

# Mini-workshop on the foundations of quantum mechanics Program

	Mon	Tue	Wed
08:50	Opening		
09:00	O. Gühne	C. Spee	N. Miklin
09:45	J-A. Larsson	A. Cabello	M. Navascues
10:30	N. Friis	A. Garner	F. Giacomini
11:00	Coffee-Break		
11:30	E. Aguilar	I. Kull	P. Höhn
12:00	S. Mansfield	G. Toth	M. Weilenmann
12:45	Lunch		
14:15	R. Uola	M. Kleinmann	Free discussion
15:00	J. Kiukas	M. Müller	
15:45	Coffee-Break		
16:15	Z. Wang	M. Woods	
17:00	End (free discussion)		

## Monday

9:00 – 9:45 O. Gühne **Quantum Steering and the Geometry of the EPR-Argument**

9:45 – 10:30 J.-Å. Larsson **Quantum computation and the additional degrees of freedom in a physical system**

10:30 – 11:00 N. Friis **Non-ideal projective measurements in quantum thermodynamics**

11:30 – 12:00 E. Aguilar **Connections between Mutually Unbiased Bases and Quantum Random Access Codes**

12:00 – 12:45 S. Mansfield **Non-classicality in sequences and causally ordered scenarios**

14:15 – 15:00 R. Uola **Quantifying quantum resources with conic programming**

15:00 – 15:45 J. Kiukas **The formulation of quantum steering in terms of incompatibility breaking channels - some applications**

16:15 – 17:00 Z. Wang **A Marginally Interesting Story of Dominoes and Tiles**

## **Tuesday**

9:00 – 9:45 C. Spee **Temporal correlations can certify the quantum dimension**

9:45 – 10:30 A. Cabello **The physical origin of quantum nonlocality and contextuality**

10:30 – 11:00 A. Garner **Phase, interference and computation beyond quantum theory**

11:30 – 12:00 I. Kull **A Spacetime Area Law Bound on Quantum Correlations**

12:00 – 12:45 G. Tóth **How long does it take to obtain a physical density matrix?**

14:15 – 15:00 M. Kleinmann **Optimal states and methods for verifying bound entanglement**

15:00 – 15:45 M. Müller **Exact operational interpretation of entropy and free energy without the thermodynamic limit**

16:15 – 17:00 M. Woods **Quantum Clocks: from fundamental bounds on their accuracy to applications in quantum information**

## **Wednesday**

9:00 – 9:45 N. Miklin **Semi-device-independent certification of nonprojective measurements**

9:45 – 10:30 M. Navascués **Chunking quantum networks**

10:30 – 11:00 F. Giacomini **Quantum mechanics and the covariance of physical laws in quantum reference frames**

11:30 – 12:00 P. Höhn **From quantum reference systems to quantum general covariance**

12:00 – 12:30 M. Weilenmann **Analysing causal structures in generalised probabilistic theories**