

# Program

## Sunday, May 27, 2018

17:00 – 21:00 Registration

18:30 BUFFET SUPPER / Informal get together

## Monday, May 28, 2018

08:00 BREAKFAST

09:00 – 09:15 Sergey Denisov      **Opening and welcome**  
Eli Barkai  
Tamás Kiss

09:15 – 10:00 Igor Jex      **Perturbed quantum walks**

10:00 – 10:45 Cécile Mailler      **The monkey walk: a random walk with reinforced relocations**

10:45 – 11:00 COFFEE BREAK

11:00 – 11:45 Viv Kendon      **Optimisation using continuous-time quantum walks**

11:45 – 12:30 Ralf Metzler      **Molecular search in gene regulation: facilitated diffusion and the next steps**

12:30 **Conference Photo** (in front of the Physikzentrum, main entrance)

12:40 LUNCH

# Program

**Monday, May 28, 2018**

14:30 – 14:35	Reinhard F. Werner	<b>Colloquium</b>
14:35 – 15:30	Reinhard F. Werner	<b>Walking the Quantum Way</b>
15:30 – 16:00	Christopher Cedzich	<b>Propagation of quantum walks in electric fields</b>
16:00 – 16:30	COFFEE BREAK	
16:30 – 17:15	Francisco Alberto Grünbaum	<b>Is thinkin about classical walks a help or a hindrance when dealing with quantum walks?</b>
17:15 – 17:45	Luis Velázquez	<b>Recurrence splitting rules for random and quantum walks</b>
18:30	DINNER	

# Program

**Tuesday, May 29, 2018**

08:00	BREAKFAST	
09:00 – 09:45	Peng Xue	<b>Observation of topological edge states in parity-time-symmetric quantum walks</b>
09:45 – 10:30	Salvador Elias Venegas-Andraca	<b>Quantum walk-based algorithms, entanglement and quantum annealing</b>
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	Peter Hänggi	<b>Quantum-Thermodynamics: Aspects of quantum work and heat</b>
11:45 – 12:30	Todd A. Brun	<b>Effects of raph symmetry on quantum walks</b>
12:30	LUNCH	
14:30 – 14:45	Sidney Redner	<b>Colloquium</b>
14:45 – 15:30	Sidney Redner	<b>Finding targets the random way</b>
15:30 – 16:00	Carlos Mejia-Monasterio	<b>Search processes in confined geometries</b>
16:00 – 16:15	COFFEE BREAK	
16:15 – 17:00	Sergey Flach	<b>Nonlinear disordered discrete time quantum walks</b>
17:00 – 17:45	Abhishek Dhar	<b>First return problem of a quantum particle with quasi-Zeno dynamics</b>
18:00	DINNER	
19:00 – 21:00	<b>Poster session I</b>	

# Program

Wednesday, May 30, 2018

08:00	BREAKFAST	
09:00 – 09:45	David Kessler	<b>Introduction to first quantum detection problems</b>
09:45 – 10:30	Vasily Zaburdaev	<b>Planar Lévy-walk bridges: an approach to home-range search and foraging</b>
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	Elena Agliari	<b>Search and diffusion of leucocytes on lab-on-chip</b>
11:45 – 12:30	Lorenzo Marrucci	<b>Photonic quantum walks in a single optical beam</b>
12:30	LUNCH	
14:00 – 19:00	<b>Excursion</b> (leisurely hike in the vicinity)	
19:00	HERAEUS DINNER (cold & warm buffet, free beverages)	

# Program

**Thursday, May 31, 2018**

08:00	<i>BREAKFAST</i>	
09:00 – 09:45	Stefan Boettcher	<b>Exploring quantum walks and quantum search algorithms with the renormalization group</b>
09:45 – 10:30	Mikhail Ivanchenko	<b>Quantum jumps on Anderson attractors</b>
10:30 – 10:45	<i>COFFEE BREAK</i>	
10:45 – 11:30	Yoav Lahini	<b>Correlated quantum walks- from photons to ultra-cold atoms</b>
11:30 – 12:00	Denis Grebenkov	<b>Search for a small target in biological cells: the necessity to go beyond mean rates</b>
12:00 – 12:30	Sidney Redner	<b>The Dynamics of Stochastic Foraging</b>
12:30	<i>LUNCH</i>	
13:50 – 14:30	Sonja Barkhofen	<b>Time-Multiplexed Photonic Quantum Walks with a 4-dimensional Coin</b>
14:30 – 15:15	Subinay Dasgupta	<b>Some aspects of the first passage problem in quantum systems</b>
15:15 – 16:00	János Asbóth	<b>Recurrence time in iterated open quantum dynamics</b>
16:00 – 16:15	<i>COFFEE BREAK</i>	
16:15 – 17:00	Gleb Oshanin	<b>Power spectral density of a single trajectory : Quantifying an ensemble by its random elements</b>
17:00 – 17:45	Shlomi Reuveni	<b>First passage under restart</b>
18:00	<i>DINNER</i>	
19:00 – 21:00	<b>Poster session II</b>	

# Program

**Friday, June 1, 2018**

08:00	BREAKFAST	
09:00 – 09:45	Olivier Bénichou	<b>First-passage times of Markovian and non-Markovian random walks</b>
09:45 – 10:30	Andrea Alberti	<b>Discrete-time quantum walks with neutral atoms in optical lattices</b>
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:30	Felix Thiel	<b>The spectral dimension controls the decay of the quantum first detection probability</b>
11:30 – 11:45	Sergey Denisov Eli Barkai Tamás Kiss	<b>Closing remarks and poster awards</b>
12:00 – 13:30	LUNCH	

**End of the seminar and FAREWELL COFFEE / Departure**

Please note that there **will be** dinner at the Physikzentrum on Friday evening for participants leaving the next morning!