



9th VIENNA CENTRAL EUROPEAN SEMINAR
ON PARTICLE PHYSICS AND QUANTUM FIELD THEORY

November 30 - December 02, 2012

DARK MATTER, DARK ENERGY, BLACK HOLES

AND

QUANTUM ASPECTS OF THE UNIVERSE

PROGRAM

Lecture Hall: "Christian-Doppler-Hörsaal"

Faculty of Physics, University of Vienna

Strudlhofgasse 4, 3rd floor, 1090 Vienna

Supported by:

The Austrian Federal Ministry of Science and Research

The Faculty of Physics, University of Vienna

FWF Doctoral Program: Complex Quantum Systems (CoQuS)

COST Action MP1006, Fundamental Problems in Quantum Theory

The Erwin Schrödinger International Institute of Mathematical Physics

The Vienna University of Technology

The Institute of High Energy Physics of the Austrian Academy of Sciences

The Vienna Convention Bureau

Nov. 30, 2012, Friday

09:00 - 09:10	<i>Helmuth Hüffel</i> (Vienna)	Opening Address
09:10 - 09:55	<i>Paolo Natoli</i> (Ferrara)	Cosmology with Planck
10:00 - 10:45	<i>Jochen Weller</i> (Munich)	Constraining Cosmic Acceleration
10:50 - 11:20		COFFEE
11:20 - 11:40	<i>Dominik Schwarz</i> (Bielefeld)	Newtonian versus Relativistic Cosmology
11:45 - 12:30	<i>Josef Pradler</i> (Johns Hopkins University)	Rare events underground: Dark Matter interpretation and new physics opportunities
12:35 - 12:55	<i>Katarina Markovic</i> (Munich)	Cosmological Structure of Warm Dark Matter
13:00 - 14:15		LUNCH
14:15 - 15:05	<i>Andrea Campoleoni</i> (Potsdam)	Higher-spin gravity
15:10 - 15:30	<i>Andrea Puhm</i> (Gif-sur-Yvette)	Unitarity, information, black holes and fuzzballs
15:35 - 15:55	<i>Michael Gary</i> (Vienna)	Holography and the Gravitational S-Matrix
16:00 - 16:20		COFFEE
16:20 - 16:40	<i>Brian Dolan</i> (Maynooth)	Black holes and the van der Waals equation of state
16:45 - 17:05	<i>Enikő Regős</i> (Budapest)	Dark Energy Time Variation and Progenitor Evolution from CLASH HST Supernovae Ia

Before the Public Lecture of Sir Roger Penrose there is the possibility to join the Lise Meitner Lecture given by Renate Loll:

17:15 - 18:30 *	<i>Renate Loll</i> (Utrecht)	LISE MEITNER LECTURE: Mysterious Quantum Spacetime: Why 3+1 sometimes equals 2
18:30 - 19:00		REFRESHMENTS
19:00 - 20:00 *	<i>Roger Penrose</i> (Oxford)	PUBLIC LECTURE: Dark Energy, Dark Matter, and Black Holes, as Essential Ingredients of a New Cyclic Theory of the Universe

* These lectures take place at the Lise Meitner Lecture Hall, 1st floor

Dez. 01, 2012, Saturday

09:00 - 09:45	<i>Seth Lloyd</i> (MIT)	The quantum geometric limit
09:50 - 10:35	<i>Ivete Fuentes</i> (Nottingham)	Moving cavities and detectors for relativistic quantum information processing
10:40 - 11:10		COFFEE
11:10 - 11:30	<i>Tim Langen</i> (Vienna)	Relaxation and Prethermalization in an Isolated Quantum System
11:35 - 11:55	<i>Nicolai Friis</i> (Nottingham)	Entanglement Generation in Relativistic Quantum Fields
12:00 - 12:45	<i>Margaret Reid</i> (Melbourne)	Quantum mechanics versus local reality: fields and atoms
12:50 - 14:15		LUNCH
14:15 - 15:00	<i>Beatrix C. Hiesmayr</i> (Brno)	Testing Foundational Issues of Quantum Mechanics at Accelerator Facilities
15:05 - 15:50	<i>Antonio Di Domenico</i> (Rome)	Hunting for CPT symmetry and Quantum Mechanics violations in neutral meson systems
15:55 - 16:25		COFFEE
16:25 - 16:45	<i>Alfredo Iorio</i> (Praha)	Probing fundamental physics on graphene: Weyl symmetry, Beltrami pseudosphere, and the Hawking effect
16:50 - 17:35	<i>Nick E. Mavromatos</i> (London)	CPT in the Early Universe and the Observed Baryon Asymmetry
17:40 - 18:30	<i>Hartmut Abele</i> (Vienna)	Spectroscopy of Gravity

18:30- 19:00		POSTER SESSION
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19:00 - ... **RECEPTION**

Dez. 02, 2012, Sunday

09:00 - 09:45	<i>Abhay Ashtekar</i> (Penn State)	Quantum Gravity and the Very Early Universe
09:50 - 10:35	<i>Timothy Clifton</i> (London)	Does Dark Energy Exist?
10:40 - 11:10		COFFEE
11:10 - 11:30	<i>Dijana Tolic</i> (Zagreb)	Trapped surfaces in a hadronic fluid
11:35 - 11:55	<i>Silvije Domazet</i> (Zagreb)	Renormalization group scale-setting in astrophysical systems
12:00 - 12:20	<i>Adriano Contillo</i> (Mainz)	Primordial perturbation spectra in Renormalisation Group driven cosmology
12:25 - 12:30	<i>H. Hüffel</i> (Vienna)	Closing Remarks