

# WQSQW 2016 Program Overview

	Thu, 17 Nov	Fri, 18 Nov	Sat, 19 Nov	Sun, 20 Nov	
9 <sup>00</sup>	registration	Alberti	Mančal	Werner	9 <sup>00</sup>
	9 <sup>40</sup> opening				
9 <sup>50</sup>	Velázquez	Obuse	Baghbanzadeh	Cedzich	9 <sup>50</sup>
10 <sup>15</sup>		coffee break	coffee break	Cardano	10 <sup>15</sup>
10 <sup>40</sup>		coffee break		coffee break	10 <sup>40</sup>
10 <sup>45</sup>		Mataloni	Ishizaki		
11 <sup>10</sup>	Perinotti				Segawa
11 <sup>35</sup>		Qiang	Petruccione		
12 <sup>00</sup>	Pérez	Wang	Di Franco	Asbóth	12 <sup>00</sup>
12 <sup>25</sup>	lunch break	photo session lunch break	lunch break	Kendon	12 <sup>25</sup>
15 <sup>00</sup>	Facchini	Hillery	Silberhorn		
	Arnault				
15 <sup>50</sup>	Filip	Reitzner	Xue		
16 <sup>15</sup>	coffee break	Sansoni	coffee break		
16 <sup>40</sup>			posters		
16 <sup>45</sup>	Dunjko			Walmsley	
17 <sup>35</sup>	Rahimi-Keshari			Polyakov	
18 <sup>00</sup>	Urbina		Omar		
18 <sup>25</sup>			19 <sup>30</sup> conf. dinner		

9:00–9:40 *Registration*

9:40–9:50 *Opening*

Chair: **Y. Shikano**

9:50–10:40 **Luis Velázquez:** From quantum recurrence to topological phases in quantum walks (*invited*)

10:40–11:10 *Coffee break – Registration*

Chair: **E. Segawa**

11:10–12:00 **Paolo Perinotti:** Symmetries of quantum walks on Cayley graphs and the Lorentz group (*invited*)

12:00–12:25 **Armando Pérez:** Simulation of neutrino oscillations in vacuum and matter with quantum walks (*contributed*)

12:25–15:00 *Lunch – Registration*

Chair: **M. Hillery**

15:00–15:25 **Stefano Facchini:** Quantum walking in curved space-time (*contributed*)

15:25–15:50 **Pablo Arnault:** Quantum walks and gauge fields (*contributed*)

15:50–16:15 **Radim Filip:** Conditional simulation of quantum nonlinear dynamics (*contributed*)

16:15–16:45 *Coffee break*

Chair: **J. B. Wang**

16:45–17:35 **Vedran Dunjko:** Quantum projective simulation, quantum walks and quantum machine learning (*invited*)

17:35–18:00 **Saleh Rahimi-Keshari:** Efficient classical simulation of quantum-optics experiments (*contributed*)

18:00–18:25 **Juan-Diego Urbina:** The mesoscopic Hong–Ou–Mandel effect and bosonic birthday paradox (*contributed*)

Chair: **P. Mataloni**

9:00–9:50 **Andrea Alberti**: Quantum walks with neutral atoms in polarization-synthesized optical lattices (*invited*)

9:50–10:15 **Hideaki Obuse**: PT symmetric non-unitary quantum walks (*contributed*)

10:15–10:45 *Coffee break*

Chair: **A. Alberti**

10:45–11:35 **Paolo Mataloni**: Integrated waveguide photonics circuits for quantum simulation and beyond (*invited*)

11:35–12:00 **Xiaogang Qiang**: Efficient quantum walk on a quantum processor (*contributed*)

12:00–12:25 **Jingbo Wang**: Efficient quantum circuits for quantum walks (*contributed*)

12:25–12:40 *Photo session*

12:40–15:00 *Lunch break*

Chair: **R. Werner**

15:00–15:50 **Mark Hillery**: Some quantum walks search problems (*invited*)

15:50–16:15 **Daniel Reitzner**: Decoherence in quantum walk searches (*contributed*)

16:15–16:40 **Linda Sansoni**: Driven quantum dynamics (*contributed*)

16:40–19:00 Poster session (*stand numbers refer to page numbers*)

Chair: **A. Ishizaki**

9:00–9:50 **Tomáš Mančal**: Quantum excitation energy transport in photosynthetic antennae (*invited*)

9:50–10:15 **Sima Baghbanzadeh**: The role of quantum coherence and geometry in the light-harvesting efficiency of purple bacteria (*contributed*)

10:15–10:45 *Coffee break*

Chair: **T. Mančal**

10:45–11:35 **Akihito Ishizaki**: Interplays between quantum effects and dynamic fluctuations in photosynthetic light harvesting (*invited*)

11:35–12:00 **Francesco Petruccione**: Open quantum walks (*contributed*)

12:00–12:25 **Carlo Di Franco**: Quantum mechanics and the efficiency of simulating classical complex systems (*contributed*)

12:25–15:00 *Lunch break*

Chair: **I. Walmsley**

15:00–15:50 **Christine Silberhorn**: Quantum walks in time (*invited*)

15:50–16:15 **Peng Xue**: Experimental implementation of quantum walk on a circle with single photons (*contributed*)

16:15–16:45 *Coffee break*

Chair: **V. Kendon**

16:45–17:35 **Ian Walmsley**: Photonic quantum networks (*invited*)

17:35–18:00 **Sergey Polyakov**: Full characterization measurement of single-photon states in a primitive boson sampler (*contributed*)

18:00–18:25 **Yasser Omar**: Spatial search by quantum walk is optimal for almost all graphs (*contributed*)

19:30–22:30 *Conference dinner*

Chair: **L. Velázquez**

- 9:00–9:50 **Reinhard Werner:** Topological classification of 1D quantum walks with symmetries (*invited*)
- 9:50–10:15 **Christopher Cedzich:** Bulk-Edge — how about finite systems? (*contributed*)
- 10:15–10:40 **Filippo Cardano:** Exploring topological phases in quantum walks of twisted light (*contributed*)
- 10:40–11:10 *Coffee break*
- Chair: **Ch. Silberhorn**
- 11:10–12:00 **Etsuo Segawa:** Sensitivity of a quantum walk to boundary (*invited*)
- 12:00–12:25 **János Asbóth:** The Hofstadter butterfly takes flight in quantum walks (*contributed*)
- 12:25–12:50 **Viv Kendon:** Quantum walks in potential wells (*contributed*)
- 12:50–13:00 *Closing*