

Session Program

4-12 Jul 2018



7th International Conference on New Frontiers in Physics (ICNFP2018)

Workshop on Quantum Foundations and Quantum Information

Tuesday 10 July

11:00

Workshop on Quantum Foundations and Quantum Information

Session | Location: Room 2

11:00–11:30 Measurement of Nonlocal Observables and Its Applications

Speaker

Dr Xiao-Ye Xu

11:30–12:00

Novel measurement protocols: from Protective Measurements to Robust Weak Measurements

Speaker

Fabrizio Piacentini

12:00–12:30

Towards an ontological theory with weak values

Speaker

Dr Aharon Brodutch

12:30–13:00

Anomalous weak values without post-selection

Speaker

Ralph Silva

13:00

14:30

Workshop on Quantum Foundations and Quantum Information

Session | Location: Room 2

14:30–15:00 Revealing Quantum Statistics with a Pair of Distant Atoms

Speaker

Dr Andrea Alberti

15:00–15:30

Geometric Phase with Decoherence

Speaker

Prof. Yutaka Shikano

15:30–16:00

Superadiabatic stimulated Raman passage via synthetic Aharonov-Bohm phases

Speaker

Dr Gheorghe Sorin Paraoanu

16:00

16:15

Workshop on Quantum Foundations and Quantum Information

Session | Location: Room 2

16:15–16:45 Consequences of time averaging of weak values

Speaker

Prof. Eli Pollak

16:45–17:15

Weak values and weak measurement in elementary scattering and reflectivity - a new effect

Speaker

C Aris Dreismann

17:15-17:45

Deriving classical and quantum mechanics in parallel

Speaker

Dr Daniel Rohrlich

17:45

Wednesday 11 July

11:00

Workshop on Quantum Foundations and Quantum Information

Session | Location: Room 2

11:00–11:30 **Interaction Free Measurements in Electron Microscopy**

Speaker

Prof. Pieter Kruit

11:30–12:00 **Quantum experiments with a Transmission electron microscope**

Speaker

Prof. Vincenzo Grillo

12:00–12:30 **Extremal quantum states**

Speaker

Prof. Sanchez-Soto Luis

12:30–13:00 **Non-paraxial effects in the quantum scattering of wave packets**

Speaker

Dr Dmitry Karlovets

13:00

14:30

Workshop on Quantum Foundations and Quantum Information

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14:30–15:00 **How to Directly Observe Quantum Discord**

Speaker

Prof. Yuval Gefen

15:00–15:30 **Thermodynamics of weakly measured quantum systems**

Speaker

Alessandro Romito

15:30–16:00
Anyonic statistics hidden due to “which path” detection by upstream neutral modes in quantum Hall interferometers

Speaker

Dr Moshe Goldstein

16:00

16:30

Workshop on Quantum Foundations and Quantum Information

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16:30–17:00

Quantum mechanics as a theory of cause and effect: why there is no reality without a corresponding action

Speaker

Prof. Holger F. Hofmann

17:00-17:30

Dynamical interaction at the least decoherence, from local measurement and classical communication

Speaker

Prof. Lajos Diosi

17:30-18:00

Nonlinear interactions in relativistic and quantum physics

Speaker

David Edward Bruschi

18:00-18:30

Scalar field theory regularization scheme using weak values

Speaker

Prof. Alonso Botero

18:30

Thursday 12 July

11:00

Workshop on Quantum Foundations and Quantum Information

Session | Location: Room 2

11:00–11:30 **Multiplicative Bell inequalities**

Speaker

Prof. Avishy Carmi

11:30–12:00 **Stronger Uncertainty and Reverse Uncertainty Relations**

Speaker

Prof. Arun Pati

12:00–12:30 **A fundamental problem in quantizing general relativity**

Speaker

Prof. Lorenzo Maccone

12:30–13:00 **A Different Angle on Quantum Uncertainty**

Speaker

Prof. Ivan Horvath

13:00

14:30

Workshop on Quantum Foundations and Quantum Information

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14:30–15:00

Experimental Tests of Supradegeneracy and the Second Law of Thermodynamics

Speaker

Dr Daniel Sheehan

15:00–15:30 **Complexity in quantum field theory and gravity**

Speaker

Prof. Keun-Young Kim

15:30–16:00

Quantification and unification of quantum macroscopicity, coherence, and nonclassicality.

Speaker

Prof. Hyunseok Jeong

16:00

16:30

Workshop on Quantum Foundations and Quantum Information

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16:30–17:00 **Work drives time evolution**

Speaker

Dr David Edward Bruschi

17:00–17:30 **TBA**

	Speaker Dr Cai Waegell
18:00	17:30–18:00 Topological entanglement and knots
	Speaker Sergey Mironov
16:30	Workshop on Quantum Foundations and Quantum Information Session Location: Room 4
	17:00–17:30 Is there physics underling the relativistic quantum mechanics?
	Speaker Dr Mohammed Sanduk
	17:30–18:00 Heisenberg-limited measurement of single photon Kerr nonlinearity
18:00	Speaker Dr Geng Chen