

EQTC 2021

EUROPEAN QUANTUM TECHNOLOGIES CONFERENCE

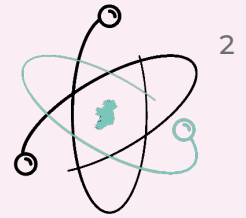
CONFERENCE AGENDA

NOVEMBER 29 - DECEMBER 2, 2021
ONLINE CONFERENCE

eqtc.org

Latest version: November 26, 2021

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

MONDAY

November 29, 2021

Daily Summary

Central European Time
(CET)

9:00 AM - 10:15 AM

Welcome addresses by Irish Government, European Commission and Quantum Flagship

9:00 AM - 9:15 AM

Prof. Jean-Christophe Desplat

Irish Centre for High-End Computing (ICHEC)

9:00 AM - 9:15 AM

Prof. James Livesey

National University of Ireland, Galway

9:15 AM - 9:30 AM

Minister Heather Humphreys

Minister for Social Protection, Community and Rural Development, Ireland

9:30 AM - 9:45 AM

Dr. Gustav Kalbe

Head of the High-Performance Computing and Quantum Technology Unit
European Commission

9:45 AM - 10:00 AM

Prof. Jürgen Mlynek

Chair of the Strategic Advisory Board of the Quantum Flagship

10:00 AM - 10:15 AM

Dr. Venkatesh Kannan

Centre Technical Manager, ICHEC

Virtual Tour through the conference

Moderator

Prof. Tommaso Calarco

Jülich Supercomputing Centre

10:15 AM - 11:00 AM

Morning Break

11:00 AM - 12:30 PM

Keynotes Presentations

11:00 AM - 11:30 AM

Prof. Eugene Polzik

Niels Bohr Institute

Keynote - Basic Sciences for Quantum Technologies

11:30 AM - 12:00 PM

Dr. Eleni Diamanti

French National Centre for Scientific Research (CNRS)

Keynote - Quantum Communication

12:00 PM - 12:30 PM

Dr. Stacey Jeffery

QuSoft

Keynote - Quantum Computing

Moderator

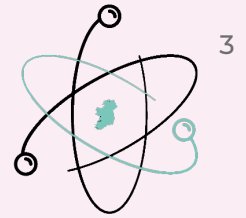
Prof. Antonio Acín

ICFO

12:30 PM - 1:30 PM

Lunch

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

MONDAY

November 29, 2021

Daily Summary

1:30 PM - 3:00 PM

Keynotes Presentations

1:30 PM - 2:00 PM

Prof. Immanuel Bloch

Managing Director, Max Planck Institute Of Quantum Optics

Keynote - Quantum Simulation

2:00 PM - 2:30 PM

Dr. Ivo Pietro Degiovanni

Senior Researcher, INRIM

Keynote - Quantum Metrology and Sensing

2:30 PM - 3:00 PM

Prof. Albert Roura

German Aerospace Centre (DLR)

Keynote – Quantum Technologies in Space

Moderator

Prof. Christiane Koch

FU Berlin

3:00 PM - 3:30 PM

Afternoon Break

3:30 PM - 4:00 PM

Quantum Flagship Activities in Education, Gender Equity & Diversity

3:30 PM - 3:45 PM

Dr. Lydia Sanmartí-Vila

ICFO

Gender, Equity and Diversity in European Quantum Flagship initiative

Dr. Rob Thew

Senior Researcher, University Of Geneva

Gender, Equity and Diversity in European Quantum Flagship initiative

3:45 PM - 4:00 PM

Dr. Chiara Macchiavello

University of Pavia c/o CNR-INO

Education in European Quantum Flagship initiative

Moderator

Dr. Lydia Sanmartí-Vila

ICFO

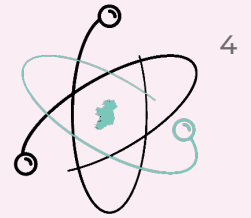
Dr. Rob Thew

Senior Researcher, University Of Geneva

4:00 PM - 4:15 PM

Late Afternoon Break

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

MONDAY

November 29, 2021

Daily Summary

4:15 PM - 5:45 PM

Updates on European Digital Agenda and Panel Discussion

4:15 PM - 4:45 PM

Dr. Gustav Kalbe

Head of the High-Performance Computing and Quantum Technology Unit
European Commission

Quantum technologies in the Digital Decade

Dr. Pascal Maillot

Deputy Head of the High-Performance Computing and Quantum Technology Unit
European Commission

1st phase of the Flagship - feedback on the first results

Dr. Oscar Diez

Head of Sector Quantum Computing of the High Performance Computing & Quantum
Technologies unit - European Commission

Call for quantum computing (HPC/QCS)

Mr. Nicklas Bergman

EIC Fund

EIC activities in Quantum Technologies

4:45 PM - 5:45 PM

EQTC Panel Discussion

Infrastructure, Implementation, Industry

Panelists

Ms. Jaya Baloo

Avast

Dr. Thierry Botter

QuIC

Prof. Tommaso Calarco

Jülich Supercomputing Centre

Mr. Agustín Escardino Malva

EIC Fund

Dr. Gustav Kalbe

European Commission

Dr. Victoria Lipinska

KPN

Dr. Ségolène Olivier

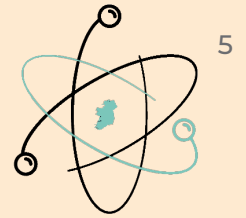
CEA-Leti

Moderator

Ms. Kinga Stanislawska

EIC Fund

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Daily Summary

Central European Time
(CET)

9:00 AM - 10:20 AM *Plenary Talks and Panel Discussion on Quantum Communication, Quantum Metrology & Sensing*

9:00 AM - 9:20 AM Plenary - Quantum Communication
Prof. Hugues de Riedmatten
ICFO

9:20 AM - 9:40 AM Plenary - Quantum Communication
Prof. Pascale Senellart
French National Centre for Scientific Research (CNRS) and Quandela

9:40 AM - 10:00 AM Plenary - Quantum Metrology and Sensing
Prof. Markus Aspelmeyer
University of Vienna

10:00 AM - 10:20 AM Panel - Quantum Communication, Metrology and Sensing
Prof. Hugues de Riedmatten, ICFO
Prof. Pascale Senellart, CNRS and Quandela
Prof. Markus Aspelmeyer, University of Vienna

MODERATOR **Prof Paolo Villorresi**
University of Padova

10:00 AM - 2:00 PM **1. Virtual Exhibition**

10:20 AM - 11:00 AM **Morning Break - Tuesday**

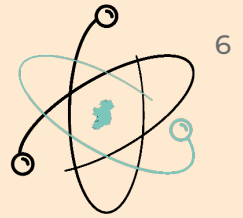
Workshop Session 1

10:30 AM - 1:30 PM Workshop 1.1 **Qiskit: Open-Source Quantum Development, an introduction**
Luciano Bello - Software Engineer - IBM Quantum
Carmen Recio Valcarce - Quantum Community Advocate, IBM Research

Workshop 2.1 **Gender Equality and Unconscious Bias in Research and Science**
Anne Graefer - GenderIQ
Nicole Shephard - GenderIQ

Workshop 1.3 **Qiskit Optimization: Quantum algorithms for applications of optimization**
Takashi Imamichi - IBM Research - Tokyo
Atsushi Matsuo - IBM Research

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Daily Summary

Workshop 2.4 **Quantum Inspire - Execution of hybrid algorithms through the cloud**

Kees Eijkel - Director Of Business Development - QuTech

Olexiy Fedorets - Quantum Inspire

Somya Gupta - Business Developer - QuTech, TU Delft

Richard Versluis - Systems Engineer - Qutech, TU Delft & TNO, Netherlands

Jordi Weggemans - Phd Candidate - QuSoft & Cwi, Netherlands

Parallel Session 1

11:00 AM - 12:30 PM

Parallel 1.1

Parallel 1.2

Parallel 1.3

Parallel 1.4

Scientific/Technical Talks - Quantum Communication

Scientific/Technical Talks - Quantum Metrology & Sensing

Industry Talk - Quantum Communication, Metrology & Sensing

Virtual Poster Session - Quantum Computing and Simulation

12:30 PM - 1:30 PM

Lunch

1:30 PM - 2:00 PM

Plenary - Quantum Metrology and Sensing

Prof. Jörg Wrachtrup

University of Stuttgart

Moderator

Thierry Debuisschert

Thales

2:00 PM - 3:00 PM

2. Virtual Exhibition

Parallel Session 2

2:00 PM - 3:00 PM

Parallel 2.1

Parallel 2.2

Parallel 2.3

Parallel 2.4

Scientific/Technical Talks - Quantum Communication

Scientific/Technical Talks - Quantum Metrology and Sensing

Industry Talks - Quantum Computing & Simulation

Virtual Poster Session - Quantum Computing and Simulation

Workshop Session 2

2:00 PM - 5:00 PM

Workshop 2.2 **Hybrid Quantum Computing via QMware Cloud**

Mr. Markus Buchberger - Svc Training & Education - QMware

Workshop 2.3 **Developing and executing error-mitigated NISQ algorithms across devices and simulators**

Silas DILKES - Quantum Software Researcher - Cambridge Quantum

Melf Johannsen - Cambridge Quantum

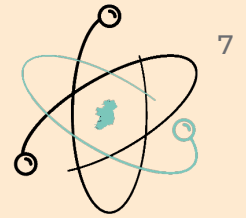
Daniel Mills - Research Scientist - Cambridge Quantum

Workshop 1.2 **Qiskit Machine Learning: Quantum algorithms for supervised learning**

Anton Dekusar - Research Software Engineer - IBM

Julien Gacon - Phd Student - Ibm Quantum, Epfl Lausanne

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Daily Summary

Workshop 1.4 **Qiskit Nature: Quantum algorithms for applications on the natural sciences domain**

Panagiotis Barkoutsos - Research Staff Member - IBM Quantum, IBM Research - Zurich

Dariusz Lasecki - Software Engineer - IBM Research Zurich

Pauline Ollitrault - IBM Quantum, IBM Research Zurich

Max Rossmannek - PhD Student - IBM Quantum, IBM Research - Zurich and University of Zurich

Ivano Tavernelli - Research Staff Member - IBM Research - Zurich

3:00 PM - 3:45 PM

Afternoon Break

3:45 PM - 5:15 PM

3. Virtual Exhibition

Parallel Session 3

3:45 PM - 5:15 PM

Parallel 3.1

Parallel 3.2

Parallel 3.3

Parallel 3.4

Scientific/Technical Talks - Quantum Communication

Scientific/Technical Talks - Quantum Metrology and Sensing

Industry Talks - Quantum Communication, Metrology & Sensing

Virtual Poster Session - Quantum Computing and Simulation

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 1.1 (11:00 AM - 12:30 PM)

Scientific/Technical Talks - Quantum Communication

11:00 AM - 11:15 AM

Dr. Frank Deppe

Senior Researcher - Walther- Meißner- Institut

Progress on Quantum Microwave Communication and Sensing (QMiCS)

11:15 AM - 11:30 AM

Dr. Hannes Hübel

Senior Scientist - AIT Austrian Institute of Technology

Real-world use-case demonstrations for QKD – examples from the OPENQKD project

11:30 AM - 11:45 AM

Mr. Dario Lago-Rivera

Phd Student - ICFO

Telecom-heralded entanglement between remote multimode solid-state quantum memories

11:45 AM - 12:00 PM

Dr. Mariella Minder

Postdoctoral Researcher - University Of Oxford

Repeater-like quantum communications over 600 km of fibre

12:00 PM - 12:15 PM

Dr. Olivier Morin - MPQ

Demonstration of a one-node quantum repeater

12:15 PM - 12:30 PM

Prof. Dr. Stephanie Wehner

Professor - Qutech/TU Delft

Quantum Internet Alliance

MODERATOR

Simon Baier

Postdoc - University Of Innsbruck

Parallel 1.2 (11:00 AM - 12:30 PM)

Scientific/Technical Talks - Quantum Metrology & Sensing

11:00 AM - 11:15 AM

Dr. Davide Grassani

CSEM SA

CPT miniature atomic clock prototype preliminary performances

11:15 AM - 11:30 AM

Dr. Jonas Keller

Physikalisch-Technische Bundesanstalt

Improving the performance of optical clocks by multi-ion operation

11:30 AM - 11:45 AM

Dr. Steven King

Physikalisch-Technische Bundesanstalt

Quantum logic spectroscopy of highly charged ions

11:45 AM - 12:00 PM

Dr. Christian Marciniak

Postdoc - Universitaet Innsbruck

Optimal metrology with variational quantum circuits on trapped ions

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

12:00 PM - 12:15 PM

Mr. Lennart Pelzer

Physikalisch-Technische Bundesanstalt

TAILORED OPTICAL CLOCK TRANSITION IN 40Ca⁺

12:15 PM - 12:30 PM

Mr. Stefan Alaric Schäffer

Postdoc - University Of Amsterdam

Active optical clocks with cold strontium in the iqClock project

**MODERATOR
TBD**

Parallel 1.3 (11:00 AM - 12:30 PM)

Industry Talk - Quantum Communication, Metrology & Sensing

11:00 AM - 11:20 AM

Mr. Simone Capeleto

CEO - ThinkQuantum Srl

Multichannel Solutions based on One QKD Technology Platform by ThinkQuantum

11:40 AM - 12:00 PM

Startup/SME/Lightning Talk

Mr Piotr Novik

VPIphotonics

VPIphotonics combines quantum and classical simulations to model QKD coexistence scenarios

11:20 AM - 11:40 AM

Startup/SME/Lightning Talk

Mr. Marco Guadalupi

CTO - Satelio IoT Services S.L.

QUANGO project overview: A shared LEO CubeSat constellation for Quantum Key Distribution and 5G IoT services

12:00 PM - 12:20 PM

Startup/SME/Lightning Talk

Dr. Andrew Thain

Airbus

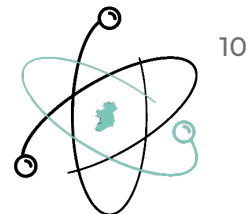
A Space Quantum Network

Moderator

Yeshpal Singh

University of Birmingham

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 1.4 (11:00 AM - 12:30 PM)

Virtual Poster Session - Quantum Computing and Simulation

Dr. Luciano Bello

Software Engineer - IBM Quantum
Initial qubit layout allocation as a k-relaxed subgraph isomorphism problem

Mr. Brian Coyle

Research Scientist - Cambridge Quantum
Variational inference with a quantum computer

Dr. Bruno Chagas

Computational Scientist - Icheq
Implementing Grover's Algorithm on a Superconducting Quantum Computer

Mr. Joe Carthy

Student - University College Dublin
Entanglement and the Variational Quantum Eigensolver

Mr. Daniel Mills

Research Scientist - Cambridge Quantum
Benchmarking Digital Error-Mitigation with Qermit

Prof Irene D'Amico

Professor - University of York,
Evolutionary computation for adaptive quantum device design

Brennan de Neeve

ETH Zurich
Error correction of a logical grid state qubit by dissipative pumping

Dr. Luca Frontini

Research Fellow - University of Milan and INFN
Directional Coupler Design Advancements for non Deterministic C-NOT Implementation

Mr. Costantino Carugno

Politecnico Di Milano
Reverse annealing improves solutions of job shop scheduling problems on a quantum annealer

Dr. Maurizio Ferrari Dacrema

Postdoc - Politecnico di Milano
Personalizing Video Recommendation Layout with Quantum Annealing

Mr. Cristian Galvis

Universidad Nacional De Colombia
Quantum Algorithm for complete and incomplete qubit state estimation using two auxiliary qubits.

Mr. Giancarlo Gatti

Phd Student
University Of The Basque Country UPV/EHU
Random access codes via quantum contextual redundancy

Msc Javier Gonzalez-Conde

Phd Student - University Of The Basque Country
PRICING FINANCIAL DERIVATIVES WITH EXPONENTIAL QUANTUM SPEEDUP

Mr. Pablo Díez-Valle

Predocctoral researcher
Institute of Fundamental Physics IFF-CSIC
Quantum variational optimization: the role of entanglement and problem hardness

Dr. Davide Ferrari

Ph.D. Student
University Of Parma
Advanced Compilers for Local and Distributed Quantum Computing

Mr. Ignacio Gimeno

Phd Student - Instituto De Nanociencia Y Materiales De Aragón
Broad-band spectroscopy of electro-nuclear spin qubits based on vanadyl porphyrin molecules

Mr. Julien Gacon

Phd Student - IBM Quantum, Epfl Lausanne
Simultaneous Perturbation Stochastic Approximation of the Quantum Fisher Information

Mr. Mirko Consiglio

Phd Student - Quantumatla
Variational Quantum Eigensolver for SU(N) Fermions

Mr. Martin Bielak

Department Of Optics, Faculty Of Science, Palacky University Olomouc, Czech Republic
Ultra high fidelity preparation and measurement of polarization using twisted nematic liquid crystals

Ms Paula García Molina

Phd Student - Instituto De Física Fundamental. Consejo Superior De Investigaciones Científicas
Variational quantum algorithm for eigenvalue problems of a class of Schrödinger-type partial differential equations

Ms Paula García Molina

Phd Student
Instituto De Física Fundamental. Consejo Superior De Investigaciones Científicas
Variational quantum algorithm for eigenvalue problems of a class of Schrödinger-type partial differential equations

Mr. Pascale Bernier-Bruna

Dissemination Leader for NEASQC project
NEASQC (NExt ApplicationS of Quantum Computing)
NEASQC project: Boosting practical applications of quantum computing in the NISQ era

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 2.1 (2:00 PM - 3:00 PM)

Scientific/Technical Talks - Quantum Communication

2:00 PM - 2:15 PM

Dr. Pau Farrera

Max Planck Institute of Quantum Optics

Nondestructive detection of photonic qubits

2:15 PM - 2:30 PM

Dr. Samuele Grandi

ICFO

Entanglement between a telecom photon and an on-demand multimode solid-state quantum memory

2:30 PM - 2:45 PM

Michael Renger

PhD student - Walther-meißner-institut

Experimental quantum teleportation of propagating microwaves

2:45 PM - 3:00 PM

Dr. Rob Thew

Senior Researcher - University Of Geneva

Entanglement Swapping and Multipartite Networks

Moderator

Andreas Reiserer

Research Group Leader, MPI of Quantum Optics

Parallel 2.2 (2:00 PM - 3:00 PM)

Scientific/Technical Talks - Quantum Metrology and Sensing

2:00 PM - 2:15 PM

Dr. Samuel Lellouch

Research Fellow - University Of Birmingham

A new method for extreme momentum transfer atom interferometry using circulating pulses

2:15 PM - 2:30 PM

Dr. James McGilligan

RAEng Research Fellow - University Of Strathclyde

Micro-fabricating cold-atom sensors

2:30 PM - 2:45 PM

Dr. Wolf von Klitzing

IESL-FORTH

Quantum Matter-Waves in Wave-Guides

2:45 PM - 3:00 PM

Mr. Chu Yaoming

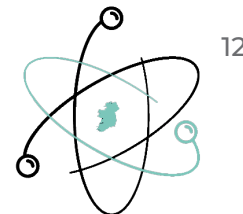
Huazhong University Of Science And Technology

Dynamic Framework for Criticality-Enhanced Quantum Sensing

Moderator

TBD

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 2.3 (2:00 PM - 3:00 PM)

Industry Talks - Quantum Computing & Simulation

2:00 PM - 2:20 PM

Dr Michael Johanning

University Professor - University Of Siegen

eleQtron GmbH: Quantum Computing with MAGIC

2:20 PM - 2:40 PM

Startup/SME/Lightning Talk

Mr Christopher Savoie

Ceo - Zapata Computing

Quantum Enhanced Optimization and its Near-term Applications, Powered by Orquestra®

2:40 PM - 3:00 PM

Startup/SME/Lightning Talk

Dr. Andreas Groeger

Examiner - European Patent Office

The Evolution of Quantum Simulation Technology – A Patent Landscape Analysis

Moderator

David Bowden

Senior Principal Research Scientist - Dell Technologies

Parallel 2.4 (2:00 PM - 3:00 PM)

Virtual Poster Session - Quantum Computing and Simulation

Mr. Ioannis Kolotouros

Phd Student - University of Edinburgh,
School of Informatics

An evolving objective function for improved variational quantum optimization

Dr. Mark Jackson

Quantum Evangelist

Cambridge Quantum Computing
tket: The Leading Quantum Development Platform

Marcela Herrera

Professor - Universidad Autónoma De Occidente

Non-equilibrium quantum many-body systems: easy access to energy fluctuations

Dr. James Nelson

Computational Scientist

Irish Centre For High End Computing

Large-scale VQE experiments with DASK

Professor Valerii Hlukhov

Professor - Lviv Polytechnic National University

Design Technologies, Implementation, and Research of Digital Quantum Coprocessor

Mr. Rodrigo Martinez-Pena

PhD Student - IFISC

Dynamical phase transitions in quantum reservoir computing

Mr. Irtaza Khalid

Phd Student - Cardiff University

Finding and Characterising Robust Quantum Controls

Mr. Rubén Ibarrondo

Student - University Of The Basque Country UPV/EHU

Quantum Genetic Algorithm

Mr. Alberto Manzano

Phd Student - Citic
Quantum Arithmetic for Directly Embedded Arrays 1: Framework definition

Daniele Musso

Cesga

Quantum Arithmetic for Directly Embedded Arrays 2: Advanced Operations and Applications

Dr. John McAllister

Queen's University Belfast

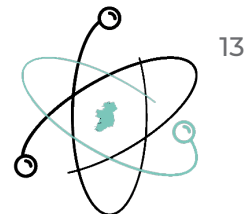
Randomised Placement for Qubit Routing in NISQ Compilers

Mr. Fernando Gago Encinas

Phd Student - Fu Berlin

Minimal number of couplings and local controls for universal quantum computing

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 2.4 (continued)

Virtual Poster Session - Quantum Computing and Simulation

Ana Martin

PhD student - University Of The Basque Country
Digital-analog quantum computing for quantum algorithms implementation

Mr. Nicola Mariella

Principal Data Scientist - Mastercard Lab
A quantum algorithm for the sub-graph isomorphism problem

Mr. Patrick Huber

Universitt Siegen
A perceptron quantum gate for quantum machine learning

Mr Jose Luis Hevia Oliver

Cto
aQuantum Software Engineering
Q Assets Compositor™: an easy path of compose quantum annealing solutions

Mr. Samuel Magaz Romero

Research Support Assistant
Universidade Da Coruña
Quantum Rule-Based Systems: Managing Uncertain Information with Quantum Computing

Matthias Krauss

University Of Kassel
Optimal Control for Cat State Preparation

Dr. Phalgun Lolur

Postdoctoral Researcher
Chalmers University Of Technology
A Chemistry Inspired Error Mitigation Strategy for Variational Quantum Eigensolver Calculations

Irina Heinz

PhD Student - University of Konstanz
Crosstalk analysis for single-qubit and two-qubit gates in spin qubit arrays

Mr. David Cirauqui

Phd Student
Icfo-quside
Solving 2D Edwards-Anderson's spin glass systems by defect-driven non-local cluster updates

Parallel 3.1 (3:45 PM - 5:15 PM)

Scientific/Technical Talks - Quantum Communication

3:45 PM - 4:00 PM

Mr. Paolo Abiuso

Phd Student - ICFO
Measurement-Device-Independent Entanglement Detection for Continuous-Variable Systems

4:00 PM - 4:15 PM

Dr. Iris Agresti

La Sapienza, università di Roma
Experimental robust self-testing of the state generated by a quantum network

4:15 PM - 4:30 PM

Phd. Simon Baier

Postdoc - University Of Innsbruck
Remote entanglement of cavity-interfaced trapped-ion quantum network nodes

4:30 PM - 4:45 PM

Mr. Antonio Ortu

Université De Genève
Time-multimode quantum storage of light for 20 ms in Eu:YSO

4:45 PM - 5:00 PM

Ms. Jelena V Rakonjac

PhD Student - ICFO
Fibre-integrated laser-written quantum memory for light-matter entanglement

5:00 PM - 5:15 PM

Dr. Andreas Reiserer

Research Group Leader - MPI of Quantum Optics
Erbium dopants – a novel platform for quantum networks

AGENDA OF SPEAKERS AND TALKS



14

EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 3.2 (3:45 PM - 5:15 PM)

Scientific/Technical Talks - Quantum Metrology and Sensing

3:45 PM - 4:00 PM

Dr. Helen Chrzanowski

Humboldt-universität Zu Berlin

Microscopy with undetected photons in the mid-infrared

4:00 PM - 4:15 PM

Dr. Georgy Kazakov

Postdoc, PI - Technische Universität Wien

Physics of active optical frequency standards

4:15 PM - 4:30 PM

Dr. Janine Riedrich-Moeller

Robert Bosch GmbH

Quadrupole splitting of ^{131}Xe in MEMS vapour cells

4:30 PM - 4:45 PM

Dr. Yongqi Shi

Postdoc - University Of Basel

Microwave magnetic field imaging based on frequency-domain Rabi spectroscopy with an ultrathin atomic vapor cell

4:45 PM - 5:00 PM

Mr. Charikleia Troullinou

Phd Student - ICFO

Squeezed-light enhancement of sensitivity and signal bandwidth in an optically-pumped magnetometer

5:00 PM - 5:15 PM

Professor Kevin Weatherill

Professor - Durham University

Terahertz sensing and imaging using atomic vapor cells.

Moderator

Wolf von Klitzing

IESL-FORTH

Parallel 3.3 (3:45 PM - 5:15 PM)

Scientific/Technical Talks - Quantum Communication

3:45 PM - 4:05 PM

Dr. Mathieu Munsch

CEO and Co-Founder - Qnami AG

Supporting the development of new computing technologies with quantum metrology

4:05 PM - 4:25 PM

Startup/SME/Lightning Talk

Dr. Remi Geiger

Director of R&D - WAINVAM-E

Metrology solutions exploiting diamond quantum sensors for industrial control and biomedical diagnostics applications

4:25 PM - 4:45 PM

Startup/SME/Lightning Talk

Dr. Markus Gellesch

University Of Birmingham

Progress update on the iqClock Industry Clock Demonstrator

4:45 PM - 5:05 PM

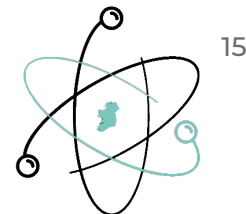
Mr. Arne Götze

Fraunhofer Institute for Applied Solid State Physics (IAF)

CVD grown diamond tips with nitrogen vacancy centers for nanoscale magnetic imaging

Moderator

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 3.4 (3:45 PM - 5:15 PM)

Virtual Poster Session - Quantum Computing and Simulation

Dr. Victor Rollano

Postdoctoral Researcher
Instituto de Nanociencia y Materiales de Aragón
High cooperativity coupling of on-chip superconducting resonators to nuclear spin transitions in Yb(trensals) molecular qubit

Mr. Sylvain Borderieux Brest

Ensta Bretagne
Study of the atmospheric influence on a quantum illumination radar scheme with an information theory approach

M.Sc. Marjan Schubert

Tu Braunschweig
Active impedance matching of a cryogenic radiofrequency resonator for ion traps

Dr. Riccardo Nembrini

Phd Student - Politecnico Di Milano
Quantum Annealing Linear Regression For Collaborative Filtering Recommendations

Dr. Riccardo Nembrini

Phd Student - Politecnico Di Milano
Quantum Personalization: an application of quantum annealing recommender systems

Dr. Sofia Vallecorsa

CERN
Automated Benchmarking of Algorithms for Quantum Systems (AB-AQS)

Dr. Maarten Wijdekop

Business Developer
How do end-users prepare for Quantum Computing?

Thomas Wagner

Heinrich-Heine-University Düsseldorf
Pauli channels can be estimated from syndrome measurements in quantum error correction

Mr. Lorenz Sauerzopf

Student - TUM
Study on the Potential of Quantum Machine Learning on Data Mining Applications

Dr. Stephen Vintskevich

Research Scientist
Moscow Institute of Physics and Technology
Learning with two Quantum Reservoirs assisted by entanglement swapping

Mr. Sayantan Pramanik

Tata Consultancy Services
Option Pricing on Indian Data Using Maximum Likelihood Amplitude Estimation

Mr. Sayantan Pramanik

Tata Consultancy Services
One Step Time Series Forecasting Using Variational Quantum Circuits

Kai-niklas Schymik

Phd Student
Institute D'optique Graduate School
Arrays of Cryogenic Traps for Improved Quantum Simulation

Dr. Javier Osca

Postdoctoral Student
Maynooth University
Stochastic quantum optical circuit simulator.

Mr. Kevin T. Geier

University of Trento
From non-Hermitian linear response to dynamical correlations and fluctuation-dissipation relations in quantum many-body systems

Sebastian Halama

Leibniz Universität Hannover
Real-time capable CCD-based individual trapped-ion qubit measurement

Elias Zapusek

Phd Student - Eth Zürich
Non-unitary Gate Operation by Dissipation Engineering

Mr. Siyuan Niu

CNRS LIRMM -University Of Montpellier
A Hardware-aware Heuristic for the Qubit Mapping Problem in the NISQ Era

Mr. Shravan Kumar Parthasarathy

Fraunhofer Institute For Integrated Systems And Device Technology IISB
Influence of material parameters on coherence time of Silicon Vacancy color centers in 4H-SiC

Mr. Alexander Miessen

Research Intern
IBM Quantum, IBM Research - Zürich
Quantum Algorithms for Quantum Dynamics: A Performance Study on the Spin-Boson Model

MSc Davide Rei

CNR-IMM Agrate Unit
Gate fidelity effects of parallel control sequences applied to flip-flop qubits

Ms Caroline Tornow

IBM Quantum, IBM Research - Zurich
Pulse-efficient circuit transpilation for quantum applications on cross-resonance-based hardware

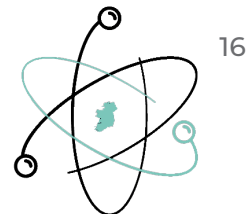
Mr. Javier Rivera-Dean

PhD Student - ICFO
Avoiding local minima in Variational Quantum Algorithms with Neural Networks

Mr. Martin Wagener

Phd Student - Eth Zuerich
Quantum Information Processing with Oscillator States of a Trapped Ion

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

TUESDAY

November 30, 2021

Parallel Sessions

Parallel 3.4 (continued)

Prof Mario Piattini

Full Professor / Cro- UCLM / aQuantum
QHealth: "Quantum pharmacogenomics applied to ageing".

Mr. Michael Perelshtein

Doctoral Candidate - Aalto University
Broadband continuous-variable entanglement generation using a Kerr-free Josephson metamaterial

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Daily Summary

Central European Time
(CET)

9:00 AM - 10:20 AM

Plenary Talks and Panel Discussion on Quantum Computing, Quantum Simulation, Hybrid HPC/QCS

9:00 AM - 9:20 AM

Dr. Iordanis Kerenidis

French National Centre for Scientific Research (CNRS) and QC Ware

Plenary - Quantum Computing

9:20 AM - 9:40 AM

Francesca Ferlaine

University of Innsbruck

Plenary - Quantum Simulation

9:40 AM - 10:00 AM

Prof. Kristel Michielsen

Jülich Supercomputing Centre

Plenary - Hybrid HPC and Quantum Computing/Simulation

10:00 AM - 10:20 AM

Panel - Quantum Computing and Simulation

Dr. Iordanis Kerenidis, French Nat. Centre for Scientific Research (CNRS) & QC Ware

Francesca Ferlaine, University of Innsbruck

Prof. Kristel Michielsen, Jülich Supercomputing Centre

MODERATOR

Anthony Laing

University of Bristol

10:20 AM - 2:00 PM

4. Virtual Exhibition

10:20 AM - 11:00 AM

Morning Break

Workshop Session 3

10:30 AM - 1:30 PM

Workshop 3.1 **QPICs: What PICs can do in Quantum technologies**

Prof Michael Wale - Professor of Integrated Photonics - University College London

Mr Roel Baets - Professor - Ghent University - imec

Thierry Debuisschert - Thales

Dr Eleni Diamanti - French National Centre for Scientific Research (CNRS)

Prof Sara Ducci - Université De Paris

Prof Martijn Heck Professor - Eindhoven University of Technology

Prof. Dr. Klaus D. Jöns - Professor - Paderborn University (organizer)

Dr Moritz Kleinert - Project Manager - Fraunhofer HHI

Dr Anke Lohmann - Director - Anchored In

Prof Peter O'Brien - Head Of Group - Tyndall Institute

Ségolène Olivier - CEA-Leti

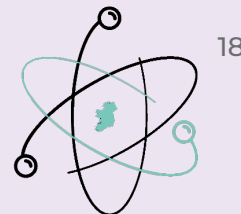
Prof Roberta Ramponi - Director - Ifn-cnr (organizer)

Prof Florian Schreck - University of Amsterdam

Prof Fabio Sciarrino - Professor - Sapienza Università Di Roma

Prof Christine Silberhorn - Prof. - University Paderborn

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Daily Summary

Workshop 3.2 **Education and Training: QTedu Community Workshop, Schools**

Dr. Oxana Mishina - QTedu CSA - National Research Council of Italy - Institute of Optics (CNR-INO) c/o SISSA - Education and Training: QTedu Community Workshop, Schools

Workshop description

Prof. Jacob Sherson - Department of Physics and Astronomy - Aarhus University
Quantum Technology Education Coordination and support action: scope and first year progress

Marilù Chiofalo - Associate professor -Co-coordinator of the QUTE4E pilot within the QT Edu-CSA - Department of Physics, University of Pisa

Massive education and outreach in quantum physics and technologies: challenges and perspectives

Mr Zeki Seskir - Researcher - METU Physics Department
Quantum Technologies Education for Everyone (QTE4E)

Mr Filippo Pallotta - Phd Student - Department Of Science And High Technology, University Of Insubria, Como, Italy

Bringing the second quantum revolution into high school

Dr. Kim Krijtenburg-Lewerissa - Assistant Professor - Freudenthal Institute for science and mathematics education, Utrecht University

Quantum physics in secondary education: Where do we stand?

Dr Philipp Bitzenbauer -Akademischer Rat - Fau Erlangen-nuernberg

Community-based development of the Quantum Concept Inventory (QCI)

Dr Henk Buisman - High School Liaison - Leiden University

Quantum Teaching Materials for Schools (Q_TeMaS)

Prof. Gesche Pospiech - TU Dresden

Development of quantum concepts via different two-state approaches (DQC-2stap)

Dr Erica Andreotti - Researcher - University Colleges Leuven-limburg

Quantum Technology PCK for Teachers (PCK)

Lise Verbraeken - UC Limburg vzw

Quantum Technology PCK for Teachers (PCK)

Mr Ulrich Hoff - Senior Advisor - Technical University Of Denmark

Playful Hands-on-Quantum Early Education (PHONQEE)

Mr Ziad Chaoui Phd Student - TU Berlin

A gender-sensitive approach to high school education in quantum computing.

Organisers: **Dr. Oxana Mishina** - QTedu CSA - National Research Council of Italy - Institute of Optics (CNR-INO) c/o SISSA // **Rainer Mueller** - TU Braunschweig // **Carrie Weidner** - Asst. Prof. - Aarhus University

Parallel Session 4

11:00 AM - 12:30 PM

Parallel 4.1

Parallel 4.2

Parallel 4.3

Parallel 4.4

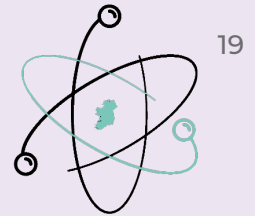
Scientific/Technical Talks - Quantum Computing

Scientific/Technical Talks - Quantum Simulation

Industry Talks - Quantum Computing and Simulation

Virtual Posters - Quantum Communication, Metrology and Sensing

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Daily Summary

1:30 PM - 2:00 PM

Plenary - Quantum Computing

Prof. Andris Ambainis

University of Latvia

Moderator

Kristel Michielsen

Jülich Supercomputing Centre

2:00 PM - 3:00 PM

5. Virtual Exhibition

Parallel Session 5

2:00 PM - 3:00 PM

Parallel 5.1

Parallel 5.2

Parallel 5.3

Parallel 5.4

Scientific/Technical Talks - Quantum Computing

Scientific/Technical Talks - Quantum Simulation

Scientific/Technical Talks - Quantum Computing

Virtual Posters - Quantum Communication, Metrology, Sensing and Education

2:00 PM - 5:30 PM

Workshop 4.3 - **Quantum chemistry use cases and methods for NISQ applications**

Dr. Jan Reiner - CSO - HQS Quantum Simulations

Dr Arseny Kovyshin - AstraZeneca

Dr Goar Sanchez - ICHEC

Mr Wassil Sennane - TotalEnergies

Dr Federica Agostini - Assistant Professor - University Paris-saclay

Dr Ibon Alkorta - Instituto de Quimica Medica

Prof Alan Aspuru-guzik - Professor Of Chemistry And Computer Science - University Of Toronto

3:00 PM - 3:45 PM

Afternoon Break

3:00 PM - 5:15 PM

6. Virtual Exhibition

3:45 PM - 5:15 PM

Workshop 5.1 - **Education and Training: QTedu Community Workshop, Higher Education**

Prof. Jacob Sherson - Department of Physics and Astronomy - Aarhus University

Workshop description

Quantum Technology Education Coordination and support action: scope and first year progress

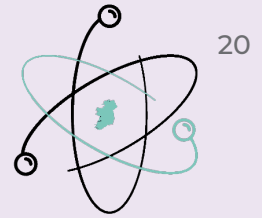
Prof. Heather Lewandowski - Professor - University of Colorado

Preparing for the quantum revolution What is the role of higher education?

Mrs Franziska Greinert - Phd Student - TU Braunschweig

A quantum-ready workforce: Delphi study on requirements and predictions for future quantum workforce and for creation of a competence framework

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Assistant Prof. Alexandru Paler - Aalto University

Introducing Quantum Technologies: A Modular Set of Actions (IQTM)

Martin Gärttner - Group leader - Heidelberg University

Enabling Future European Quantum

Dr Aurel Gabris - Czech Technical University in Prague

Quantum Technology open Master Pilot (QTOM)

Organizers: **Dr. Oxana Mishina** - QTedu CSA - National Research Council of Italy -

Institute of Optics (CNR-INO) c/o SISSA // **Dr Carrie Weidner** - Asst. Prof. - Aarhus University // **Prof. Jacob**

Sherson - Department of Physics and Astronomy - Aarhus University

Parallel Session 6

3:45 PM - 5:15 PM

Parallel 6.1

Parallel 6.2

Parallel 6.3

Parallel 6.4

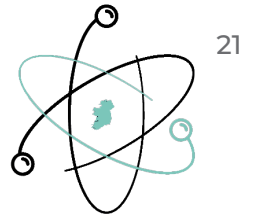
Scientific/Technical Talks - Quantum Computing

Scientific/Technical Talks - Quantum Simulation

Industry & Technical Talks - Quantum Computing

Virtual Posters - Quantum Communication, Metrology and Sensing

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 4.1 (11:00 AM - 12:30 PM)

Scientific/Technical Talks - Quantum Computing

11:00 AM - 11:15 AM

Ms Amira Abbas

IBM

The power of quantum neural networks

11:15 AM - 11:30 AM

Mr. Gian-luca Anselmetti

PhD Student - Covestro Deutschland AG

**Local, Expressive, Quantum-Number-Preserving
VQE Ansätze for Fermionic Systems**

11:30 AM - 11:45 AM

Dr. Daniel Egger

Research Staff Member - IBM Quantum

Warm-starting Quantum Optimization

11:45 AM - 12:00 PM

Dr. Steven Herbert

Senior Research Scientist - Cambridge Quantum Computing

Quantum Monte Carlo Integration: The Full Advantage in Minimal Circuit Depth

12:00 PM - 12:15 PM

Max Rossmannek

PhD Student - IBM Quantum, IBM Research - Zurich and University of Zurich

Quantum-DFT Embedding Algorithm for Electronic Structure Calculations

12:15 PM - 12:30 PM

Mr. Igor Sokolov

PhD student - IBM Research - Zurich

Microcanonical and finite temperature ab initio molecular dynamics simulations on quantum computers

Moderator

Niall Robertson

IBM

Parallel 4.2 (11:00 AM - 12:30 PM)

Scientific/Technical Talks - Quantum Simulation

11:00 AM - 11:15 AM

Prof. Immanuel Bloch

Managing Director - Max Planck Institute Of Quantum Optics

Programmable Atomic Quantum Simulators (PAS-QUANS)

11:15 AM - 11:30 AM

Mr. Aurelien Fabre

PhD Student - Laboratoire Kastler-Brossel

Experimental realisation of topological pumping in a synthetic Hall cylinder

11:30 AM - 11:45 AM

Mr. Sebastian Geier

Physikalisches Institut, Universität Heidelberg

Hamiltonian Engineering of a many-body Rydberg-spin system

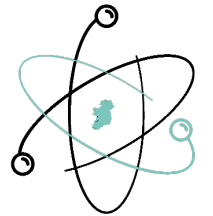
11:45 AM - 12:00 PM

Pr Olivier Gorceix

Professor - Université Sorbonne Paris Nord

Strontium Fermi seas for the quantum simulation of SU(N) magnetism

AGENDA OF SPEAKERS AND TALKS



22

EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 4.2 (continued)

Scientific/Technical Talks - Quantum Simulation

12:00 PM - 12:15 PM

Dr. Simone Notarnicola

Postdoctoral Researcher - University Of Padova

Tensor network and quantum simulation protocols for Rydberg atom platforms

12:15 PM - 12:30 PM

Dr. Joe Randall

Postdoc Researcher - Delft University of Technology

Observation of a many-body-localised discrete time crystal with a programmable spin-based quantum simulator

Moderator

Taira Giordani

Post Doc - Physics Department Sapienza Università Di Roma

Parallel 4.3 (11:00 AM - 12:30 PM)

Industry Talks - Quantum Computing and Simulation

11:00 AM - 11:20 AM

Dr. Matthew Hutchings

Chief Product Officer - Seeqc

Seeqc: the digital quantum computing company

11:20 AM - 11:40 AM

Startup/SME/Lightning Talk

Mr. Christopher Savoie

Ceo - Zapata Computing

Quantum Enhanced Optimization and its Near-term Applications, Powered by Orchestra®

12:00 PM - 12:20 PM

Startup/SME/Lightning Talk

Dr.-ing. Thorsten Last

Director Of D&E

Orange Quantum Systems B.V.

Accelerating the engineering cycle with software and full-stack systems for characterization and calibration of quantum devices through collaboration and standardization

Moderator

Christa Zoufal

IBM Quantum

11:40 AM - 12:00 PM

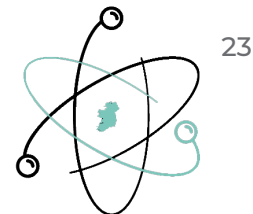
Startup/SME/Lightning Talk

Mr. David Bowden

Senior Principal Research Scientist - Dell Technologies

Hybrid Classical/Quantum Computing

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 4.4 (11:00 AM - 12:30 PM)

Virtual Posters - Quantum Communication, Metrology and Sensing

Dr. Bruno Coutinho
IT
Robustness of Noisy Quantum Networks

Dr. Mustafa Gündoğan
Postdoctoral Researcher
Humboldt Universität Zu Berlin
Proposal for space-borne quantum memories for global quantum networking

Dr. Emanuele Distanto
Post Doc - Max Planck Institute For Quantum Optics
A nondestructive Bell-state measurement on two distant atomic qubits

Mr. Samuel Gyger
KTH Royal Institute of Technology
Strain-controlled quantum dot fine-structure for entangled photon generation at 1550 nm

Mr. Tasio Gonzalez-Raya
Phd Student - University of the Basque Country UPV/EHU
Open-Air Microwave Entanglement Distribution for Quantum Teleportation

Mr. Nicolò Leone
Phd Student - University Of Trento
Simple and certified quantum random numbers generator employing linear optic devices

Mr. Gianni Buser
University Of Basel
Single-Photon Storage in a Ground-State Vapor Cell Quantum Memory

Mr. Angel Alvaro Sanchez
R&D Manager
Thales Alenia Space España
CARAMUEL, technical challenges of an operational QKD service delivered from geostationary orbit

Mr. Obada Alia
Phd Student - High Performance Network Group University Of Bristol

H2020-UNIQORN: Photonic Integrated QKD Systems in Field-deployed Access and Metro Optical Networks

Mr. Luís Bugalho
Phd Student - Instituto De Telecomunicações
Distributing Multipartite Entanglement over Noisy Quantum Networks

Dr. Indrakshi Dey
Asst. Professor - Maynooth University
Modeling Quantum Channels Carrying Classical Information

Mr. Shane Hearne
Researcher/student - Walton Institute
Wavelength selection for Quantum Key Distribution under variable atmospheric conditions

Ms Jennifer Aldama
Phd Student - ICFO
Experimental Characterization of an InP-based PIC Transmitter for CV-QKD Applications

Mr. Hauke Conradi
Fraunhofer HHI
Photon Pair Sources in Hybrid Polymer Photonic Integrated Circuits

Dr. Hannes Hübel
Senior Scientist
AIT Austrian Institute of Technology
Results from the QT Flagship project UNIQORN

Mr. Lukas Hartung
PhD - MPQ
Quantum Teleportation with only a single photon as a resource

Dipl. Ing. Florian Kappe
PhD Student - University Of Innsbruck
Towards deterministic generation of time-bin entangled photons from GaAs quantum dots.

Dr PETRA SCUDO
European Commission Joint Research Centre

Potential for innovative multiuser concepts in EU quantum communication infrastructure

Dr. Nitin Jain
Researcher - Technical University Of Denmark
Exploiting the modulation leakage loophole in continuous-variable quantum key distribution

Dr. Renato Domeneguetti
Postdoc
Technical University of Denmark
Single- and two-mode squeezed light sources integrated on-chip

Mr. Francesco Mazzoncini
Telecom Paris
QKD Attack Rating: Prioritizing is the key to Practical Security

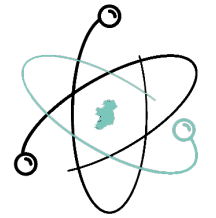
Vittorio Bellani
Department of Physics and INFN, University of Pavia
Nanowires, Graphene and Two-Dimensional Materials for Polarization Control in Silicon Photonic Waveguides

Mr. Benjamin Desef
University of Ulm, Institute For Theoretical Physics & IQST
Protecting quantum states against loss

Dr. Antonio Carlos Amaro de Faria Jr
Researcher - Federal Technological University of Parana - UTFPR - GP
Sensor Design for Processing of Non-linear Optical Signals

Mr. Félicien Appas
Université De Paris
Flexible entanglement - distribution network with an AlGaAs chip for secure communications

AGENDA OF SPEAKERS AND TALKS



24

EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 5.1 (2:00 PM - 3:00 PM)

Scientific/Technical Talks - Quantum Computing

2:00 PM - 2:15 PM

Dr. David Amaro

Scientist - Cambridge Quantum

Filtering variational quantum algorithms for combinatorial optimization

2:15 PM - 2:30 PM

Mr Yasser Omar

Group Leader / Professor - It & Ist, University Of Lisbon

Investigating Quantum Speedup for Track Reconstruction

2:30 PM - 2:45 PM

Anton Dekusar

Mathematical Programming methods for Swap Mapping

2:45 PM - 3:00 PM

Liam Madden

University of Colorado Boulder

Best Approximate Quantum Compiling Problems

Moderator

Frank Wilhelm-mauch

Director - Forschungszentrum Jülich

Parallel 5.2 (2:00 PM - 3:00 PM)

Scientific/Technical Talks - Quantum Simulation

2:00 PM - 2:15 PM

Ms Tanja Behrle

PhD - ETH Zurich

Phonon lasing in the quantum regime

2:15 PM - 2:30 PM

Mr. Qi-Ming Chen

Walther-Meissner-Institute

Quantum critical behaviours of a superconducting Duffing oscillator around a first-order dissipative phase transition

2:30 PM - 2:45 PM

Assoc. Prof. Marilu Chiofalo

Professor - Department of Physics "Enrico Fermi", University of Pisa (Italy) and INFN

Quantum effects in the Aubry transition

2:45 PM - 3:00 PM

Dr. Jinglei Zhang

Postdoc Fellow - University Of Waterloo

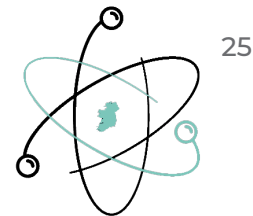
SU(2) hadrons on a quantum computer

Moderator

Joe Randall

Postdoctoral Researcher - Delft University of Technology

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 5.3 (2:00 PM - 3:00 PM)

Scientific/Technical Talks - Quantum Simulation

2:00 PM - 2:15 PM

Mrs Janine Hilder

Johannes Gutenberg-Universität Mainz

Fault-tolerant parity readout on a trapped-ion quantum information processing node

2:15 PM - 2:30 PM

Mr. Carmelo Mordini

Postdoc - Department Of Physics, Institute For Quantum Electronics, Eth Zürich, Zurich

Control of trapped ions using an optical standing wave generated using integrated photonics

2:30 PM - 2:45 PM

MSc Marco Valentini

PhD Student - University Of Innsbruck

Operation of a micro-fabricated 2D trap array

2:45 PM - 3:00 PM

Dr. Giorgio Zarantonello

Postdoc - Leibniz Universität Hannover

Robust two-qubit entangling gate in trapped ions with microwave near-fields

Moderator

Emanuele Distante

Post Doc - Max Planck Institute For Quantum Optics

Parallel 5.4 (2:00 PM - 3:00 PM)

Virtual Posters - Quantum Communication, Metrology, Sensing and Education

Mr. Tobias Schaich

PhD Student - University of Cambridge
Influence of Cooling on Quantum Network Deployment

Dr. Alberto Montanaro

Post-doc - Scuola Superiore Sant'Anna
Layered materials and silicon nitride photonic integrated platform for quantum information

Dr. Max Carey

Post-doctoral Researcher
University Of Southampton
Quantum technologies for classical navigators

Mr. Philip Thomas

Mpi Of Quantum Optics
Quantum Repeater Node Demonstrating Unconditionally Secure Key Distribution

Dr. Alberto Santamato

Researcher - Cnit
Integrated silicon photonic semi-device-independent quantum random number generator module

Ms Cathy White

db
We demonstrated QKD over 6km of Hollow Core Nested Antiresonant Nodeless Fibre (HC-NANF), copropagated with total classical power of +9dBm.

Mr. Žiga Pušavec

Phd Student - Fac. of Mathematics and Physics, University of Ljubljana
A MHz-bandwidth source of polarization-entangled photons in the telecom o-band

Mrs Josephine Pazem

Master Student
RWTH Aachen, Peter-Grünberg-Institute Forschungszentrum Jülich
Boosting fault resilience of autoencoders in quantum denoising process

Marco Barbieri

Università Degli Studi Roma Tre
Quantum estimation reaching for the continuum

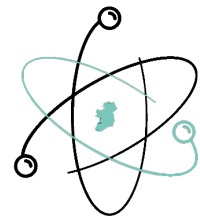
Dr. Klara Theophilo

Postdoc - Icfo
Raman quantum storage of quasi-deterministic single photons emitted by Rydberg atoms

Dr. Marcin Bober

researcher - Nicolaus Copernicus University
Towards a continuous active optical atomic clock with cold strontium

AGENDA OF SPEAKERS AND TALKS



26

EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 5.4 (continued)

atoms

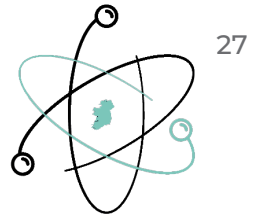
Mr. Danilo Zia

PhD Student - Sapienza - Università Di Roma

Enhanced detection techniques of orbital angular momentum states in the classical and quantum regimes

Ms Lara StrohPhD - Heriot-Watt University
A non-interactive XOR quantum oblivious transfer protocol**Mr. Benedikt Tissot**PhD Student
Universität Konstanz
Hyperfine Structure of Transition Metal Defects in SiC**Mr. Jessica Almeida**Phd Student - Ico
Collective super-resolving measurements for mixed bosonic states**Armando Pinto**Professor - Universidade de Aveiro, Instituto de Telecomunicações
Hardware Security Modules Enabled by QKD: A Field Experiment in Portugal**Dr. Quentin Ansel**Post-doc - Institut Utinam
Optimal control and selectivity of qubits in contact with a structured environment**Mr. Réouven Assouly**ENS Lyon
Number-Resolved Photocounter for Propagating Microwave Mode**Dr Claudio Sutrini**PhD Student - University of Pavia, Department of Physics
Quantum technologies: cultural pathways for in-service teachers**Dr Claudio Sutrini**PhD Student - University of Pavia, Department of Physics
THE SECOND QUANTUM REVOLUTION: EXPERIMENTATION WITH HIGH SCHOOL STUDENTS**Ms Sara Satanassi**Ph.d. Student - University Of Bologna
An approach to quantum technologies: educating for the Second Quantum Revolution**Linda Qerimi**Student - Max-Planck-Institut of Quantumoptic, Photonlab
Interactive Quantumphysics Quantum Random Number Generation for schoolstudents using flipped classroom**Dr. Lukas Mairhofer**Lecturer/Researcher - UAS Technikum Wien
Training the Quantum Workforce: Towards a BB84-experiment for Engineering Students**Dr Stefan Küchemann**Tu Kaiserslautern
Learning quantum physics with the Quantum Composer, an interactive visualization and simulation tool**Mr Johannes Kretzschmar**Institut for Applied Physics, FSU Jena
Photonic Quantum Experiments for Everyone with DIY Components, Web Services, and VR endpoints**Mr Madhav Gupta**Graduate Student - The University Of Hong Kong (HKU)
Quantum Technology for Everyone: Hands-on Research-Oriented Learning Activities Integrated with An In-class Demonstration Kit**Prof. Mikhail Belogolovskii**Head of Laboratory - Vasyli' Stus Donetsk National University
Quantum Physics Curriculum for Training STEM Teachers

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 6.1 (3:45 PM - 5:15 PM)

Scientific/Technical Talks - Quantum Computing

3:45 PM - 4:00 PM

Mr. Marco Fellous

Cnrs

The energetic cost of quantum computing

3:45 PM - 4:00 PM

Mr. Marco Fellous

Cnrs

The energetic cost of quantum computing

4:00 PM - 4:15 PM

Mr. Christophe Piveteau

PhD Student - ETH Zurich/IBM Research Zurich

Error mitigation for universal gates on encoded qubits

4:15 PM - 4:30 PM

Mr. Lukas Postler

Phd Student - University Of Innsbruck

Fault-tolerance in Noisy Intermediate-Scale Quantum devices

4:30 PM - 4:45 PM

Dr. Francesco Tacchino

Research Staff Member - IBM Quantum, IBM Research - Zurich

Learning to measure: adaptive informationally complete POVMs for near-term quantum algorithms

4:45 PM - 5:00 PM

Mr. Xiao Xue

PhD Candidate - QuTech and Kavli Institute of Nanoscience, Delft University of Technology

Computing with spin qubits at the surface code error threshold

5:00 PM - 5:15 PM

Ms Christa Zoufal

IBM Quantum

Error Bounds for Variational Quantum Time Evolution

MODERATOR

Jinglei Zhang

Postdoc Fellow - University Of Waterloo

Parallel 6.2 (3:45 PM - 5:15 PM)

Scientific/Technical Talks - Quantum Simulation

3:45 PM - 4:00 PM

Dr. Gabriel Araneda

Postdoc - University Of Oxford

A two-node trapped-ion quantum network with photonics interconnects

4:00 PM - 4:15 PM

Viviane Cotte

Phd Student - Institut D'optique Graduate School

Implementation of a fast Optical Schrödinger Cat Source

4:15 PM - 4:30 PM

Dr. Emanuele Distante

Post Doc - Max Planck Institute For Quantum Optics

Quantum logic gate between distant network qubits

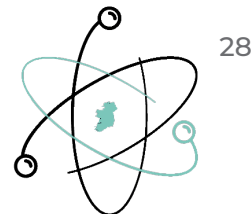
4:30 PM - 4:45 PM

Dr. Taira Giordani

Post Doc - Physics Dept. Sapienza Università Di Roma

Reconfigurable continuously coupled 3D optical circuit for photonic Boson Sampling

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 6.2 (continued)

Scientific/Technical Talks - Quantum Simulation

4:45 PM - 5:00 PM

Mr. Francesco Mattana

Phd Student - Tyndall National Institute

Towards the experimental realisation of a photonic cluster state with pyramidal site-controlled GaAs quantum dots

Moderator

Olivier Gorceix

Professor - Université Sorbonne Paris Nord

5:00 PM - 5:15 PM

Mr. Jonas Mielke

University of Konstanz

Nuclear Spin Readout in a Cavity-Coupled Hybrid Quantum Dot-Donor System

Parallel 6.3 (3:45 PM - 5:15 PM)

Industry & Technical Talks - Quantum Computing

3:45 PM - 4:00 PM

Dr. sc. Johannes Heinsoo

Senior Quantum Engineer - IQM

Superconducting quantum processor design with KQ Circuits

4:00 PM - 4:15 PM

Dr. Bruno Kueng

Application Scientist - Zurich Instruments AG

Instrumentation innovations for the path towards 100 qubits

4:15 PM - 4:30 PM

Startup/SME/Lightning Talk

Dr. Shai Machnes

Ceo - Qruise

Qruise Control for Quantum Technology Development

4:30 PM - 4:45 PM

Startup/SME/Lightning Talk

Mr. Stephan Philips

Phd - TUDelft

A six qubit quantum processor in Silicon

4:45 PM - 5:00 PM

Scientific/Technical Talk

Mr. Ivan Pogorelov

PhD student - University Of Innsbruck

A compact ion-trap quantum computing demonstrator

5:00 PM - 5:15 PM

Scientific/Technical Talk

Prof. Frank Wilhelm-mauch

Director - Forschungszentrum Jülich

An Open Superconducting Quantum Computer – state of play and schedule

Moderator

Marilù Chiofalo

Co-coordinator of the QUTE4E pilot within the QT-Edu-CSA - Department of Physics, University of Pisa

AGENDA OF SPEAKERS AND TALKS



29

EQTC 2021

WEDNESDAY

December 1, 2021

Parallel Sessions

Parallel 6.4 (3:45 PM - 5:15 PM)

Virtual Posters - Quantum Communication, Metrology and Sensing

Mr. Matteo Sanna

Trento - University of Trento

A silicon source of quantum light for sensing beyond 2 μm **Mr. Gianlorenzo Massaro**

Phd Student - Università Di Bari

Toward Quantum 3D imaging devices

MSc Michal LipkaPhd Student - Centre For Quantum Optical Technologies, Centre Of New Technologies, University Of Warsaw
Single-photon hologram of a zero-area pulse**Dr. Philippe Faist**

Free University Berlin

Time-energy uncertainty relation for noisy quantum metrology

Ms Camila Silva

Phd Student - University Of Amsterdam

Continuous superradiant clock lasers on narrow transitions of strontium

Dr. Nikolay Pavlov

Lead Physicist - MICROR SYSTEMS

Ultra-compact and ultra high-Q photonic chip based optical reference cavity at 1550nm

Dr. Sylvain Karlen

R&d Engineer - CSEM SA

Rubidium MEMS atomic vapor cells for quantum sensing and metrology

Dr. Stephen Vintskevich

Research Scientist

Moscow Institute of Physics and Technology

Two-photon amplitude interferometry for precision astrometry and beyond

Mr Luca Panarella

Tyndall National Institute

Characterisation of MoS2 field-effect transistors at milliKelvin temperatures

Dr. Tobias Leopold

DLR

A grating magneto-optical trap for two-color cooling of strontium atoms

Mr. Sushanth Kini Manjeshwar

Doctoral Student - Chalmers University Of Technology

Photonic crystal membrane array in AlGaAs heterostructures for integrated cavity optomechanics

Antonio A Valido

Assistant Professor

Universidad Rey Juan Carlos

Gaussian phase sensitivity of boson-sampling-inspired strategies

Mr. Matteo Sanna

Trento - University of Trento

A silicon source of quantum light for sensing beyond 2 μm **Mr. Gianlorenzo Massaro**

Phd Student - Università Di Bari

Toward Quantum 3D imaging devices

MSc Michal LipkaPhd Student - Centre For Quantum Optical Technologies, Centre Of New Technologies, University Of Warsaw
Single-photon hologram of a zero-area pulse**Dr. Philippe Faist**

Free University Berlin

Time-energy uncertainty relation for noisy quantum metrology

Dr. Leonardo Masi

Post-doc - CNR-INO Istituto Nazionale di Ottica, University Of Florence

A novel optical lattice with arbitrary large spacing for ultracold atoms

Ms Camila Silva

Phd Student - University Of Amsterdam

Continuous superradiant clock lasers on narrow transitions of strontium

Dr. Nikolay Pavlov

Lead Physicist - MICROR SYSTEMS

Ultra-compact and ultra high-Q photonic chip based optical reference cavity at 1550nm

Dr. Sylvain Karlen

R&d Engineer - CSEM SA

Rubidium MEMS atomic vapor cells for quantum sensing and metrology

Dr. Stephen Vintskevich

Research Scientist

Moscow Institute of Physics and Technology

Two-photon amplitude interferometry for precision astrometry and beyond

Dr. Ray Duffy

Tyndall National Institute

Characterisation of MoS2 field-effect transistors at milliKelvin temperatures

Dr. Tobias Leopold

DLR

A grating magneto-optical trap for two-color cooling of strontium atoms

Mr. Sushanth Kini Manjeshwar

Doctoral Student - Chalmers University Of Technology

Photonic crystal membrane array in AlGaAs heterostructures for integrated cavity optomechanics

Antonio A Valido

Assistant Professor

Universidad Rey Juan Carlos

Gaussian phase sensitivity of boson-sampling-inspired strategies

Mr. Ivan Rojko

Doctoral Student - ETH Zurich

Bias in error-corrected quantum sensing

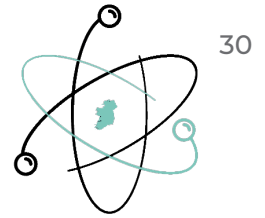
Prof. Geza Toth

Ikerbasque Research Professor

Ikerbasque and UPV/EHU

Activating hidden metrological usefulness

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

WEDNESDAY
December 1, 2021

Parallel Sessions

Parallel 6.4 (continued)

Dr. Julen Pedernales

Postdoc - Universität Ulm
Challenges and Opportunities for
Macroscopic Matter-Wave Interfer-
ometry with Solids

Prof. Tommaso Roscilde

Associate Professor - Ecole Normale
Supérieure De Lyon
Scalable spin squeezing from
strong correlations

Dr. Alexander Mikhalychev

Senior Researcher - B.i. Stepanov
Institute Of Physics, Nas Of Belarus
Lost photon enhances superreso-
lution

Dr. Johannes Fiedler

Researcher - University Of Bergen
The role of dispersion forces for
matter-wave binary holography

experiments

Mr. Patrick Kaspar

PhD Student - 5. Institute of Phys-
ics, University of Stuttgart
Towards an optogalvanic flux sensor
for nitric oxide based on Rydberg
excitation

Mr. Hans Stærkind

Phd Student - Niels Bohr Institute,
University of Copenhagen
Optical Magnetometry for MRI

Dr. Rémy Dassonneville

Post-doc - Ens De Lyon
Dissipative Stabilization of Squeez-
ing Beyond 3 dB in a Microwave

Mode

Ugo Marzolino

Researcher - INFN, Trieste Unit
Precision magnetometry exploit-
ing excited-state quantum phase
transitions

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

THURSDAY

December 2, 2021

Daily Summary

Central European Time
(CET)

9:00 AM - 9:20 AM

Plenary - Basic Sciences and Cross-Cutting Technologies

Prof Mauro Paternostro

Queen's University Belfast

Moderator

Tracy Northup

University of Innsbruck

9:30 AM - 10:30 AM

7. Virtual Exhibition

Parallel Session 7

9:30 AM - 10:30 AM

Parallel 7.1

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

Parallel 7.2

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

9:30 AM - 12:30 PM

Workshop 4.1 - EURAMET support to Quantum Technologies Standardisation

Dr. Ivo Pietro Degiovanni - Senior Researcher - INRIM

Tommaso Calarco - Jülich Supercomputing Centre

Dr Nicolas Spethmann - Physikalisch-technische Bundesanstalt

Dr Martin Ward - Senior Research Scientist - Toshiba Europe Limited

Dr Hansjörg Scherer - Head Of Department - Physikalisch-Technische Bundesanstalt (PTB)

Mr Sebastien Bize - Researcher, Deputy-director - Lne-syrte, Observatoire De Paris-psl, Cnrs, Sorbonne Université

Dr Christopher CHUNNILALL - NPL

Dr Dagmar Auerbach - Programme Manager - EURAMET e.V.

Mrs Eveline Domini - EURAMET eV

Dr Marco Gramegna - Staff Scientist - Inrim - Istituto Nazionale Di Ricerca Metrologica

Dr Alessandro Cultrera - Istituto Nazionale di Ricerca Metrologia, (INRIM)

Dr Charles Clifford - National Physical Laboratory

Workshop 6.1 - **Quantum Orchestration: Integrated quantum control hardware & software for neutral atoms**

Dr. Ramon Szmuk - Quantum Hardware Engineer - Quantum Machines

Yonatan Cohen - CTO - Quantum Machines

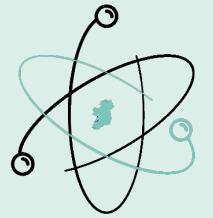
Alex Greenshpun - Director of Marketing - Quantum Machines

Ramon Szmuk - Quantum Hardware Engineer - Quantum Machines

Workshop 6.2 - **Quantum Network Explorer: Showcase and demonstration of quantum network technologies**

Dr. Ingrid Romijn - Coordinator Quantum Internet Division - QuTech / TUDelft

AGENDA OF SPEAKERS AND TALKS



32

EQTC 2021

THURSDAY

December 2, 2021

Daily Summary

Önder Karpaz - Software Lead - Qutech
Wojciech Kozlowski - Quantum Network Engineer - Qutech / Delft Univ. Of Technology
Ingrid Romijn - Coord. Quantum Internet Division - QuTech / TUDelft
Bart van der Vecht - PhD student - Qutech
Dr Joshua Slater - Quantum Scientist - Qutech

9:30 AM - 11:30 AM

Workshop 6.3 - QTedu community workshop & Decide game

Crazia Bastasin - Program Manager - QuTech, Technische Universiteit Delft
Workshop description
Education and Training: QTedu Community Workshop, Workforce and General Discussion
Dr Araceli Venegas-gomez - Founder And Ceo - Qureca
Quantum technologies training initiatives worldwide: present and future
Associate Prof. Andras Palyi - Budapest University of Technology and Economics
Quantum Retraining Network (QAREER)
Prof Alex Holleitner - Full Professor - Technical University Munich
Quantum education in Munich – from university to industry
Dr Anand Sharma - Research Associate and Academic Coordinator - RWTH Aachen University
Digitized Platform for Internationalization: Master study track in Quantum Technology

Organizers: **Dr Oxana Mishina** - QTedu CSA - National Research Council of Italy - Institute of Optics (CNR-INO) c/o SISSA // **Dr Carrie Weidner** - Asst. Prof. - Aarhus University // **Grazia Bastasin** - Program Manager - QuTech, Technische Universiteit Delft

11:30 AM - 12:30 PM

Workshop/Tutorial

Dr Federica Alice Beduini - KTT Outreach Project Manager - ICFO
Dr Lydia Sanmartí-Vila, ICFO
Decide Game: an interactive tool to introduce quantum technologies

10:30 AM - 11:15 AM

Morning Break

11:15 AM - 2:30 PM

8. Virtual Exhibition

Parallel Session 8

11:15 AM - 12:45 PM

Parallel 8.1	Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies
Parallel 8.2	Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies
Parallel 8.3	Virtual Posters - Basic Science and Cross-Cutting Technologies

AGENDA OF SPEAKERS AND TALKS



33

EQTC 2021

THURSDAY

December 2, 2021

Daily Summary

12:45 PM - 1:30 PM

Lunch

Parallel Session 9

1:30 PM - 2:10 PM

Parallel 9.1

Invited Talks and Panel Discussion on Education in Quantum Technologies

Parallel 9.2

Invited Talks and Panel Discussion on Industry Consortium in Quantum Technologies

2:15 PM - 2:45 PM

Open community discussion & EQTC 2021 closing

Closing EQTC 2021

Tommaso Calarco

Jülich Supercomputing Centre

Pascal Maillot

European Commission

Dr Rob Thew

Senior Researcher - University Of Geneva

Dr. Venkatesh Kannan

Centre Technical Manager - ICHEC

EQTC 2021 closing

Mr Peter Woods

Irish Centre for High-End Computing (ICHEC)

EQTC 2021 closing

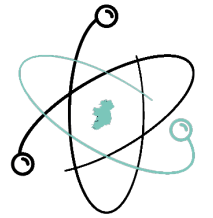
Moderator

Rob Thew

Senior Researcher

University Of Geneva

AGENDA OF SPEAKERS AND TALKS



34

EQTC 2021

THURSDAY

December 2, 2021

Parallel Sessions

Parallel 7.1 (9:30 AM - 10:30 AM)

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

9:30 AM - 9:45 AM

Mr. Dmitry Tabakaev

PhD student - University Of Geneva

Spatial properties of entangled two-photon absorption

9:45 AM - 10:00 AM

Professor David Vitali

Full Professor- University of Camerino

Engineering cluster states for universal quantum computation with a single-site squeezed driving

10:00 AM - 10:15 AM

Dr. Stephen Wein

Postdoctoral Researcher - CNRS - Institut Neel

Photon-number entanglement generated by sequential excitation of a two-level atom

10:15 AM - 10:30 AM

Dr. Stephan Welte

Max-Planck-Institute of Quantum Optics

Double nondestructive detection of a flying optical photon

Moderator

Klaus D. Jöns

Professor - Paderborn University

Parallel 7.2 (9:30 AM - 10:30 AM)

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

9:30 AM - 9:45 AM

Ms. M. Luisa Mattana

PhD Student - ETH Zurich

Quantum control of macroscopic objects with levitated optomechanics

9:45 AM - 10:00 AM

Professor Mikko Möttönen

Professor Of Quantum Technology, Group Leader

Aalto University

Low-noise on-chip coherent microwave source

10:00 AM - 10:15 AM

Dr. Stefan Schulz

Tyndall National Institute

Non-classical light emission from (In,Ga)N quantum dots: Atomistic analysis of the impact of alloy fluctuations on electronic and excitonic properties

10:15 AM - 10:30 AM

Mrs Ana Strinic

PhD Student - Walther-Meissner-Institute, BAdW

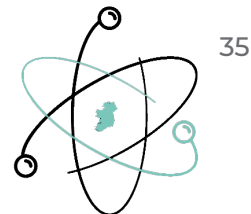
Towards implementing frequency comb protocol into the purely microwave regime

Moderator

Emanuele Pelucchi

Head Of Group - Tyndall National Institute

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

THURSDAY

December 2, 2021

Parallel Sessions

Parallel 8.1 (11:15 AM - 12:45 PM)

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

11:15 AM - 11:30 AM

Mr. Alexander Gresch

Ph.D. - Quantum Technology Group, Heinrich Heine University Düsseldorf

Scalable approach to many-body localization via quantum data

11:30 AM - 11:45 AM

Ms. Vindhiya Prakash

PhD Student - ICFO

What we can learn from a HOM interference between distinguishable photons

11:45 AM - 12:00 PM

Dr. Jelmer Renema

Assistant Professor - University Of Twente

Witnessing entanglement on a quantum photonic processor

12:00 PM - 12:15 PM

Mr. Javier Rivera-Dean

PhD Student - ICFO

Schemes for creating Schrödinger optical cat states using strong-field physics

12:15 PM - 12:30 PM

Marcos Rubín-Osanz

Instituto de Nanociencia y Materiales de Aragón

Decoherence-free molecular spin qubits with chemically designed frequencies

12:30 PM - 12:45 PM

Dr. Thomas Schulte-Herbrueggen

Lecturer - Technical University Munich (TUM)

Exploring the Limits of Markovian Quantum System Dynamics

Moderator

Maria Luisa Mattana

PhD Student - ETH Zurich

Parallel 8.2 (11:15 AM - 12:45 PM)

Scientific/Technical Talks - Basic Sciences and Cross-Cutting Technologies

11:15 AM - 11:30 AM

Dr. Martin Bowen

Senior Researcher - Institute Of Physics And Chemistry Of Materials Of Strasbourg

Merging spintronics and quantum thermodynamics to harvest ambient thermal energy

11:30 AM - 11:45 AM

Prof. Dr. Dmitri Efetov

Prof. at ICFO

Two-dimensional quantum materials and devices for scalable integrated photonic circuits (This is an overview talk of the QF project 2D-SIPC)

11:45 AM - 12:00 PM

Dr. Laia Gines

Postdoctoral Researcher - Stockholm University

A broadband micropillar cavity device for high extraction efficiency of photon pairs

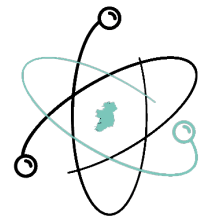
12:00 PM - 12:15 PM

Prof. Dr. Klaus D. Jöns

Professor - Paderborn University

Scalable Two-Dimensional Quantum Integrated Photonics

AGENDA OF SPEAKERS AND TALKS



36

EQTC 2021

THURSDAY

December 2, 2021

Parallel Sessions

Parallel 8.2 (continued)

12:15 PM - 12:30 PM

Mr. Patrick Laferriere

PhD Student - University Of Ottawa

Nanowire based source of single-photons**Moderator****Mauro Paternostro**

Queen's University Belfast

12:30 PM - 12:45 PM

Dr. Shai Machnes

Forschungszentrum Jülich

Machine-learning tools for Control, Calibration and Characterization of QPUs and other quantum devices

Parallel 8.3

Virtual Posters - Basic Science and Cross-Cutting Technologies

Dr Tom HebdigePostdoc - University of York
Assessment of a quantum random number generator based on photon number statistics**Dr. Michal Parniak**University Of Warsaw
Embedding multiple quantum functionalities in an atomic-ensemble quantum memory**Prof Irene D'Amico**Professor - University of York,
Out-of-equilibrium many-body systems: work statistics and signatures of quantum phase transitions**Dr. Fredrik Brange**Postdoc - Aalto University
Dynamic Cooper pair splitter**Sean Adamson**

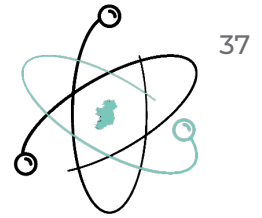
Practical Parallel Self-testing of Bell States via Magic Rectangles

Dr. Archak PurkayasthaTrinity College Dublin
Classical simulation of quantum devices**Prof. Mikhail Belogolovskii**Head of Laboratory - Vasyli' Stus Donetsk National University
Quantum Effects in the Persistent Edge State Transport**Dr. Stephan Welte**Max-Planck-Institute of Quantum Optics
Double nondestructive detection of an itinerant optical photon**Ms Mu-che Lin**Graduate Student - Department Of Engineering Science, National Cheng Kung University
Canonical Hamiltonian ensemble representation for the free induction decay of NV centers**Mr. Sergio Altares-Lopez**PhD Student - Universidad Politécnica de Madrid
Automatic design of quantum feature maps**Mr. Iman Ranjbar Jahromi**Phd Student - Tyndall National Institute
GaAs site-controlled Pyramidal

quantum dots: enhancing dot reproducibility and controllability (hence scalability) for on-demand single and entangled photon emission

Mr. Andreas MeyerScientific Assistant - Walther-Meißner-Institut, Bayerische Akademie der Wissenschaften
Thermodynamic simulation of spin-ensemble memory devices**Mr. Owidiusz Makuta**Center For Theoretical Physics, Polish Academy Of Sciences
Framework for self-testing of entangled subspaces**Mr. Shubhayan Sarkar**Graduate Student
Centrum Fizyki Teoretycznej PAN
Certification of incompatible measurements using quantum steering**Mr. Kirill Streltsov**Phd - Ulm University
Ground-State Cooling of Levitated Magnets

AGENDA OF SPEAKERS AND TALKS



EQTC 2021

THURSDAY

December 2, 2021

Parallel Sessions

Marina Calero De Ory

Phd Student - Centro De Astrobiología (csic-inta)
LC on-chip resonators for the magneto-electrical control and read-out of molecular spin qubits

Mr. Sergio Martinez-Losa Del Rincon

PhD Student - Universidad De Zaragoza / CSIC
Strong coupling regime in multi-shaped thin films using light-magnonics

Mr. Vojtech Svarc

Ph.D. Student - Univerzita Palackého Olomouc
Sub-0.1° phase stabilization of a fiber Mach-Zehnder interferometer for single-photon applications.

Parallel 9.1 (1:30 PM - 2:10 PM)

Invited Talks and Panel Discussion on Education in Quantum Technologies

1:30 PM - 1:40 PM

Celia Merzbacher

QED-C Executive Director - SRI International

Workforce needs of the growing quantum industry

1:40 PM - 2:10 PM

Panel Discussion

Inés de Vega

Head of Quantum Innovation, Guest researcher

IQM Germany, LMU

Panel Discussion on Education in Quantum Technologies

Fabio Scafirimuto

Education, Outreach and Community Team Lead for Europe and Africa -IBM Quantum

Panel Discussion on Education in Quantum Technologies

Dr Araceli Venegas-gomez

Founder And Ceo - Qureca

Panel Discussion on Education in Quantum Technologies

Moderator

Jacob Sherson

Department of Physics and Astronomy - Aarhus University

Parallel 9.2 (1:30 PM - 2:10 PM)

Invited Talks and Panel Discussion on Industry Consortium in Quantum Technologies

1:30 PM - 1:40 PM

Thierry Botter

QuIC

QuIC: European industries join forces and define common milestones to champion quantum technologies

1:40 PM - 2:05 PM Round Table Discussion

Johanna Sepulveda

Airbus

Paolo Bianca

Airbus

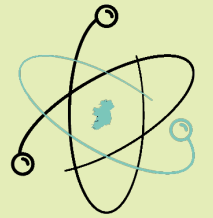
Mario Caldeira

Deloitte

Thierry Debuisschert

Thales

POST EQTC 2021 - QUANTUM FLAGSHIP



EQTC 2021

FRIDAY

December 3, 2021

Post EQTC 2021 Workshop

9:00 AM - 12:30 PM

From research to market: patenting your quantum technologies
Jointly held by Quantum Flagship and European Patent Office

You are invited to an introductory workshop on intellectual property rights (IPR) for quantum technologies, organised jointly by the European Patent Office (EPO) and the Quantum Flagship, and supported by European IP Helpdesk.

This workshop will be geared towards quantum engineers and scientists who are new to IPR and patent law. You will become familiar with the basics through lectures from the EPO, a case study example, and online exercises. There will be two follow-up workshops next Spring, moving on to a more advanced level.

To sign up for this workshop visit:

<https://qt.eu/about-quantum-flagship/the-european-community/from-research-to-market-patenting-your-quantum-technologies/>