Audiology	66	66
Fall 2019	CSD: 556: 001	Audiology for SLPs	34	34
Fall 2019	CSD: 376: 001	Hearing Science	79	79
Summer 2019	CSD: 456: 001	Survey of Audiology	34	34
Summer 2019	CSD: 556: 001	Audiology for SLPs	34	34
Summer 2019	CSD: 376: 001	Hearing Science	77	77
Spring 2019	CSD: 508: 001	Neurobiology	45	45
Spring 2019	CSD: 456: 001	Survey of Audiology	70	70
Fall 2018	CSD: 556: 001	Audiology for SLPs	24	24
Fall 2018	CSD: 376: 001	Hearing Science	75	75
Summer 2018	CSD: 456: 001	Survey of Audiology	34	34
Summer 2018	CSD: 556: 001	Audiology for SLPs	42	42
Summer 2018	CSD: 376: 001	Hearing Science	74	74
Spring 2018	CSD: 508: 001	Neurobiology	25	25
Spring 2018	CSD: 456: 001	Survey of Audiology	76	76
Fall 2017	CSD: 375: 001	Speech and Language Sciences	65	65
Fall 2017	CSD: 556: 001	Audiology for SLPs	27	27
Fall 2017	CSD: 376: 001	Hearing Science	91	91
Summer 2016	CSD: 456: 001	Survey of Audiology	67	67
Summer 2016	CSD: 556: 001	Audiology for SLPs	27	27
Summer 2016	CSD: 376: 001	Hearing Science	68	68
Spring 2016	CSD: 508: 001	Neurobiology	38	38
Spring 2016	CSD: 456: 001	Survey of Audiology	75	75
Fall 2015	CSD: 556: 001	Audiology for SLPs	28	28
Fall 2015	CSD: 376: 001	Hearing Science	81	81
Summer 2015	CSD: 456: 001	Survey of Audiology	75	75
Summer 2015	CSD: 556: 001	Audiology for SLPs	38	38
Summer 2015	CSD: 376: 001	Hearing Science	76	76
Spring 2015	CSD: 508: 001	Neurobiology	40	40
Spring 2015	CSD: 456: 001	Survey of Audiology	55	55

Fall 2014	CSD: 556: 001	Audiology for SLPs	32	32
Fall 2014	CSD: 376: 001	Hearing Science	55	55

### Student Mentoring Summary

Fall 2020	Honors advisor, Chair, # Students: 3
Fall 2020	Undergraduate Advisor, Chair, # Students: 3
Spring 2020	Honors advisor, Chair, # Students: 2
Spring 2020	Undergraduate Advisor, Chair, # Students: 2
Fall 2019	Honors advisor, Chair, # Students: 2
Fall 2019	Undergraduate Advisor, # Students: 2
Spring 2019	Honors advisor, Chair, # Students: 4
Spring 2019	Undergraduate Advisor, Chair, # Students: 4
Fall 2018	Honors advisor, Chair, # Students: 3
Fall 2018	Undergraduate Advisor, Chair, # Students: 3
Spring 2018	Honors advisor, Chair, # Students: 2

### Student Mentoring

#### *M.E. (Engineering) - Capstone Project, Chair/Co-Chair*

2019 - 2020 Shi Shing, Shen

#### *BA - Undergraduate Honors Thesis*

2019 - 2020 Amanda, Sgambati; *Completed*

2019 - 2020 Braden, Wiegand-Shahani; *Completed*

2017 – 2018 Natalia, Cores; *Completed*

2015 – 2016 Abigail, Spiss; *Completed*

2015 - 2016 Rachel, Johnson; *Completed*

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## SCHOLARSHIP

### Publications

CLAS \* System \* = Senior Author, Major Contribution, \*\* = Secondary Contribution \*\*\* = Equal Contribution, \*\*\*\* = Minor Contribution

#### *Refereed Articles*

1. \*Deshpande, A. K., Bhatt, I. S., & Rojanaworarit, C. (2021). Virtual reality tinnitus management: a randomized controlled trial. *International Journal of Audiology*. doi: 10.1080/14992027.2021.1978568.
2. \*O'neil, G., & Bhatt, I.S. (in press). Nondeterministic nature of sensorineural outcomes following noise trauma. *Biology Open*.
3. \*Bhatt, I. S., Dias, R., Washnik, N., Wang, J., Guthrie, O., Skelton, M., Lane, J. & Wilder, J. (in press). AudioChipping – a novel deep phenotyping method for documenting a phenotypic spectrum of speech-in-noise deficits in “normal” hearing young adults. *Ear and hearing*.
4. \*Bhatt, I. S., Dias, R., & Torkamani, A. (2021). Association Analysis of Candidate Gene Polymorphisms and Tinnitus in Young Musicians. *Otology & Neurotology*. doi: 10.1097/MAO.00000000000003279
5. \*Bhatt, I. S. (2020). Determinants of the Audiometric Notch at 4000 and 6000 Hz in Young Adults. *Journal of the American Academy of Audiology*, 31(6), 371-383.
6. \*Washnik, N. J., Bhatt, I. S., Phillips, S. L., Tucker, D., & Richter, S. (2020). Evaluation of cochlear activity in normal-hearing musicians. *Hearing Research*, 108027.
7. \*Bhatt, I. S., Dias, R., Washnik, N., Wang, J., Guthrie, O., Skelton, M., Lane, J. & Wilder, J. (2020). A candidate gene association study for noise-induced hearing loss in a population of young

- musicians. *Journal of Otology and Neurotology*. doi: 10.1097/MAO.0000000000002615
8. \*Bhatt, I. S., & Wang, J. (2019). Evaluation of dichotic listening performance in normal-hearing, noise-exposed young females. *Hearing Research*, 380(1), 10-21.
  9. \*Bhatt, I. S. (2018). Prevalence of and Risk Factors for Tinnitus and Tinnitus-related Handicap in a College-aged Population. *Ear and hearing*, 39(3), 517-526.
  10. \*Bhatt, I. S. (2018). Supra-aural transducer-related artifact contributes to overestimation of noise-induced hearing loss. *The Journal of the Acoustical Society of America*, 143(4), 2055-2058.
  11. \*Bhatt, I. S. (2017). Increased medial olivocochlear reflex strength in normal-hearing, noise-exposed humans. *PloS one*, 12(9), e0184036.
  12. \*Bhatt, I. S., & Guthrie, O. N. (2017). Analysis of audiometric notch as a noise-induced hearing loss phenotype in US youth: data from the National Health And Nutrition Examination Survey, 2005–2010. *International Journal of Audiology*, 56(6), 392-399.
  13. \*Bhatt, I. S., Phillips, S., Richter, S., Tucker, D., Lundgren, K., Morehouse, R., & Henrich, V. (2016). A polymorphism in human estrogen-related receptor beta (ESRR $\beta$ ) predicts audiometric temporary threshold shift. *International Journal of Audiology*, 55(10), 571-579.
  14. \*Phillips, S. L., Richter, S. J., Teglas, S. L., Bhatt, I. S., Morehouse, R. C., Hauser, E. R., & Henrich, V. C. (2015). Feasibility of a bilateral 4000–6000 Hz notch as a phenotype for genetic association analysis. *International Journal of Audiology*, 54(10), 645-652.

### **Book Chapters**

1. \* Bhatt, I. S. (in press). Genetics of Tinnitus. *Recent Advancement in Tinnitus*. San Diego: Plural Publishing Inc.

### **Grants and Contracts**

#### **Funded**

- Jan 2019 – Dec 2022 *Tinnitus: Genetic Susceptibility and Audiometric Measures*. Funded by National Institute for Deafness and Other Communication Disorders. Award amount: (\$455,982.00) 1R21 DC016704-01A1 Investigator/s Ishan Bhatt (Principal Investigator).
- Jan 2017 – June 2020 *Investigating the Role of Estrogenic-Related Receptor Beta in the Pathogenesis of Noise-Induced Hearing Loss*. Funded by Research Development Award. Award amount: (\$25,000.00) Investigator/s Ishan Bhatt (Principal Investigator).
- Jan 2017 - June 2020 *Toward Understanding the Genetic Basis of Phenotypic Heterogeneity in Tinnitus*. Funded by Faculty Grant Program. Award amount: (\$7158.00) Investigator/s Ishan Bhatt (Principal Investigator).
- Jan 2015 - Dec 2016 *Prevalence of and Risk Factors for Tinnitus in Young Adults*. Funded by Faculty Grant Program. Award amount: (\$5000.00) Investigator/s Ishan Bhatt (Principal Investigator).
- Jan 2014 - Dec 2018 *Start-up funding*. Funded by CSD/NAU, supplement grant. Award amount: (\$150,000.00) Investigator/s Ishan Bhatt (Principal Investigator).
- Nov 2013 - Nov 2014 *Audiometric Phenotypes and Genetic Susceptibility to Noise-Induced Hearing Loss*. Funded by Faculty Grant Program. Award amount: (\$5000). Investigator/s Ishan Bhatt (Principal Investigator).
- Jan 2012 - Jun 2013 *Identifying the Genetic Variants Associated with Noise-Induced Hearing Loss in Young Musicians*. Funded by The Theodore and Loretta Williams Graduate Research Award. Award amount: (\$1500.00) Investigator/s Ishan Bhatt (Principal Investigator).

### **Invited Lectures and Conference Presentations**

- Bhatt, I. S. (accepted). Genetics of tinnitus. Research Podium Presentation at the American Speech-Language and Hearing Association Conference 2021.

- Washnik, N. & Bhatt, I. S. (accepted). Sound Exposure of Marching Band Members and Perceived Auditory Risk. Research Poster Presentation at the American Speech-Language and Hearing Association Conference 2021
- Bhatt, I. S. (accepted). Suprathreshold Auditory Measures in Normal-hearing Noise-exposed Young Adults. Research Poster Presentation at the American Speech-Language and Hearing Association Conference 2021
- Bhatt, I. S. and Washnik, N. (2021). Evaluating cochlear tuning and medial olivocochlear reflex strength in young musicians and non-musicians. International Evoked Response Audiometry Study Group Biennial Symposium. Online.
- Bhatt, I. S. and Washnik, N. (2021). Suprathreshold auditory measures for detecting early-stage noise-induced hearing loss in young adults. International Evoked Response Audiometry Study Group Biennial Symposium. Online.
- Washnik, N. and Bhatt, I. S. (2021). Suprathreshold auditory electrophysiological and perceptual measures in young musicians with high noise exposure background. International Evoked Response Audiometry Study Group Biennial Symposium. Online.
- Bhatt, I. S. (2020). Investigating the genetic basis of tinnitus: A deep phenotyping Standpoint. Research Podium Presentation at Indian Speech and Hearing Association Conference, Chandigarh, India. (INVITED SPEAKER)
- Booth, M., Bhatt, I. S. & Skelton, M. (2020). Analyzing the phenotypic spectrum of hidden hearing loss in normal-hearing young females. Research Poster Presentation at AudiologyNow!2020 (accepted). New Orleans, LA.
- Chuzie, O., Washnik, N. & Bhatt, I. S. (2020). The influence of Musicianship on Cochlear Tuning Estimates. Research Poster Presentation at AudiologyNow!2020 (accepted). New Orleans, LA.
- El-Houayek, R., Deshpande, A. & Bhatt, I. S. (2020). Virtual Reality for Tinnitus Management. Research Poster Presentation at AudiologyNow!2020 (accepted). New Orleans, LA.
- Washnik, N.J., Bhatt, I. S., Phillips, S., Tucker, D., & Richter. (2019). Evidence of Cochlear Synaptopathy in Student Musicians. Presented at the American Speech-Language-Hearing Association, Orlando, Florida.
- Shixing, S., Bhatt, I. S. & Flikkema, P. (2019). Evaluation of cochlear tuning in adults with and without tinnitus. Research Poster Presentation at the American Auditory Society Conference 2019. Scottsdale, AZ.
- Effler, A. & Bhatt, I. S. (2018). Can Foreign Phonemes Production Skills Predict Supra-Threshold Speech Perception Abilities? Research Poster Presentation at the American Speech Language and Hearing Association Conference 2018. Boston, MA.
- Bhatt, I. S. (2018). Effects of Noise Exposure on the Medial Olivocochlear Reflex Strength in Normal-Hearing Young Adults. Research Podium Presentation at AudiologyNOW!, 2018. Nashville, TN.
- Bhatt, I. S. (2018). Effects of Transducer Type on the Prevalence of Noise-Induced Hearing Loss in Young Adults. Research Podium Presentation at AudiologyNOW!, 2018. Nashville, TN.
- Bhatt, I. S., Rhodes, N. & Wood, K. (2017). Analysis of Tinnitus in a College-aged Population. Research Podium Presentation at Arizona Speech and Hearing Association Conference, Phoenix, AZ.
- Bhatt, I. S. (2017, Recipient of the ASHA Meritorious Poster Submission award). Extended High-Frequency Audiometry & DPOAEs in "Normal" Hearing Noise-Exposed Young Adults. Research Poster Presentation at the American Speech-Language and Hearing Association Conference 2017. Los Angeles, CA.
- Bhatt, I. S. (2017). Prevalence and Audiological Factors Associated with Tinnitus in a College-aged Population. Research Poster Presentation at AudiologyNOW!, 2017. Indianapolis, IN.
- Bhatt, I. S. (2017). *Comparison of Insert and TDH Supra-aural Earphones in Identification of a 4000-6000 Hz notch*. Research Poster Presentation at AudiologyNOW!, 2017. Indianapolis, IN.
- Mbuoben, T., Tubbs, H., Randall, A., White, N., Hiebert, C. & Bhatt, I. S. (2016). Transient-Evoked Otoacoustic Emissions in Normal-Hearing Noise-Exposed Human Ears. Research Poster Presentation at the American Speech-Language and Hearing Association Conference 2016. Philadelphia, PA.
- Bhatt, I. S., Guthrie, O., Skelton, M., Fofanav, V., Kosaraju, S. & Badreldin, O. (2015). Challenges in treating a bilateral 4-6 kHz notch as a noise-induced hearing loss phenotype for genetic association analysis. Research

Podium Presentation at AudiologyNOW!, 2016. Phoenix, AZ.

Bhatt, I. S., Guthrie, O. & Skelton, M. (2015). Risk Factors for a High-Frequency Hearing Loss in US Youth: Data from the NHANES (2005-2010). Research Poster Presentation at AudiologyNOW!, 2016. Phoenix, AZ.

Bhatt, I. S., Guthrie, O. & Skelton, M. (2015). Risk Factors for a High-Frequency Hearing Loss in US Youth: Data from the NHANES (2005-2010). Research Poster Presentation at AudiologyNOW!, 2016. Phoenix, AZ.

Bhatt, I. S., Guthrie, O. & Skelton, M. (2015). Risk Factors for a Bilateral 4-6 kHz Notch in US Youth: Data from the NHANES (2005-2010). Research Poster Presentation at AudiologyNOW!, 2016. Phoenix, AZ

Bhatt, I. S., Guthrie, O. & Skelton, M. (2015). Risk Factors for Self-Reported Tinnitus in US Youth: Data from the NHANES (2005-2010). Research Poster Presentation at AudiologyNOW!, 2016. Phoenix, AZ.

Bhatt, I. S., Phillips, S. & Shaikh, M. (2014). Phenotyping Noise-Induced Hearing Loss with Audiometry and DPOAE. Oral presentation at the American Speech and Hearing Association Conference, November 2014. Orlando, FL.

Bhatt, I. S., Phillips, S., Richter, S., Morehouse, R., Tucker, D., Lundgren, K. & Henrich, V. (2015). A Polymorphism in Human Estrogen-Related Receptor Beta (ESRR $\beta$ ) predicts temporary Noise-Induced Hearing Loss. Oral presentation at Arizona Speech and Hearing Association Conference, 2015. Tempe, AZ. (INVITED SPEAKER)

Bhatt, I. S., Phillips, S. & Suthaharan, S. (2013). Analysis of Otoacoustic Emissions using Wavelet Transform to Examine the Physiological Basis of Noise-Induced Hearing Loss Associated with A Specific Genetic Polymorphism. Oral presentation at Regional Mathematics and Statistics Conference, November 2, 2013. Greensboro, NC.

Bhatt, I. S., Phillips, S., Richter, S., Morehouse, R., Tucker, D., Lundgren, K. & Henrich, V. (2013). A Polymorphism in Human Estrogen-Related Receptor Beta (ESRR $\beta$ ) is associated with Physiologic Measures of Noise-Induced Hearing Loss. Poster presented at the American Society of Human Genetics, October 22-26, 2013. Boston, MA.

Bhatt, I. S. & Phillips, S. (2012). Early identification of Noise-Induced hearing loss using distortion product of otoacoustic emissions. In UNCG departmental research meeting.

Mace, S., Phillips, S., Bhatt, I. S., Henrich, V. & Richter, S. (2012) Hearing Policy for Music Students. Poster presented at the Biennial Music Educators National Conference with Special Focus on Research and Music Teacher Education, March 28-31, 2012. St. Louis, MO.

Bhatt, I. S. (2010) Differential diagnosis between Noise-Induced Hearing Loss, Ototoxicity and Presbycusis using auditory brainstem responses. Journal club meetings, Ali Yavar Jung National Institute for Hearing Handicapped, Mumbai, India.

Bhatt, I. S. (2008) Usefulness of auditory electrophysiological assessment battery for early diagnosis of Noise-Induced Hearing Loss. The clinical conference, Ali Yavar Jung National Institute for Hearing Handicapped, Mumbai, India.

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## SERVICE

### Profession

2021	Grant review panel – Neurological, Aging and Musculoskeletal Epidemiology Study Section ( <a href="#">NAME</a> ), NIH
2020 - Present	Grant review panel - Hearing and Balance Section, ASHA foundation
2020 - Present	Member – Bilingual Language Competence, ASHA
2018 - Present	Reviewer for the Journal of Acoustical Society of America
2018 - Present	Reviewer for the Journal of Trends in Hearing
2015 - Present	Reviewer for the Journal of American Academy of Audiology
2015 - Present	Reviewer for the Journal of Ear and Hearing
2014 - Present	Reviewer for the International Journal of Audiology
2014 - 2019	Reviewer for the Arizona Speech, Language and Hearing Association

2014 - 2019

Section Editor for the Journal of Clinical &amp; Experimental Otolaryngology

**Department**

2020 - Present

AuD Qualifying Exam Committee, Member

2020 - Present

AuD Admission Committee, Member

2020 - Present

Member – Admission Committee

2018 - 2020

Member – NAU CSD marketing committee

2018

Member of a search committee – Tenure Track Position

2016 - 2019

Member of a search committee – Post-doc position

2016 - 2019

Honors advisor

**University**

2017 - 2020

Member of a Steering Committee, Interdisciplinary Health Ph.D. Program (University-level, Effort level – 10% per academic year).

2019 - 2020

Professional Development Committee, Arizona Speech-Language and Hearing Association (Leadership role)

2015 - 2020

Professional Ethics Committee, NAU

2015 - 2020

Member of a search committee – The Director of Institutional Review Board, NAU.