

# Scott Gong

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## Experience

### **Offsites & Utilities Engineer, ExxonMobil**

*Aug 2021 – present*

- Provide expertise in various brownfield utilities including cooling, water, and fuel for Houston Hub Project
- Designed steam system improvements for a polyethylene plant which will save the facility \$2.5M per year
- Developing testing and integration scope for 100% H<sub>2</sub> burners to decarbonize methane-driven gas turbines
- Support upstream FPSO facilities scoping study for Guyana Offshore Assets

### **Engineers in Operations Field Training Program, ExxonMobil**

*Feb 2021 – July 2021*

- Engaged in daily plant operations and technical troubleshooting at an oil processing and distribution site
- Completed a variety of engineering projects for Operations, Construction, and Commissioning groups

### **Cost and Schedule Engineering Intern, ExxonMobil**

*Summer 2019*

- Established a data collection and analysis architecture for efficient execution of Cost Estimate Accuracy Studies
- Standardized scheduling methods by co-authoring a new Scheduling Guideline and developing a PowerBI tool

### **Founder, Scott Gong Tutoring (scottgongtutoring.com)**

*Aug 2018 – present*

- Specialize in engineering mechanics, all levels of math, and other popular STEM courses (50+ courses/topics)
- Train and coach a team of 8 tutors while managing all aspects of the business including hiring, onboarding, marketing, website management, accounting/payroll, client communications, and business analytics
- Produced 32 hours of comprehensive video lectures for engineering math and mechanics – hosted on Udemy.com
- To date: 2,500 appointments, 200 students, 5 figure annual revenue

### **Process Reliability Intern, Eastman Chemical**

*Summer 2018*

- Implemented a new air treatment process for pneumatic actuators, decreasing maintenance costs by \$30k per year
- Improved safety by installing stabilization features for shaking acid pipelines in a railcar acid unloading station

### **Technical Engineering Co-op, GE Appliances**

*Spring & Fall 2017*

- Modified hardware and software for refrigerator water system to eliminate failure modes and improve robustness
- Designed test fixtures, and coordinated/performed product launch qualification tests per industry standards
- Utilized rapid prototyping to solve critical issues in a fabric softener dispense system

### **Structural Analysis Intern, Volvo Trucks**

*Summer 2017*

- Applied mechanical design concepts to develop ergonomic and strength enhancements to paint fixtures – reduced weight by 30% and increased rigidity on multiple fixtures, which improved facility workflow and paint uniformity

## Research

### **Beam Steering using Electrowetting-on-Dielectric (EWOD), Virginia Tech**

*Jan 2019 – May 2020*

- Implemented EWOD to create a controllable liquid-liquid interface inside a prism. Created a compact and easily manufacturable dual interface liquid prism. Submitted design to the US Patent Office
- Graduate Coursework: *Nonlinear Dynamics and Chaos, Advanced Vibrations, Optofluidics, Interfacial Fluid Mechanics*

### **MInDS Lab Undergraduate Member, Virginia Tech**

*May 2016 – Dec 2016*

- *Acoustic Wave Propagation*: Explored alternative fracture detection methods by writing MATLAB codes that analyze data from COMSOL Finite Element simulations of various ultrasonic wave patterns
- *SMART HVAC Development*: Wrote EPA P3 and ICTAS Proposals for the advancement of smart HVAC systems

## Leadership and Volunteering

- United Way *Day of Caring* Volunteering Event Lead, Montgomery Food Bank *2022*
- Event Coordinator, ASME – organized company visits, planned club events, ran weekly meetings *2018 – 2020*
- Senior Design Team Lead – Dynamic Pallet Jack, Altria *2018 – 2019*
- Lead Tutor, Virginia Tech Student Success Center – CRLA Level 2 Certified, tutored 19 courses *2015 – 2020*
- Louisville Lion Dance Member and Instrumental Coordinator *2017*
- Lion Dance Instructor and Youth Volunteer at Livingston Chinese School *2008 – 2014*
- Co-Founder of Mount Olive Math Tutors *2013 – 2014*

## Education

Virginia Polytechnic Institute and State University

- B.S. Mechanical Engineering and Mathematics Minor (May 2019) – **GPA: 3.7** (*Honors Scholar, Magna Cum Laude*)
- M.S. Mechanical Engineering (May 2020) – **GPA: 3.95**

Languages: Chinese Cantonese (Level 2+ ILR, intermediate proficiency)