

## EDUCATION

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- University of Texas at Austin** 2021 - present  
*Ph.D. (expected 2026) [Mechanical Engineering, Acoustics](#)* GPA: 4.0
- University of Texas at Dallas** Class of 2021  
*B.S. Physics, Minor in Music, Collegium V Honors, Magna Cum Laude* GPA: 3.897

## 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.* in press.
- 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).

## PROCEEDINGS

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- 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).

## 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.
- 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).
- S. P. Wallen, B. M. Goldsberry, C. A. Gokani, M. R. Haberman, "[Computational Analysis of Sub-wavelength Scatterers exhibiting Electro-momentum Coupling](#)," *J. Acoust. Soc. Am.* **153**, A120 (2023).
- 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, M. R. Haberman, M. F. Hamilton, "[Physical acoustics homework problems written by students: undisciplined, irreverent, and original](#)," *J. Acoust. Soc. Am.* **152**, A168 (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)

## EXPERIENCE

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- Graduate Program in Acoustics at UT Austin and the Applied Research Laboratories** 2021 - present  
*Graduate Research Assistant*
  - Studying acoustic and multi-domain bianisotropy with [Prof. Michael Haberman](#)
  - Studying linear and nonlinear vortex beams with [Prof. Mark Hamilton](#)
  - [Austin Student Chapter of the ASA](#), chair, 2024-2025 academic year
  - [Texas Acoustics Seminar](#) Administrator, fall 2022
- Acoustical Society of America (ASA)** 2023 - 2025  
*Biomedical Acoustics Technical Committee (BATC) student council representative*
  - Promote the interests of students in the ASA and organize student-related activities within the Society
  - Serve as a conduit for information for students within BATC
  - Attend Technical Committee meetings to report on student activities

- **Department of Physics at UT Dallas**  
Teaching Assistant for *Electromagnetism and Waves lab* 2020
- **Advanced Research in Thermo Fluid Systems (ARTS) Lab, UT Dallas**  
Undergraduate Research Assistant 2019
  - Assisted with data collection for [Prof. Diana Alatalo's](#) doctoral project on milk rheology
- **UTD Cosmology, Relativity and Astrophysics Group**  
Undergraduate Research Assistant 2017-2018
  - Under the supervision of [Prof. Michael Kesden](#), studied the perturbative effects of tertiary black holes on the gravitational waves radiated by inspiraling binary black holes
  - Under the supervision of [Prof. Kaloyan Penev](#), catalogued data from the Gaia space observatory

## HONORS & AWARDS

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- **Walker Department of Mechanical Engineering 2024 Poster Competition:** third place for “[Paraxial and ray approximations of acoustic vortex beams](#)”
- **Structural Acoustics and Vibrations Student Competition:** tied for first place for “[Source-driven homogenization theory for electro-momentum coupled scatterers](#)” at 183<sup>rd</sup> ASA in Chicago, *Spring 2023*
- **Chester M. McKinney Graduate Fellowship in Acoustics:** awarded by [the Applied Research Laboratories \(ARL:UT\)](#) for support in acoustics research, 2022-2025
- **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 the [University of Texas at Dallas](#), 2017-2021

## TECHNICAL SKILLS

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- **Theory:** acoustics, electrodynamics, continuum and classical mechanics
- **Computation:** MATLAB, Mathematica
- **Writing:**  $\text{\LaTeX}$ , HTML/CSS, Markdown, MS Office
- **Experiment:** rheometry, astronomy, spectroscopy

## EDUCATIONAL RESOURCES

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- **Wave Phenomena**, web-based class notes from ME 384N, taught by Professor Mark F. Hamilton, *spring 2024*
- **Review for the acoustics qualifying exam**, extensive review of physical acoustics, ultrasonics, nonlinear acoustics, and math for the PhD qualifying exam in acoustics at UT Austin, *summer 2023*
- **IntelliChoice SAT Math Course**, free math course for high school students studying for the SAT, *summer 2020*

## 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.