

**SEAN FARRELL****Rice University**

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**RESEARCH INTEREST**

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Joint communication and distributive network imaging systems  
Computational Imaging, signal processing, wireless networks, millimeter wave imaging

**EDUCATION**

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2019 – 2026	<b>RICE UNIVERSITY</b> M.S./Ph.D. in Electrical and Computer Engineering, May 2026 (Expected) GPA: 3.95 Research Advisor: Dr. Ashok Veeraraghavan	<b>HOUSTON, TX</b>
2015 – 2019	<b>TRINITY UNIVERSITY</b> B.S. in Engineering with a focus in Electrical Engineering, <i>magna cum laude</i> Minor in Mathematics GPA: 3.74 Research Advisors: Dr. Peter Kelly-Zion and Dr. Dennis Ugolini	<b>SAN ANTONIO, TX</b>

**WORK EXPERIENCE**

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2019 – Present	<b>RICE UNIVERSITY</b> <b>Research Assistant</b> <ul style="list-style-type: none"><li>Developing and testing foundational ideas in distributive wireless network imaging using the next generation 5G communication networks.</li><li>Applying a Background Oriented Schlieren (BOS) imaging technique to investigate the air flow dynamics arising from orchestra musicians and opera singers; study evaluates performance environment safety in light of the SARS-CoV-2 virus pandemic.</li></ul>	<b>HOUSTON, TX</b>
2016 – 2018	<b>TRINITY UNIVERSITY</b> Electrical Engineering and Fluid Dynamics Undergraduate Research Assistant (2017 – 2018) <ul style="list-style-type: none"><li>Designed stochastic filtering signal processing method to reduce experimental noise impacts on computed tomography routine used to study the transport mechanisms influencing sessile drop evaporation</li><li>Measured vapor cloud concentrations of ideal and non-ideal hydrocarbon mixtures using infrared spectroscopy and computed tomography techniques</li></ul> Physics Undergraduate Research Assistant (Summer 2016) <ul style="list-style-type: none"><li>Engineered LIGO based interferometer physics lab experiment</li><li>Operated an atomic force microscope to measure charge distribution on LIGO optics</li><li>Collaborated with other researchers to automate optical charging vacuum chamber using LabVIEW</li></ul>	<b>SAN ANTONIO, TX</b>

**PRESENTATIONS**

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Fall 2018	<b>AMERICAN PHYSICAL SOCIETY DIVISION OF FLUID DYNAMICS</b> “Measuring Vapor Concentration and Diffusive Flux Distributions of an Evaporating Drop”	<b>ATLANTA, GA</b>
Summer 2018	<b>TRINITY UNIVERSITY RESEARCH SYMPOSIUM</b> “Signal Processing to Reduce Effects of Experimental Noise on Drop Evaporation Analysis”	<b>SAN ANTONIO, TX</b>
Summer 2017	<b>TRINITY UNIVERSITY RESEARCH SYMPOSIUM</b> “Sessile Drop Evaporation Study: Measurement of Bi-component Vapor Cloud Concentration”	<b>SAN ANTONIO, TX</b>

Fall 2016	<b>GULF COAST UNDERGRADUATE RESEARCH SYMPOSIUM</b> “LIGO Interferometer for Undergraduate Physics Lab”	<b>HOUSTON, TX</b>
Summer 2016	<b>TRINITY UNIVERSITY RESEARCH SYMPOSIUM</b> “LIGO Interferometer for Undergraduate Physics Lab”	<b>SAN ANTONIO, TX</b>

### **LEADERSHIP & INVOLVEMENT**

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2020 – Present	<b>RESEARCH EXPERIENCE FOR UNDERGRADUATES (REU)</b> , Mentor
2019 – Present	<b>LATINX DOCTORAL DIVERSITY GROUP</b> , Member
2019 – Present	<b>RICE GRADUATE EDUCATION FOR MINORITIES (RGEM)</b> , Member
2018 – Present	<b>AMERICAN PHYSICAL SOCIETY (APS)</b> , Member
2015 – 2019	<b>TRINITY UNIVERSITY CLUB TENNIS</b> , Service Chair and Member
2015 – 2019	<b>TRINITY UNIVERSITY ATHLETIC OFFICE</b> , Assistant

### **HONORS & ACHIEVEMENTS**

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Fall 2018	<b>NSF AWARD</b> , #1404269
2017 – 2018	<b>TRINITY UNIVERSITY DEAN’S LIST</b>
Spring 2018	<b>JUNIOR ACADEMIC ACHIEVEMENT AWARD</b>
Spring 2018	<b>BEST INVESTIGATION AND ANALYSIS USING STATISTICS (BIAS) AWARD</b>
Spring 2018	<b>MATHEMATICAL CONTEST IN MODELING (MCM)</b>
2017 – 2018	<b>OUTSTANDING SOPHOMORE DESIGN AWARD</b>
Spring 2017	<b>AUSTIN MARATHON FINISHER</b>
Spring 2012	<b>EAGLE SCOUT AWARD</b>

### **ADDITIONAL INFORMATION**

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**Skills:** MATLAB, Scala, C, Python, VHDL, BASIC, Eagle, Creo Parametric, Autodesk Inventor, Microsoft Office Suite, Wireless Insite