Daniel Guest

✉ guest121@umn.edu   🐦 @drdrguest
🌐 https://guestdaniel.github.io/

Education

2017 – 2022	**Ph.D., University of Minnesota**, Psychology
2013 – 2017	**B.S., The University of Texas at Dallas**, Psychology

Research

University of Minnesota

2017 – 2022	PhD Student, 🔗 Auditory Perception and Cognition Lab (Andrew Oxenham)
2018 – 2022	PhD Student, 🔗 Computational Visual Neuroscience Lab (Kendrick Kay)

The University of Texas at Dallas

2015 – 2017	Undergraduate Research Assistant, 🔗 Speech Perception Lab (Peter Assmann)

Awards

National Institutes of Health

2020 – 2022	F31 Predoctoral Fellowship Title: *Processing of complex sounds at high frequencies*

University of Minnesota

2017 – 2022	College of Liberal Arts Graduate Fellowship
2018 – 2020	NSF-NRT Graduate Training Program in Sensory Science Fellowship
2018	Department of Psychology Graduate Summer Research Fellowship

National Science Foundation

2018	Graduate Research Fellowship Program, Honorable Mention

Journal Articles

Guest, D. R., & Oxenham, A. J. (2022). Human discrimination and modeling of high-frequency complex tones shed light on the neural codes for pitch. *PLOS Computational Biology*, *18*(3), e1009889. 🔗 doi:10.1371/jounral.pcbi.1009889

Kapolowicz, M. R., **Guest**, D. R., Montazeri, V., Baese-Berk, M. M., & Assmann, P. F. (2021). Effects of spectral envelope and fundamental frequency shifts on the perception of foreign-accented speech. *Language and Speech*, 1–26. 🔗 doi:10.1177/00238309211029679

Guest, D. R., & Oxenham, A. J. (2019). The role of pitch and harmonic cancellation when listening to speech in harmonic background sounds. *The Journal of the Acoustical Society of America*, *145*(5), 3011–3023. 🔗 doi:10.1121/1.5102169

Talks

Guest, D. R., Allen, E., Wu, Y., Naselaris, T., Arcaro, M., & Kay, K. N. (2021). Evidence for a ventral visual stream in the pulvinar. Contributed talk presented at VSS 2021 (virtual).

Guest, D. R., & Oxenham, A. J. (2019). Pitch perception of concurrent high-frequency complex tones. Invited talk presented at ASA 2019 Louisville. 🔗 doi:10.1121/1.5101520

Posters

Guest, **D. R.**, & Oxenham, A. J. (2021). Fundamental frequency discrimination in mixtures of high-frequency complex tones: Data and ideal-observer model predictions. Poster presented at ARO 2021 (virtual).

Guest, **D. R.**, & Oxenham, A. J. (2020). Modeling pitch perception of concurrent high-frequency complex tones with auditory nerve simulations. Poster presented at ARO 2020.

Guest, **D. R.**, & Oxenham, A. J. (2020). Perception of melody and triads at high frequencies. Poster presented at ASA 2020 (virtual). 🔗 doi:10.1121/1.5146799

Guest, **D. R.**, & Oxenham, A. J. (2019). Pitch perception of concurrent high-frequency complex tones. Poster presented at ARO 2019.

Guest, **D. R.**, & Oxenham, A. J. (2019). Pitch perception of concurrent high-frequency complex tones: Modeling behavior with auditory nerve simulations. Poster presented at ISAAR 2019.

Guest, **D. R.**, & Oxenham, A. J. (2018). The role of pitch and harmonic cancellation in simultaneous speech segregation. Poster presented at 2018 UMN Center for Cognitive Science Spring Research Day.

Guest, **D. R.**, & Oxenham, A. J. (2018). The role of pitch and harmonic cancellation when listening to speech in background sounds. Poster presented at ASA 2018 Victoria. 🔗 doi:10.1121/1.5068208

Kapolowicz, M. R., **Guest, D. R.**, Montazeri, V., Baese-Berk, M. M., & Assmann, P. F. (2018). Perception of spectrally-shifted non-native speech. Poster presented at ASA 2018 Victoria. 🔗 doi:10.1121/1.5068208

Guest, **D. R.** (2017). Perception of voice gender in children's voices by cochlear implant users. Poster presented at 6th UT Dallas Annual Exhibition of Excellence in Undergraduate Research.

Guest, **D. R.**, Montazeri, V., Kapolowicz, M. R., & Assmann, P. F. (2017). Perception of voice gender in children's voices by cochlear implant users. Poster presented at ASA 2017 Boston. 🔗 doi:10.1121/1.4988543

Kapolowicz, M. K., **Guest, D. R.**, Montazeri, V., & Assmann, P. F. (2017). Effect of frequency shifts on talker recognition in native and foreign-accented speech. Poster presented at ASA 2017 New Orleans. 🔗 doi:10.1121/1.5014953

Guest, **D. R.** (2016). Perception of voice gender in cochlear implant simulations of children's speech. Poster presented at the 5th UT Dallas Annual Exhibition of Excellence in Undergraduate Research.

Guest, **D. R.**, Kapolowicz, M. R., Hossain, S., Montazeri, V., & Assmann, P. F. (2016). Perception of voice gender in cochlear implant simulations of children's speech. Poster presented at ASA 2016 Salt Lake City. 🔗 doi:10.1121/1.4950328

Professional experience

Oticon A/S

2019	Research intern in Augmented Hearing, Eriksholm Research Center
	Supervisor: Lars Bramsløw

Teaching

University of Minnesota

2021	Guest lecturer, Osher Lifelong Learning Institute Course "Normal and Abnormal Perception: How Senses Shape Experience" Lecture topic: *The science of hearing loss*
2018 – 2022	Guest lecturer, Introduction to Biological Psychology (PSY 3061) Lecture topic: *Audition*

Professional service

Acoustical Society of America

2019	Co-organized "Guidance from the Experts: Applying for Grants and Fellowships" special panel session at ASA San Diego
2018 – 2020	Student Council Representative (Psychological and Physiological Acoustics)

University of Minnesota

2019 – 2022	Department of Psychology Graduate Student Liaison Committee Representative (Cognitive and Brain Sciences)

Mentorship

University of Minnesota

2018 – 2022	Supervisor for undergraduate research projects: • Sam Maier • Neha Rajappa (supported by 🔗 UROP Award in 2021) • Thomas Tobin (supported by 🔗 UROP Award in 2020 and 2021) • Ethan Lentz • Anders Bjorkman

Skills

Computers	bash, git, LaTeX, Linux
Languages	English (native), Spanish, Portuguese
Mathematics	Differential equations, linear algebra, multivariable calculus, real analysis
Programming languages	Python, R, MATLAB, Julia
Statistics	Bayesian statistics, estimation theory, generalized linear regression, multilevel/hierarchical regression, neural networks, probability theory