# QISKIT FALL FEST 2025 @ CUA (10/27 - 10/29)

# **FULL SCHEDULE**



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Day	Time (EST)	Lecture Title	Speaker
<b>Day 1</b> Mon. Oct. 27th (In-Person/ Online)	2PM-3PM	Intro. to IBM Quantum and Qiskit	Nick Bronn
	3PM-4PM	Fundamental Quantum Algorithms	Natalie Lee
<b>Day 2</b> Tue. Oct. 28th (Online)	10AM-11AM	Q&A: High Performance Computing in the Quantum Era	Juan Guillermo Lalinde
	11AM-12PM	Intro. to Quantum Dynamic Circuits	Alberto Maldonado
	2PM-3PM	Transforming Tech Knowledge to Policy Design	Avanti Joshi
	3PM-4PM	Quantum Optimization	Jorge Saavedra Benavides
<b>Day 3</b> Wed. Oct. 29th (In-Person/ Online)	2PM-3PM	Qiskit Beginner Coding Session	Natalie Lee
	3PM-4PM	Hackathon Prompt Review Code Submissions Due: 10/31	Natalie Lee







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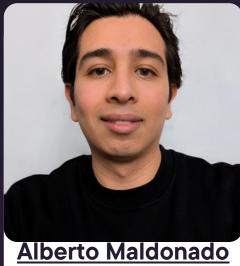
# GUEST SPEAKERS



**Nick Bronn** Global Strategic Research Development Lead @ IBM Quantum



Founder of Apolo Scientific Computing Center



Quantum Computational Scientist @ IBM Quantum



**Avanti Joshi** Congressional Innovation Fellow @ TechCongress



Jorge Saavedra Benavides Graduate Student @ the Center for Computing Research of the Instituto Politécnico Nacional



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RIFT IBM Quantum

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# **GUEST SPEAKER LECTURES**



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#### DAY 1 - MON. OCT. 27TH



## **Nick Bronn**

#### Introduction to IBM Quantum and Qiskit

In this opening Fall Fest presentation, I'll provide an overview of what quantum computers are and how they work. Then we will consider the types of problems quantum computers are expected to solve better than the standard (classical) computers we are familiar with. Lastly, I will detail how you can use the open source Qiskit framework to access actual quantum computers hosted by IBM Quantum on the cloud.

#### DAY 2 - TUES. OCT. 28TH



## Juan Guillermo Lalinde

# **Q&A Session:**High Performance Computing in the Quantum Era

In this interactive session, we'll explore how quantum technologies are transforming the landscape of high-performance computing. We'll discuss how quantum and classical systems can work together to solve complex problems faster and more efficiently. Bring your questions and curiosity as we dive into the challenges, opportunities, and future of computing in the quantum era.



## Alberto Maldonado

## Introduction to Quantum Dynamic Circuits

In this talk, we will explore the relevance and growing importance of dynamic quantum circuits, a new paradigm that allows quantum computations to adapt and evolve in real time. Unlike static circuits, dynamic quantum circuits enable midcircuit measurements and conditional operations, making it possible to implement more efficient and flexible algorithms. These capabilities open the door to new experimental techniques and improved control over quantum systems.



# **Avanti Joshi**

#### Transforming Tech Knowledge to Policy Design

This session will break down policy considerations that accompany the growth and emergence of fields like quantum computing. How can policy makers encourage innovation while assessing risks? How can technologists inform policy?



# Jorge Saavedra Benavides

#### **Quantum Optimization**

Recent global efforts have brought the theory behind the nanoscale world closer to practical computational applications. While the path forward is not entirely smooth, one of the most promising near-term applications of current quantum hardware is in solving combinatorial optimization problems. In this talk, we will explore the fundamental concepts of quantum optimization to provide a general overview of the current state of the field.



