SAM LIN
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EDUCATION
Bachelor of Science Physics, Mathematics Minor, Texas A&M University, College Station, June 2019

RESEARCH EXPERIENCE
Research Assistant, *TAMU***,** November 2020 - current
Bound state in the continuum assisted tunable beam steering
> Ongoing research on leaky mode slow light photonic crystal waveguide;
> Engineering a photonic band structure for slow light propagation and high quality factor via COMSOL and guided mode expansion techniques

Valley-Hall Hybrid Plasmonic Topological Insulator
> Investigated topological properties of a hybrid plasmon polariton photonic crystal via finite element eigenfrequency calculations; mapped the associated Berry curvatures of the photonic bands
> Simulated transmission and propagation characteristics of a valley topological photonic crystal waveguides with full-wave FDTD

Independent Research, *Kaggle*, June 2020 - November 2020
> Assembled convolutional neural network network architectures for analysis of medical records and scans of patients diagnosed with pulmonary fibrosis
> Modified machine learning training parameters and sequences
> Published code notebooks on the Kaggle community platform
> Accessed Amazon cloud computing resources for neural network training

Undergraduate Research Assistant, *TAMU Physics and Astronomy*, May 2018 - August 2018
> Utilized LabVIEW for data visualization in low temperature physics experiments
> Engineered electronic lab equipment to monitor liquid helium levels

TEACHING EXPERIENCE
Physics Teacher, *Dulles High School, Sugar Land*, August 2019 - December 2019
> Maintained in six high school physics classes an environment conducive to student learning, conveying relevant knowledge and/or skills to students.

Private Tutor, *Knack*, 2018 - 2019
Tutored college level physics and mathematics, accumulating 42 hours of tutoring time.

TECHNICAL SKILLS
Photonics / material transport simulators - Lumerical FDTD, COMSOL
Programming languages - Python, LaTeX, C#, LabVIEW