

Program

Contributed Talk: 30+10 min

Invited Talk: 60+20 min

Nov. 7 (Mon.)

9:00 – 9:40 Registration

9:40 – 9:50 Opening Remarks by Yutaka Shikano

9:50 – 10:00 Local Information by Armando Perez

1st Session: Chair: Mari Carmen Bañuls

10:00 – 11:00 Frederik W. Strauch (William College) **Invited Talk**

“Quantum Walks in Discrete and Continuous Time”

11:20 – 11:50 Fabrice Debbasch (University Paris 6)

“Discrete time quantum walks: continuous limit and wave propagation”

12:00 – 12:30 Yusuke Ide (Kanagawa University)

“Time averaged distribution of a discrete-time quantum walk on the path”

12:40 – 15:30 Lunch Break

2nd Session: Chair: Ozgur Mustecaplioglu

15:30 – 16:00 Carlo Di Franco (University College Cork)

“Mimicking the probability distribution of a two-dimensional Grover walk with a single-qubit coin”

16:10 – 16:40 Mari Carmen Bañuls (MPQ Garching)

“Analysis of the DTQW using Wigner functions”

16:50 – 17:20 Coffee Break

17:20 – 17:50 Jingbo Wang (University of Western Australia)

“Two-particle quantum walks: Entanglement and graph isomorphism testing”

18:00 – 18:30 Katie Barr (University of Leeds)

“Quantum Finite Automata and Quantum Walks”

18:40 – 19:10 Ramesh Aryal (Liberty Institute of Information Technology)

“TBA”

Nov. 8 (Tue.)

3rd Session: Chair: Jingbo Wang

9:30 – 10:00 Christopher Cedzich (Universitat Hannover)

“Quantum Walks random in space and time”

10:10 – 10:40 Armando Perez (Universidad de Valencia)

“Decoherence in space and long time behavior in Quantum Walks”

10:50 – 11:20 Coffee Break

11:20 – 11:50 Eugenio Roldan (Universidad de Valencia)

“Quantum walks with extended initial conditions in one and two dimensions”

12:00 – 12:30 Volkher Scholz (Universitat Hannover)

“Molecular binding in interacting quantum walks”

12:40 – 15:30 Lunch

15:30 – Free Time & Discussion Time

20:30 – Social dinner

Nov. 9 (Wed.)

4th session: Chair: Armando Perez

9:30 – 10:00 Yutaka Shikano (Tokyo Institute of Technology)

“On the Inhomogeneous Quantum Walk”

10:10 – 10:40 Jonathan Edge (University of Leiden)

“Quantum Hall effect in a one-dimensional dynamical system”

10:50 – 11:20 Coffee Break

11:20 – 12:20 Takuya Kitagawa (Harvard University) **Invited Talk**

“Topological phenomena in quantum walks”

12:40 – 15:30 Lunch

5th session: Chair: Yutaka Shikano

15:30 – 16:00 Etsuo Segawa (University of Tokyo)

“Spectral measure of quantum walks induced by random walks”

16:10 – 16:40 Hideaki Obuse (Forschungszentrum Karlsruhe)

“Topological Phases and Delocalization of Quantum Walks in Random Environments”

16:50 – 17:20 Coffee Break

17:20 – 17:50 Takao Namiki (Hokkaido University)

“Towards a classical limit of DTQW: a sequence of discrete-time quantum walk associated with chaotic dynamics”

18:00 – 18:30 Vaclav Potocek (Czech Technical University)

“Quantum Walks in Optical Delay-Line Interferometers: New Results and Outlook”

Nov. 10 (Thu.)

6th session: Chair: Eugenio Roldan

9:30 – 10:00 Lauri Lehman (Macquarie University)

“Quantum Walks of Non-Abelian Anyons”

10:10 – 10:40 Ozgur Mustecaplioglu (Koc University)

“Discrete Time Quantum Walk in Diamond with Nitrogen-Vacancy Centers”

10:50 – 11:20 Coffee Break

11:20 – 11:50 Paolo Mataloni (Universita di Roma)

“Optical realization of quantum walk on a chip by using entangled photons”

12:00 – 12:30 Robert Matjesch (Universitat Hannover)

“Quantum Walks with Trapped Ions”

12:40 – 12:50 Closing Remarks by Armando Perez

12:50 – 16:00 Lunch

16:00 – 17:00 Organizer Meeting

“Reviewing and deciding the next workshop”