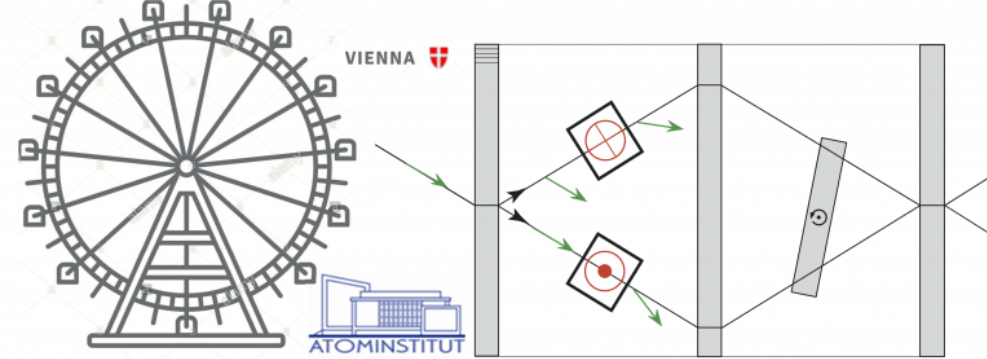




Atominstitut (TU Wien)
 Stadionallee 2, 1020
 Vienna, Austria

2nd Informal Workshop on Matter-Wave Interferometry

Thu May 23th and
 Fri 24th 2019

matter-wave-interferometry.org

Aim of this workshop is to bring together workers in matter-wave interferometry, to discuss new scientific opportunities and prospects for collaborative research on fundamental quantum physics.

Please feel free to contact us for more information
 (stephan.sponar@tuwien.ac.at)

Thursday, May 23th 2019

08:45-09:00	OPENING	
09:00-09:45	Stephan Sponar (ATI)	Measurement Uncertainty Relations studied in Neutron Optics
09:45-10:30	Dmitry Pushin (IQC)	Phase grating based neutron interferometry
10:30-11:00	Coffee	
11:00-11:45	Hartmut Lemmel (ATI)	Simulating a Neutron Interferometer
11:45-12:30	Ben Heacock (NIST)	Precision Structure Factor Measurements Using Pendellosung Interferometry
12:30-13:30	Lunch	
13:30-14:15	Michael Huber (NIST)	Measuring n-4He cross-section to high precision using neutron interferometry
14:15-15:00	Victor-O. de Haan (BP BV)	Gravitation-induced quantum interference for neutrons
15:00-15:30	Coffee	
15:30-16:15	Markus Arndt (U. Vienna)	Matter-wave interferometry with biological nanomatter
16:15-17:00	Stefan Gerlich (U. Vienna)	Long-Baseline Universal Matter-wave interferometry
17:00-17:45		
17:45-19:00	Social Event	<i>Ride on the "Wiener Riesenrad", a famous ferris wheel pls. be there latest 18:00</i>
19:00-22:00	Social Event	<i>"Schweizerhaus" a legendary viennese tavern</i>

Neutron Interferometry

Atom Interferometry

Molecule Interferometry

Friday, May 24th 2019

09:00-09:45	Dennis Schlippert (U. Hannover)	Matter wave interferometry for inertial sensing and tests of fundamental physics
09:45-10:30	Sina Loriani (U. Hannover)	Gravity gradient cancellation in space-borne quantum tests of the universality of free fall
10:30-11:00	Coffee	
11:00-11:45	Fabio Di Pumpo (U. Ulm)	Specular mirrors in atom interferometers
11:45-12:30	Enno Giese (U. Ulm)	The twin paradox in light pulse atom interferometers
12:30-13:30	Lunch	
13:30-14:15	Ben McMorran (U. Oregon)	Phase Contrast Imaging of Materials and Magnetic Fields using Scanning Electron Interferometry
14:15-15:00	Rene Sedmik (ATI)	Gravity Resonance Spectroscopy with Ultracold Neutrons as a Tool to Test Dark Sector Models
15:00-15:45	Kirill Zhernenkov (U. Juelich)	TBA
15:45-16:00	Coffee	
16:00-16:20	Richard Wagner (ATI)	Delayed Choice Quantum Cheshire Cat
16:20-16:40	Niels Geerits (ATI)	Quantum Contextuality in Neutron Spin Echo Interferometry
16:40-17:00	Armin Danner (ATI)	Spin Rotation Coupling
17:00-18:00	Round Table Discussion & Reactor Tour	

Neutron Interferometry

Atom Interferometry

Electron Interferometry

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