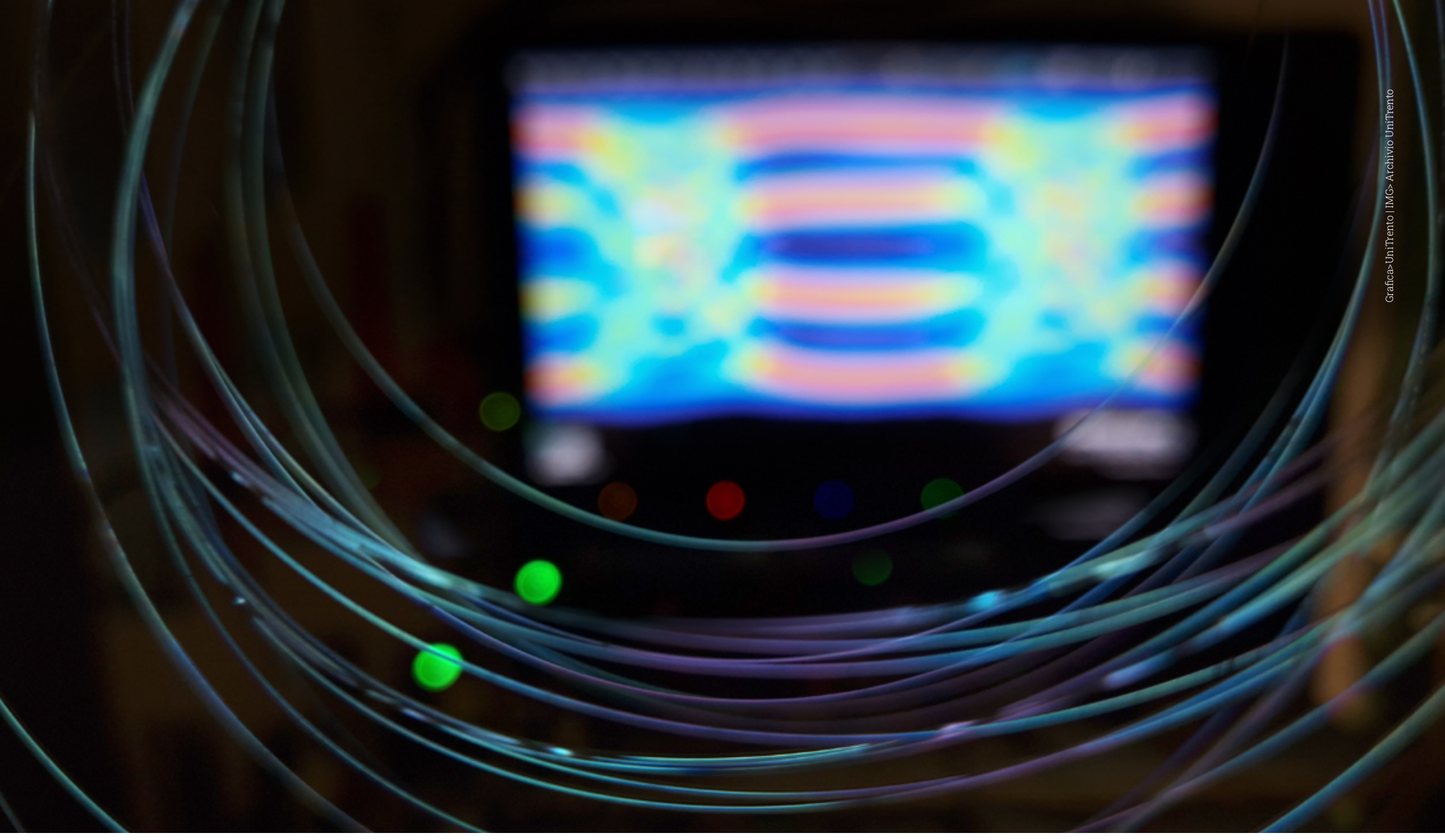

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Organized by

UNIVERSITÀ DI TRENTO | Dipartimento di Fisica

In collaboration with

SPIE. STUDENT CHAPTER UNIVERSITY OF TRENTO

Nanoscience Laboratory Kick Off Meeting

5 December, 2025

Room A208, Polo Ferrari 1, via Sommarive 5, Povo (Trento)

The meeting aims at making the point of our research activities to pave the way to the future researches at the Nanoscience Laboratory. This year we welcome a long seminar on a topic related to emergent properties in complex networks. In addition, four research teams, formed by the scientists of the lab, will address the audience with the state of the art of their research in nanoscience, biology and photonics.

14.00	Welcome remarks, **Lorenzo Pavesi**
14.10-15.00	*Modelling memory with complex networks: Phase transitions, self-organised criticality and spreading dynamics*, **Massimo Stella**
15.00-15.40	*Photonic neural networks for high-throughput optical signal processing*, **Stefano Biasi**, **Alessandro Foradori**, **Stefano Gretter**, **Alessio Lugnan**, **Emiliano Staffoli**
15.40-16.20	*Exploiting photonics to interact with biological matter*, **Ilya Auslender**, **Isabel Barth**, **Paolo Brunelli**, **Matteo Dominici**, **Aleyna Habesoglu**, **Seyedeh Yasaman Heydari**, **Pietro Scauso**, **Beatrice Vignoli**, **Clara Zaccaria**
Coffee Break	
17.00-17.40	*Non-Hermitian and Nonlinear Dynamics in Microresonators*, **Salamat Ali**, **Bülent Aslan**, **Stefano Biasi**, **Davide Olivieri**
17.40-18.20	*Photonic quantum technologies for computing and sensing*, **Stefano Azzini**, **Alessio Baldazzi**, **Xuan Chen**, **Sebastiano Guaraldo**, **Chiara Michelini**

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ToEQPL Quantum Photonics · Q@TN · PhotoNeuroGel Project · CIRCUS · MetaScat metasurface-based imaging for liquid biopsy · PROVINCIA AUTONOMA DI TRENTO · FONDAZIONE CARITRO CASSA DI RISPARMIO DI TRENTO E ROVERETO · THE KAVLI FOUNDATION · VolkswagenStiftung · PON RICERCA E INNOVAZIONE · Rotonium

And together with

- PRIN 2022 Time REsolved multiparametric Sensing with opticAl Unstable REservoir
- PRIN 2022 Astrocytes gain molecular control over visual cortex plasticity and function
- PRIN 2022 PNRR Targeting mitochondria to modulate neuron-astrocyte crosstalk and halt Alzheimer's Disease

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