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# PROGRAMME

# The Sixth Poznań Symposium on Quantum Information and Quantum Technologies OIOTec 2024

10th (Friday) - 13th (Monday) May 2024 at the Physics Faculty, Adam Mickiewicz University (UAM), Poznań, Poland

### PROGRAMME

# Friday sessions, 10 May 2024

### venue: Prof. Kielich Auditorium

#### 8:15-8:50 MORNING COFFEE 8:50-9:00 Adam Miranowicz: Symposium Opening and Welcome Note Session I -- chairman: Prof. Zbigniew Ficek 9:00-9:20 Huan-Yu Ku: Measurement incompatibility cannot be distilled (invited talk) 9:20-9:40 Po-Chen Kuo: Non-Markovian skin effect (invited talk) 9:40-10:00 Jhen-Dong Lin: Non-Markovian quantum exceptional points (invited talk) 10:00-10:20 Karol Bartkiewicz: Experimental exploration of Liouvillian exceptional points on a quantum computer 10:20-10:40 Arnab Laha: Speciality optical waveguide systems exhibiting conjugate exceptional points 10:40-11:00 Kacper Wrześniewski: Dynamics and cross-correlations in quantum dot-Majorana wire systems 11:00-11:30 COFFFF BRFAK Session II -- chairman: Prof. Ryszard Tanaś 11:30-11:50 Wiesław Leoński: Two-mode entangled bosonic system and Legget-Garg inequality (invited talk) 11:50-12:10 Zbigniew Ficek: Controlled generation of coherence and entanglement in a three-mode system (invited talk) 12:10-12:30 Artur Barasiński: Efficient and Reliable Detection of Nonlocal Quantum Correlations via Random Measurements (invited talk) 12:30-12:50 Kuan-Yi Lee: Unveiling quantum steering by quantum-classical uncertainty complementarity 12:50-13:10 Javid Naikoo: Enhancing quantum sensors by capitalising on dynamical instabilities 13:10-14:15 LUNCH Session III -- chairman: Prof. Adam Miranowicz

#### 14:15-15:15

Franco Nori: Quantum Nonlinear Optics without Photons, how to excite two or more atoms simultaneously with a single photon, and other unusual properties of ultra-strongly-coupled QED systems. (keynote speaker talk)

# Monday sessions, 13 May 2024

## venue: Sala Rady Wydziału (Room 16)

8:30-9:00 MORNING COFFEE

Session IV -- chairman: Prof. Paweł Kurzyński

9:00-9:20 Ireneusz Weymann: Kondo cloud in superconductors 9:20-9:40

9:40-10:00 Grzegorz Chimczak: Good two-photon blockade displayed in the presence of a cloud of emitters 10:00-10:20 Yi-Te Huang: An efficient Julia framework for hierarchical equations of motion in open quantum systems 10:20-10:40 Jędrzej Stempin: Exploring position-dependent quantum random walks 10:40-11:00 Patrycja Tulewicz: Advancing generative machine learning with quantum computing 11:00-11:30 COFFEE BREAK Session V chairman: Prof. Huan-Yu Ku 11:30-11:50 Andrzej Grudka: Superluminal observers and quantum superpositions 11:50-12:10 Paweł Kurzyński: Non-classicality primitive in a quasi-probabilistic toy model 12:10-12:30 Jan Wójcik: Electrically coupled optomechanical cavities as a tool for quantum nondemolition measurement 12:30-12:50 Marcin Karczewski: Heralded entanglement generation with indistinguishable particles 12:50-13:10 Ravindra Chhailany: Artificial quantum matter under control: from excitons to atoms	Anna Kowalewska-Kudłaszyk: On some examples of blocking photons an	d phonons
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Adam Miranowicz: Closure of Regular Sessions	Adam Miranowicz: Closure of Regular Sessions	
13:15-14:15	13:15-14:15	
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## Satellite talk in the series Stanislaw Ulam's Lectures

Chairman: Prof. Michał Banaszak

#### 16:00-17:00

Franco Nori: Artificial neural networks and Machine Learning applied to Quantum Physics

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