Book of Abstracts

20/11 : 11:30

SALUTI INIZIALI

C. Pettinari

NQSTI

20/11 : 12:10

QUAKE-G: Integrating Quantum Gravimetry and Satellite Models for Multiscale Analysis of Earth's Gravity Field Variations

M. Capponi, D. Sampietro

Geomatics Research & Development srl

The QUAKE-G project introduces an innovative framework for analyzing Earth's gravity field variations by integrating quantum gravimeters, ground-based observation networks, and satellite gravity missions such as GRACE and GRACE-FO. Within the project a comprehensive database of satellite, terrestrial gravimetric and GNSS observations was created and updated, together with dedicated software tools for data ingestion, processing, and long-term analysis. Advanced algorithms were developed to separate local and regional gravity signals and to reduce raw observations for solid Earth tides, ocean loading, and atmospheric effects. The processing workflow now supports simultaneous analysis of multiple gravity stations, enabling the estimation of key geophysical which provide insights into crustal density and viscosity. The results show consistency with regional geological structures, marking a step toward the operational use of quantum gravimetry in geophysical applications.

20/11 : 12:40

F. La Rosa

STMicroelectronics

20/11 : 14:30

European Quantum Communication Infrastructure

F.S. Cataliotti

CNR

EuroQCI

20/11 : 14:50

G. Elia

TIM

20/11 : 15:40

Bridge the gap between research and real-world

Paolo Comi

Exprivia S.p.A.

Un esempio concreto per realizzare il passaggio dalla scienza alla tecnologia e dalla tecnologia al mercato applicata alle tecnologie quantistiche di communication e sensing. Presentazione del progetto QCS AppLab come ambiente inclusivo e generativo di impatto nella vita reale dei cittadini.

20/11 : 15:55

A. Zavatta

QTI

20/11 : 16:10

Dalle strategie europee agli strumenti operativi: opportunità di finanziamento per l'impresa quantistica italiane

N. Targhetta

Euris srl

La presentazione collega la strategia europea e nazionale per la quantum science and technology con gli strumenti concreti oggi e domani a disposizione delle imprese italiane. a partire dalle priorità su quantum sensing e dalle linee guida dei ministeri competenti, verranno illustrati i principali schemi di supporto evidenziando requisiti, intensità di aiuto e logiche di partnership tra imprese e organismi di ricerca. l'intervento propone una chiave di lettura pragmatica per aiutare le aziende a posizionarsi in filiera, costruire progetti di dimensione adeguata e utilizzare i bandi non come occasioni spot ma come strumenti per pianificare percorsi di sviluppo e investimento coerenti con la traiettoria tecnologica europea.

20/11 : 17:50

Moderazione tavola rotonda VC

G. Muzio

FBK

20/11 : 17:50

Tavola rotonda

D. Cazzulani

Deloitte

20/11 : 17:50

Tavola rotonda

S. Valrorani

Scientifica

20/11 : 17:50

Tavola rotonda

R. Della Marina

Obloo

20/11 : 17:50

Tavola rotonda

A. Rossi

Liftt

21/11 : 8:40

F. Mattei

IBM

21/11 : 9:00

Rotonium: photonic quantum processors at the edge

N. Leone, M. Sanna, R. Siagri, F. Tamburini

Rotonium srl

In this talk I will introduce Rotonium's approach for develop room-temperature photonic quantum processors designed to bring quantum computing at the edge. These processors are based on Rotonium proprietary technology and ensure compactness, energy efficiency, and robustness, achieving scalable quantum performance with optimized SWaP (Size, Weight, Power). The presentation will outline the results from prototypes RC000 and RP000, as well as recent advances in integrated single-photon sources developed within Project Hyperion, supported by NQSTI. By enabling hybrid classical-quantum integration, Rotonium's technology enables new use cases, moving from centralized, high-cost infrastructures to practical, deployable photonic systems capable of operating in real-world industrial environments.

21/11 : 9:15

QuantumNet: Advancing Quantum Computing for Real-World Applications

A. Massa

QuantumNet

QuantumNet, an Italian startup born from NetCom Group and the University of Naples Federico II, advances research and industrial applications of quantum computing. The company develops hybrid quantum-classical solutions, contributes to workforce training through the Quantum Computing Academy, and participates in the IBM Quantum Startup Program. Its main projects include QuEST, applying quantum optimization to smart transport, and QUANTIC, benchmarking hybrid QML models against classical ones in real use cases.

21/11 : 9:45

V. Piccinini

Lutech

21/11 : 10:00

QFL-ADEC

Claudio Pagano

I.T. SVIL SRL

21/11 : 10:15

Quantum Computing & Communication: l'ecosistema italiano e internazionale

M. Natalucci

Politecnico di Milano

Presentazione di alcuni risultati della ricerca dell'Osservatorio Quantum Computing & Communication del Politecnico di Milano

21/11 : 11:05

SNSPD as enabling technology of quantum revolution

Daniela Salvoni

Photon Technology Italy SRL

Superconducting nanowire single-photon detectors (SNSPDs) are becoming a key enabling technology for the quantum revolution. Their unmatched efficiency, ultra-low noise, and picosecond timing unlock performance required for quantum communication, computing, and sensing. This talk highlights how our company's integrated SNSPD systems bridge the gap between research prototypes and reliable, deployable solutions. We introduce recent advances in cryogenic design, optical coupling, and multi-channel scalability, and show how these improvements support long-distance QKD, photonic-qubit experiments, and emerging quantum sensing platforms. By delivering turnkey, high-performance detection, SNSPD systems accelerate the transition from laboratory demonstrations to practical quantum technologies.

21/11 : 11:20

M. Dallari

Planckian

21/11 : 11:35

Enabling technologies for superconducting quantum computers

C. Puglia

DSQM

This presentation outlines the key enabling technologies essential for building and scaling superconducting quantum computers. We will discuss some of the critical challenges and recent advancements in areas such as advanced cryogenics, high-fidelity control electronics, interconnects, and materials science for improved qubit fabrication. This talk highlights DSQM's integrated approach required to overcome these hurdles and accelerate the development of practical quantum computation.

21/11 : 11:50

M. Proietti

Leonardo SPA

21/11 : 12:10

Moderazione tavola rotonda

E. Paladino

NQSTI e UniCT

21/11 : 12:10

Tavola rotonda

N. Amodio

Confindustria e Fondazione Mai

21/11 : 12:10

Tavola rotonda

F. Beltram

NQSTI e SNS

21/11 : 12:10

Tavola rotonda

F. S. Cataliotti

NQSTI, UniFI e CNR

21/11 : 12:10

Tavola rotonda

L. V. Colombo

Confindustria CT e DIH Sicilia

21/11 : 12:10

Tavola rotonda

M. Natalucci

Osservatorio Digital Innovation PoliMi

21/11 : 12:10

Tavola rotonda

V. Vinci

MIMIT

21/11 : 15:10

N. Amodio

Confindustria e Fondazione Mai

21/11 : 15:30

Tecnologie quantistiche e sistema imprenditoriale

L. V. Colombo

Confindustria CT e DIH Sicilia

Descrizione delle tecnologie quantistiche e loro impatto sul sistema produttivo siciliano e del Sud Italia in generale

21/11 : 15:50

E. Paladino

NQSTI e UniCT

21/11 : 16:30

D. Cartabellotta

Regione Siciliana

21/11 : 16:45

T. Aiello

Fondazione Emblema

21/11 : 17:00

Closing remarks

G. A. Falci

NQSTI e UniCT