

PHILOSOPHIAE DOCTOR IN QUANTUM TECHNOLOGIES

February 8, 2019

Ore 15:00 - AULA "E. CAIANIELLO" - Dipartimento di Fisica "E. Pancini"

15.00 Greetings from
Prof. Leonardo Merola
Direttore Dipartimento Fisica
Prof. Piero Salatino
Presidente Scuola Politecnica
e Scienze di Base
Greetings
Prof. Gaetano Manfredi
Rettore Università di Napoli Federico II
**UNINA vs Quantum
Technologies and advanced
education"**

15.10 **Sir Anthony Leggett**
Nobel Laureate 2003
**Testing the limits of
quantum mechanics:
motivation, state of play,
prospects**

15.30 QUANTUM TECHNOLOGIES
ACTIVITIES IN FIRENZE
Augusto Smerzi:
**Useful entanglement for
quantum technologies**
Marco Bellini:
**Non-classicality and
entanglement by photon
addition and subtraction**
Iacopo Catani:
**Quantum simulation of
solid-state systems with
ultracold atoms**

16.15 QUANTUM TECHNOLOGIES
ACTIVITIES IN CAMERINO
David Vitali:
**Quantum sensing and
communication with hybrid
devices**
Sebastiano Pilati:
**Many-body simulations for
adiabatic quantum
optimization**

17.00 QUANTUM TECHNOLOGIES
ACTIVITIES IN NAPOLI
Davide Massarotti:
**Macroscopic Quantum
phenomena in
superconducting junctions**
Procolo Lucignano:
**Theory and simulation of
materials and devices for
quantum technologies**
Alberto Porzio:
**Entangling different degrees
of freedom of optical fields**
Felice Gesuele:
**2D van der Waals
heterostructures for
light-matter-states
engineering and guiding**

17.45 CONCLUSIONS

In 2018 the University Federico II, the University of Camerino and CNR have launched a new common PhD program in Quantum Technologies (QT). This new program, originated from the awareness of the need of an interdisciplinary background on QT, will cover quantum computation, quantum networks and communication, quantum simulation, quantum sensors and metrology.