

## “Quantum computation and sensing” June 21st- July 2nd 2021

Please notice that 9am CDT(Fermilab-Batavia IL) = 16:00 CEST(GGI-Firenze)

INTRO&COMMUNICATIONS (15min) → 9:00am to 9:15am CDT = 16:00 to 16:15 CEST

SLOT A (90 min)→ 9:15am to 10:45am CDT = 16:15 to 17:45 CEST

SLOT B (90 min)→ 11:00am to 12:30pm CDT = 18:00 to 19:30 CEST

EXTRA (45 min) → 12:45pm to 1:30pm CDT = 19:45 to 20:30 CEST

Week 1 : 06/21 to 06/25					
	Monday 06/21	Tuesday 06/22	Wednesday 06/23	Thursday 06/24	Friday 06/25
Intro&Comm.	opening @8:45	Q&A recap	Q&A recap	Q&A recap	Q&A recap
SLOT A	Graham	Ercolessi	Ercolessi	Ercolessi	Koch
15min break					
SLOT B	Graham	Graham	Paik	Koch	discussion
			Koch		
EXTRA	discussion	<b>Shammah (a)</b>	discussion	discussion	

Week 2 : 06/28 to 07/02					
	Monday 06/28	Tuesday 06/29	Wednesday 06/30	Thursday 07/01	Friday 07/02
Intro&Comm.	Q&A recap	Q&A recap	Q&A recap	Q&A recap	Q&A recap
SLOT A	Koch	Blais	Braggio	Braggio	Paik
	Blais				
15min break					
SLOT B	Blais	Blais	Blais	Paik	discussion
		Paik			closing
EXTRA	<b>Frolov</b>	<b>Shammah (b)</b>	<b>Cruciani</b>	<b>Rini</b>	

Quantum Sensing for Particle Physics and Cosmology → Peter Graham
Quantum algorithms and protocols → Elisa Ercolessi
Introduction to superconducting circuits and circuit-QED → Jens Koch with Hanhee Paik
Qbit measurements and signatures of light-matter coupling → Alexandre Blais
Quantum information processing with circuit-QED → Hanhee Paik
Quantum sensing: searches with 3D cavities → Caterina Braggio

**Nathan Shammah, Chief Tech. Officer of Unitary Fund:**

**”Open-source software tools in quantum science”:**

- a) **”Make your code count: Leveraging open-source tools in quantum technology”**
- b) **”Open-source quantum circuit simulation and quantum error mitigation with QuTIP and Mitiq”**

**Matteo Rini, Deputy Editor for American Physical Society :**

**”Communication in Science”**

**Daniil Frolov, Fermilab:**

**”Superconducting qubits characterization. Live tour of testing facilities at Fermilab.”**

**Angelo Cruciani, INFN sezione di Roma1:**

**”Cryogenic facilities for superconducting qubits”**