

# Triet Ho

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## EDUCATION

**University of Michigan, Ann Arbor, MI 48109**

*Ph.D. in Aerospace Engineering*

AUGUST 2025 - JUNE 2030

## SKILLS

**Programming:** Python, Matlab, Fortran, C++

**3D software and Simulation:** Blender, Solidworks, COMSOL Multiphysics, Future Aircraft Sizing Tool (FAST)

**Machine Learning:** DNNs, Autoencoder, VAE, GANs, RNNs, LLMs, GNNs, RL

**Skills:** Time management, Teamwork, Problem-solving

## PUBLICATION

### **Possible Spin-Triplet Excitonic Insulator in the Ultraquantum Limit of $\text{HfTe}_5$**

Jinyu Liu, Varsha Subramanyan, Robert Welser, Timothy McSorley, **Triet Ho**, David Graf, Michael T. Pettes, Avadh B. Saxena, Laurel E. Winter, Shi-Zeng Lin & Luis A. Jauregui

DOI: [10.1103/bj2n-4k2w](https://doi.org/10.1103/bj2n-4k2w)

Published in Physical Review Letters, July 22, 2025

### **Controllable strain-driven topological phase transition and dominant surface-state transport in $\text{HfTe}_5$**

Jinyu Liu, Yinong Zhou, Sebastian Y. Rodriguez, Matthew A. Delmont, Robert A. Welser, **Triet Ho**, Nicholas Sirica, Kaleb McClure, Paolo Vilmercati, Joseph W. Ziller, Norman Mannella, Javier D. Sanchez-Yamagishi, Michael T. Pettes, Ruqian Wu & Luis A. Jauregui

DOI: [10.1038/s41467-023-44547-7](https://doi.org/10.1038/s41467-023-44547-7)

Published in Nature Communications, Springer Nature, January 6, 2024

### **Non-local Transport and Spontaneous Superconductivity of the Topological Surface States of thin $\text{HfTe}_5$ devices**

Robert A. Welser, Jinyu Liu, Timothy J. McSorley, **Triet Ho**, Jonghyun Moon, David Graf & Luis A. Jauregui

Manuscript in progress

## RESEARCH EXPERIENCE

### **NASA AACES 2050 Advanced Aircraft Concepts for Environmental Sustainability - Ph.D. Researcher**

August 2025 - Present | Prof. Gokcin Cinar, University of Michigan | 20 hours per week

- Developing sustainable aircraft concepts in a collaborative NASA project with industry partner ELECTRA
- Streamlined researcher onboarding by revising documentation for the computational environment setup

### **Generative Graph Neural Networks in Hybrid Propulsion System Design - Ph.D. Researcher**

August 2025 - Present | Prof. Gokcin Cinar, University of Michigan | 20 hours per week

- Developed and trained generative GNNs to discover unconventional hybrid propulsion system designs
- Analyzed the GNN-generated designs for potential improvements in fuel efficiency and emissions

### **Machine Learning in High Entropy Alloys - Undergrad Student Researcher**

August 2023 - June 2025 | Prof. Penghui Cao, UC Irvine | 20 hours per week

- Developed and trained machine learning models to predict material properties of high-entropy alloys

## EXTRACURRICULAR ACTIVITY

### **YouTube Channel - Education Content Creator**

July 2019 - Present

- Educational videos on [Machine Learning](#)
- Software tutorial videos on [COMSOL Multiphysics](#) and [Blender](#)