

# Toward Quantum Advantage in Quantum Simulation

Quantum simulation of chemistry and other many-particle quantum systems is one of the most interesting applications of quantum computers and a candidate for the first demonstration of a useful quantum advantage. Near term algorithms, including variational quantum eigensolvers, constitute a promising path toward that goal. Sophia Economou will give an overview of the elements that enter quantum simulation and focus on her work on adaptive problem-tailored algorithms.



## Sophia Economou

Sophia Economou is a Professor of Physics and the T. Marshall Hahn Chair in Physics at Virginia Tech. She is the founding director of the Virginia Tech Center for Quantum Information Science and Engineering. Her research focuses on theoretical aspects of quantum information science, including quantum computing, quantum communications, and quantum simulation algorithms.

## Date

**October 27,  
2022**

## Time

**9:30am –  
10:30am MST**

## Location

**Biodesign B  
Auditorium**

727 E. Tyler St.  
Tempe, AZ, 85287

Register for in-  
person or virtual  
attendance:

[Registration](#)

*Snacks and beverages  
will be provided*