



# cQED@Tn - "Circuit QED: From Quantum Devices to Analogues on Superconducting Circuits"

## Monday, October 3, 2022

**Talks: Sensing - Sala Stringa (3:00 PM - 7:00 PM)**

**-Conveners: Claudio Gatti**

time	[id] title	presenter
3:00 PM	[2] Welcome	
3:10 PM	[3] Circuit QED and analogue simulation of quantum impurities	ROCH, Nicolas
4:00 PM	[4] Single Microwave Photon Detection with superconducting quantum circuits	ALBERTINALE, Emanuele
4:50 PM	Coffee Break	
5:10 PM	[5] Single Microwave Photon Detection with a Network of Superconducting Qubits	LISITSKIY, Mikhail
6:00 PM	[24] Testing a Josephson junction as a photon detector with pulsed microwaves measurements	Dr RETTAROLI, Alessio
6:30 PM	[23] Qub-IT: Quantum sensing with transmon-based itinerant single-photon counter	CORTI, Hervé Atsè

# Tuesday, October 4, 2022

## **Talks: Analogues - Quantum - Sala Stringa (9:00 AM - 12:30 PM)**

**-Conveners: Iacopo Carusotto**

time	[id] title	presenter
9:00 AM	[7] Circuit-QED in non-euclidean geometries	KOLLAR, Alicia
9:50 AM	Coffee Break	
10:10 AM	[8] Analog and digital simulations with small superconducting quantum circuits	PARAOANU, Sorin
11:00 AM	[28] Modeling of the nonlinear dynamics of Josephson Traveling-Wave Parametric Amplifiers	GUARCELLO, Claudio
11:30 AM	[21] Critical Parametric Quantum Sensing	FELICETTI, Simone
12:00 PM	[30] Continuous quantum gate sets and pulse class meta-optimization	PRETI, Francesco

## **Talks: Quantum - Sala Stringa (4:30 PM - 7:00 PM)**

**-Conveners: Mikhail Lisitskiy**

time	[id] title	presenter
4:30 PM	[34] Superconducting qubit readout fidelity at the threshold for quantum error correction without a quantum-limited amplifier	TANCREDI, Giovanna
5:00 PM	[22] Effects of Radioactivity on Superconducting Qubits	COLANTONI, Ivan
5:30 PM	[31] Evidence of dual Shapiro steps in a Josephson junctions array	CRESCINI, Nicolo'
6:00 PM	[26] Engineering the speedup of quantum tunneling in Josephson systems via dissipation	RASTELLI, Gianluca

# Wednesday, October 5, 2022

## **Talks: Hybrids - Amplifiers - Sala Stringa (9:00 AM - 12:30 PM)**

**-Conveners: Andrea Vinante**

time	[id] title	presenter
9:00 AM	[14] Hybrid architectures and systems with spins	AFFRONTI, Marco
9:50 AM	Coffee Break	
10:10 AM	[15] Microwave optomechanical systems	KIRCHMAIR, Gerhard
11:00 AM	[29] Cavity magnonics in strong coupling regime – from magnon-polariton hybrid states to perspectives for quantum sensing	LEO, Angelo
11:30 AM	[25] Development of Kinetic Inductance TWPAs with DARTWARS	Dr FAVERZANI, Marco
12:00 PM	[27] A preliminary study of Traveling-wave Josephson parametric amplifiers (TWJPA)	GRANATA, Veronica

## **Talks: Amplifiers - Sala Stringa (3:00 PM - 4:40 PM)**

**-Conveners: Paolo Falferi**

time	[id] title	presenter
3:00 PM	[19] Josephson TWPAs: from reversed-Kerr amplification to squeezing generation	ESPOSITO, Martina
3:50 PM	[20] Josephson metamaterials: properties and fabrication techniques	ENRICO, Emanuele