

QUANTUM SPEEDUP

February 12-13, 2026, Gdańsk

Venue: University of Gdańsk, Faculty of Mathematics, Physics, and Informatics, Wita Stwosza street, 57, Gdańsk, Poland
Auditorium: D005

Conference Programme 12 February 2026

Thursday, February 12, 2026

09:30 Registration & Welcome Coffee

10:45 **Opening**

Thursday SpeedTalk Sessions

10:50 – 11:20 **SpeedTalks I**

Amrapali Sen (ICTQT, UG)

Matthias Salzger (ICTQT, UG)

Fernando Almaguer Angeles (ICTQT, UG)

Agnieszka Schlichtholz (WMFil, UG)

Leonard Sikorski (WMFil, UG)

Abhyoudai Sajeevkumar Shaleena (ICTQT, UG)

Rashi Adhikari (ICTQT, UG)

Sumit Rout (ICTQT, UG)

Jędrzej Stempin (WMFil, UG)

Break & Discussion time

12:00 – 12:30 **SpeedTalks II**

Maria Popławska (QOT, UW)

Michał Banacki (ICTQT, UG)

Felix Huber (WMFil, UG)

Jorge Escandón-Monardes (ICTQT, UG)

Gerard Anglès Munné (WMFil, UG)

Robert Okuła (GUT)

Paweł Cieśliński (ICTQT, UG)

Rishav Sagar (ICTQT, UG)

Andre Hernandes Alves Malavazi (ICTQT, UG)

Voting for Talk of the Day

Lunch Break (not provided by the organizers)

15:00 – 17:00 **Thursday Poster Session**

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Friday, February 13, 2026

10:00 Registration & Morning Coffee

10:30 **Announcements**

Friday SpeedTalk Sessions

10:35 – 11:05 **SpeedTalks III**

Marcin Jarzyna (QOT, UW)

Akshata Shenoy (ICTQT, UG)

Vera Uzunova (QOT, UW)

Tomasz Linowski (ICTQT, UG)

Alexandre Orthey (MIM, UW)

Konrad Schlichtholz (ICTQT, UG)

Antonio Mandarino (ICTQT, UG)

Piotr Mironowicz (ICTQT, UG / GUT)

Gerardo Suarez Vargas (ICTQT UG)

Break & Discussion time

11:45 – 12:15 **SpeedTalks IV**

Marcin Marciniak (WMFil, UG)

Beata Zjawin (ICTQT, UG)

Ana Belen Sainz (ICTQT, UG)

John H. Selby (ICTQT, UG)

Arturo Konderak (CFT, PAN)

Karthik Hosapete Seshadri (ICTQT, UG)

Firat Diker (ICTQT, UG / SU)

Giovanni Scala (PB / INFN)

Vinicius Rossi (ICTQT, UG)

Voting for Talk of the Day

Lunch Break (not provided by the organizers)

14:30 – 16:30 **Friday Poster Session**

16:30 Closing remarks

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List of speed talks / poster sessions – 12 February

Thursday Sessions	
Rashi Adhikari (ICTQT, UG)	Optimal Universal Higher-Order Quantum Networks for Multi-Copy Unitary Complex Conjugation
Fernando Almaguer Angeles (ICTQT, UG)	Hacking quantum computer with row hammer attack
Gerard Anglès Munné (WMFil, UG)	Holographic quantum codes with trapped ions
Michał Banacki (ICTQT, UG)	Unitary induced channels and Tsirelson's problem
Paweł Cieśliński (ICTQT, UG)	The Incredible Richness of Bell Nonlocality
Felix Huber (WMFil, UG)	A Lovász theta lower bound on quantum max cut
Jorge Escandón-Monardes (ICTQT, UG)	Multiparameter estimation with a photonic quantum switch
Andre Hernandes Alves Malavazi (ICTQT, UG)	cQED-Based Quantum Power Plant
Moein Naseri (ICTQT, UG)	Energy Fluctuations as a Resource for Entanglement Generation
Robert Okuła (GUT)	Mapping Quantum Discord for different Bell violations
Maria Popławska (QOT, UW)	Information capacity of multi-mode quantum Gaussian channels
Sumit Rout (ICTQT, UG)	Facets of Non-locality and Advantage in Entanglement-Assisted Classical Communication Tasks
Rishav Sagar (ICTQT, UG)	Ergotropy Protection via Two-Time Weak-Measurement (TWM) Protocol
Abhyoudai Sajeevkumar Shaleena (ICTQT, UG)	Understanding Bell inequality violations in 2-2-d and 2-d-2systems
Matthias Salzger (ICTQT, UG)	On the physical realisability of indefinite causal order process in classical spacetime
Agnieszka Schlichtholz (WMFil, UG)	Förster Resonance Energy Transfer in cylindrical nanostructures
Amrapali Sen (ICTQT, UG)	Superluminal Transformations and Indeterminism
Leonard Sikorski (WMFil, UG)	Quantum waste management: Utilizing residual states in quantum information processing
Jędrzej Stempin (WMFil, UG)	Quantum Capacity of a Graph

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List of speed talks / poster sessions – 13 February

Friday Sessions	
Firat Diker (ICTQT, UG / SU)	Deterministic generation of a four-qubit W state using one- and two-qubit gates
Karthik Hosapete Seshadri (ICTQT, UG)	Quantum coherence leveraged agnostic phase estimation
Marcin Jarzyna (QOT, UW)	Optical Communication Receiver Based on Single Photon Coherent Beam Combination
Arturo Konderak (CFT, PAN)	Full nonlocality of partially entangled states
Tomasz Linowski (ICTQT, UG)	Quantum-inspired exoplanet detection in the presence of experimental imperfections
Antonio Mandarino (ICTQT, UG)	Statistics of topological defects across a phase transition in a digital superconducting quantum processor
Marcin Marciniak (WMFil, UG)	Equiangular systems of vectors
Piotr Mironowicz (ICTQT, UG/ GUT)	Long-range device-independent quantum key distribution
Alexandre Orthey (MIM, UW)	Optimality of universal conclusive entanglement purification protocols
Vinicius Rossi (ICTQT, UG)	How typical is contextuality?
Ana Belen Sainz (ICTQT, UG)	Linear Program Witness for Network Nonlocality in Arbitrary Networks
Giovanni Scala (PB / INFN)	Measurable Third-Order Detection from an Affine Reduction Moment Matrix
Konrad Schlichtholz (ICTQT, UG)	Enhancing SPADE-based source discrimination through frequency measurements
John H. Selby (ICTQT, UG)	Generalised Process Theories
Akshata Shenoy (ICTQT, UG)	Quantum-Inspired Approaches for Bloch Surface Wave–Based Sensing
Gerardo Suarez Vargas (ICTQT UG)	Non-Markovian equations and approximate environments
Vera Uzunova (QOT, UW)	Photon Efficiency of high-dimensional Quantum Key Distribution
Beata Zjawin (ICTQT, UG)	The resource theory of causal influence and knowledge of causal influence

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Acronyms

UG – University of Gdańsk

ICTQT – International Centre for Theory of Quantum Technologies

WMFiI - Department of Mathematics, Physics and Informatics

UW – University of Warsaw

QOT – Centre for Quantum Optical Technologies, Centre of New Technologies

MIM - Faculty of Mathematics, Informatics and Mechanics

CFT PAN – Center for Theoretical Physics, Polish Academy of Sciences

GUT – Gdańsk University of Technology

PB - Politecnico di Bari, Italy

INFN - Istituto Nazionale di Fisica Nucleare - Sezione di Bari, Italy

SU - Sabanci University, Turkey

Committees

Steering Committee

Marek Żukowski (ICTQT, UG)

Konrad Banaszek (QOT, UW)

Organising Committee

Ewa Kaszewska (ICTQT, UG)

Marcin Jarzyna (QOT, UW)

Marta Krzyżykowska (ICTQT, UG)

Local Organising Committee

Rashi Adhikari (ICTQT, UG)

Fernando Almaguer Angeles (ICTQT, UG)

Shahana Aziz (ICTQT, UG)

Paweł Cieśliński (ICTQT, UG)

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Vinicius Pretti Rossi (ICTQT, UG)

Chithra Raj (ICTQT, UG)

Aravinth Ravichandran (ICTQT, UG)

Sumit Rout (ICTQT, UG)

Abhyoudai Sajeevkumar Shaleena (ICTQT, UG)

Matthias Salzger (ICTQT, UG)

Amrapali Sen (ICTQT, UG)

Organisers and Partners



