

# University of Miami, Physics Department Colloquium

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**Date:** Wednesday, Feb 03, 2025  
**Time:** 4:00 pm – 5:00 pm  
**Location:** Wilder Auditorium – Rm 112, Knight Physics Building

## Quantum Information Perspectives in Fundamental Physics

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### **Abstract**

Quantum information theory explores the potential of quantum mechanics to revolutionize communication and computation. Beyond these applications, it also offers back fresh insights into foundational questions in physics. In this talk, I will demonstrate how quantum information-theoretic tools can address problems in theoretical high-energy physics and discuss the mutual benefits of this interdisciplinary synergy.

### **Biography**

I earned my bachelor's degree in physics from Imperial College London and completed the Mathematics Tripos Part III at the University of Cambridge for my master's degree. I then pursued a Ph.D. in Quantum Information Theory at ETH Zurich and am currently a postdoctoral fellow at the Stanford Institute for Theoretical Physics.