

## EDUCATION

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- **University of Texas at Austin (UT Austin)** August 2021 – May 2026  
*Ph.D. candidate, [Mechanical Engineering \(Acoustics concentration\)](#)* GPA: 4.0
- **University of Texas at Dallas (UT Dallas)** August 2017 – May 2021  
*B.S. Physics, Minor in Music, Collegium V Honors, Magna Cum Laude* GPA: 3.897

## EXPERIENCE

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- **Graduate Program in Acoustics at UT Austin**  
*Graduate Research Assistant* August 2021 – May 2026
  - Studying acoustic radiation force, bianisotropic media, and vortex beam diffraction under the supervision of [Prof. M. R. Haberman](#) and [M. F. Hamilton](#)
  - Dissertation title: *Scattering and diffraction of acoustic waves in three problems with broken symmetry*
  - [Austin Student Chapter of the ASA](#), Chair, 2024-2025 academic year
  - [Texas Acoustics Seminar](#) administrator, fall 2022
- **Acoustical Society of America (ASA)**  
*Student Council* Fall 2023 – Spring 2026
  - As Student Council Chair (2025-2026), promoted interests of students and organized student-related activities at meetings
  - As [Biomedical Acoustics Technical Committee](#) Student Council Representative (2023-2025), reported on student activities at Technical Committee meetings and managed website
- **International Congress on Acoustics**  
*Webmaster for 25th International Congress on Acoustics* 2025
- **Department of Physics at UT Dallas**  
*Teaching Assistant for Electromagnetism and Waves lab* Spring 2020
- **Advanced Research in Thermo Fluid Systems (ARTS) Lab, UT Dallas**  
*Undergraduate Research Assistant* Summer 2019
  - Assisted with rheometry experiments of milk for Diana Alatalo's [dissertation](#) (She is now an [assistant professor](#) at WPI)
- **UTD Cosmology, Relativity and Astrophysics Group**  
*Undergraduate Research Assistant* 2017-2018
  - Studied the perturbative effects of tertiary black holes on the gravitational waves radiated by inspiraling binary black holes under the guidance of [Prof. M. H. Kesden](#)
  - Cataloged data from the Gaia space observatory under the guidance of [Prof. K. Penev](#)

## HONORS & AWARDS

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- **Chester M. McKinney Graduate Fellowship in Acoustics:** awarded by the [Applied Research Laboratories at UT Austin](#) for support in acoustics research, 2022-2026
- **T. W. Whaley, Jr. Friends of Alec Endowed Scholarship:** awarded by the [Cockrell School of Engineering](#) at UT Austin, 2021-2022
- **Eugene McDermott Scholar:** One of twenty-three undergraduates selected for flagship scholarship at [UT Dallas](#), 2017-2021

## PUBLICATIONS

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- C. A. Gokani, M. R. Haberman, M. F. Hamilton, "[Analytical solutions for acoustic vortex beam radiation from planar and spherically focused circular pistons](#)," *JASA Express Lett.* **4**, 124001, (2024). Editor's choice.
- C. A. Gokani, M. R. Haberman, M. F. Hamilton, "[Paraxial and ray approximations of acoustic vortex beams](#)," *J. Acoust. Soc. Am.* **155**, 2707-2723, (2024).

## CONFERENCE PROCEEDINGS

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- C. A. Gokani and M. R. Haberman, “Acousto-electromagnetic media: Homogenization and constraints,” 19th International Congress on Artificial Materials for Novel Wave Phenomena - Metamaterials 2025, accepted.
- C. A. Gokani, T. S. Jerome, M. R. Haberman, M. F. Hamilton, “[Born approximation of acoustic radiation force used for acoustofluidic separation](#),” *Proc. Mtgs. Acoust.* **48**, 045002 (2022).

## SEMINAR TALKS

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- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Paraxial and ray approximations of acoustic vortex beams](#),” Center for Nonlinear Dynamics, Department of Physics, UT Austin, September 25th, 2024.

## CONFERENCE TALKS

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- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Radiation force on inhomogeneous subwavelength scatterers due to progressive waves](#),” *J. Acoust. Soc. Am.* **157**, A112–A113 (2025).
- C. A. Gokani and P. S. Wilson, “[Timbral effects of the right-hand techniques of Wes Montgomery and Joe Pass](#),” invited. *J. Acoust. Soc. Am.* **157**, A107 (2025).
- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Analytical solutions for acoustic vortex beam radiation from planar and spherically focused circular pistons](#),” *J. Acoust. Soc. Am.* **157**, A363 (2025).
- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Effects of increasing orbital number on the field transformation in focused vortex beams](#),” *J. Acoust. Soc. Am.* **155**, A346 (2024).
- C. A. Gokani, J. M. Cormack, M. F. Hamilton, “[Growth rates of harmonics in nonlinear vortex beams](#),” *J. Acoust. Soc. Am.* **154**, A328 (2023).
- C. A. Gokani, S. P. Wallen, M. R. Haberman, “[Reciprocity, passivity, and causality in fully coupled acousto-electrodynamic media](#),” *J. Acoust. Soc. Am.* **154**, A118 (2023).
- C. A. Gokani, S. P. Wallen, M. F. Hamilton, M. R. Haberman, “[Source-driven homogenization theory for electro-momentum coupled scatterers](#),” *J. Acoust. Soc. Am.* **153**, A120 (2023). Tied for first place for in the Structural Acoustics and Vibrations Student Competition at 183<sup>rd</sup> ASA in Chicago. See also: “[Computational analysis of sub-wavelength scatterers exhibiting electro-momentum coupling](#).”
- C. A. Gokani, Y. Meng, M. R. Haberman, M. F. Hamilton, “[Analytical solution for a focused vortex beam radiated by a Gaussian source](#),” *J. Acoust. Soc. Am.* **152**, A56 (2022).
- C. A. Gokani, T. S. Jerome, M. R. Haberman, M. F. Hamilton, “[Born approximation of acoustic radiation force used for acoustofluidic separation](#),” *J. Acoust. Soc. Am.* **151**, A90 (2022). (Also presented at the 22nd International Symposium on Nonlinear Acoustics, Oxford, UK)

## POSTERS

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- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Acoustic radiation force on subwavelength objects due to progressive waves](#),” Walker Department of Mechanical Engineering Research Poster Competition, February 21st, 2025, tied for 1st place out of 30 posters. Also presented at the 188th ASA/25th ICA meeting in New Orleans on May 23rd, 2025 (tied for 2nd place out of 20 posters).
- C. A. Gokani, M. R. Haberman, M. F. Hamilton, “[Paraxial and ray approximations of acoustic vortex beams](#),” Walker Department of Mechanical Engineering Research Poster Competition, March 18th, 2024, 3rd place out of 30 posters.

## TECHNICAL SKILLS

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- **Theory:** acoustics, electrodynamics, continuum and classical mechanics
- **Computation:** MATLAB, Mathematica
- **Writing:** L<sup>A</sup>T<sub>E</sub>X, HTML/CSS, Markdown, MS Office

## WEBSITES

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- [Acoustics PhD qualifying exam review site](#), summer 2023
- [IntelliChoice SAT Math Course](#), free math course for high school students studying for the SAT, summer 2020
- [Wave Phenomena](#), web-based class notes from ME 384N, taught by Prof. Mark F. Hamilton, spring 2024

## AFFILIATIONS

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- [Acoustical Society of America, Student Member](#), 2021-present
- [Texas Astronomical Society, Student Member](#), 2018-2021

## VOLUNTEERING

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- **Women in STEM**, volunteer, 2022 - *present*
- **IntelliChoice**, math tutor and branch manager, 2018 - 2022
- **Society of Physics Students at UTD**, star party coordinator, 2017 - 2021
- **Helbing Jazz Initiative**, jam session coordinator, 2019-2020
- **Richardson Public Library**, volunteer, 2017 - 2020

## EXTRACURRICULAR ACTIVITIES

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- **Wind chimes**: I have been handcrafting wind chimes since my sophomore year at UTD.
- **Music**: I have had a lifelong love for music.