

Programme of the Workshop „ Quantum Mechanics Tests in Particle, Atomic, Nuclear and Complex Systems: 50 years after Bell’s renowned theorem “

Monday (24.02.2014)		Tuesday (25.11.2014)	
	Chairperson: Hiesmayr		Chairperson: Sciarrino
9:00-9:30	Opening (by B.C. Hiesmayr, W.Weise [director of ECT*])	Revealing bound entanglement of twisted photons and 4-photon transverse-mode entanglement (speaker: Löffler)	
9:30-10:00	VIP2 - New precision tests of the Pauli Exclusion Principle for Electrons (speaker: Marton)	Testing Quantum Mechanics with Superconducting Artificial Atoms (speaker: Filipp)	
10:00-10:30	Entanglement on a cosmological scale (speaker: Vaccaro)	Crucial tests of macrorealist and semi-classical gravity models with freely falling mesoscopic microspheres (speaker: Durt)	
10:30-11:15	Coffee break	Coffee break	
	Chairperson: Löffler		Chairperson: Millotti
11:15-11:45	From the Vonnegut’s chrono-synclastic infundibulum to the collapse of the wave function (speaker: Curceanu)	Testing fundamental principles of quantum mechanics (speaker: Sciarrino)	
11:45-12:15	Testing fundamental physical principles with entangled neutral K mesons (speaker: Di Domenico)	Universal decoherence due to gravitational time dilation (speaker: Pikovski)	
12:15-12:45	Why and how collapse models affect the radiative properties of matter (speaker: Bassi)	Photosynthesis exploits quantum coherence for efficient Solar energy conversion (speaker: Romero)	
12:45-14:30	Lunch Break	Lunch Break	
	Chairperson: Ghirardi		Chairperson: Ulbricht
14:30-15:00	Does coherent quantum dynamics guide the charge separation in organic solar cells? (speaker: Burghardt)	Testing the quantum superposition principle in the frequency domain (speaker: Bahrami)	
15:00-15:30	The Schrödinger-Newton equation as a model for self-gravitating quantum systems (speaker: Großardt)	Positronium: a laboratory for testing quantum mechanics and a tool for medical imaging (speaker: Moskal)	
15:30-16:15	Coffee Break	Coffee Break	
16:15-17:05	My Magic Moments With John St. Bell (speaker: R. A. Bertlmann)	Moderator: Buchleitner	
18:30--	Welcome Dinner at ECT* at 18:30	Discussion Panel: “What role does superposition/entanglement play in our universe?” A. Bassi, T. Brandes, I. Burghardt, G. C. Ghirardi, U. Henrik & J. Vaccaro	
		Dinner at La Baracca at 19:00	

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	Wednesday (26.02.2014)	Thursday (27.11.2014)
	Chairperson: Kupsc	Chairperson: Illuminati
9:00-9:30	An experimental approach to the nature of time in quantum mechanics (speaker: Genovese)	Revealing entanglement in high-dimensional systems (speaker: Huber)
9:30-10:00	Recent DAMA/LIBRA results and the perspectives (speaker: Bernabei)	Matter-wave interferometry with gratings made of light (speaker: Haslinger)
10:00-10:30	Testing Macroscopic Quantum Superposition (speaker: Ulbricht)	Analyzing Genuine Multipartite Entanglement in Condensed Matter Systems (speaker: Giampaolo)
10:30-11:15	Coffee break	Coffee break
	Chairperson: Bertlmann	Chairperson: Burghardt
11:15-11:45	Searches for a dark photon (speaker: Kupsc)	Towards validating entanglement in radical pair systems (speaker: Tiersch)
11:45-12:15	Einsteins 1935 Papers (speaker: Krizek)	General Quantum Correlations in Critical Spin Systems (speaker: Campbell)
12:15-12:45	Recollections of John St. Bell (speaker: G. C. Ghirardi+20 minutes)	Using photon-photon scattering to investigate the nature of quantum vacuum (speaker: Millotti)
12:45-14:30	Lunch Break	Lunch Break
	Free afternoon!	Chairperson: Haslinger
14:30-15:00		Flavour oscillations (mesons, neutrinos) in collapse models (speaker: Donaldi)
15:00-15:30		Maxwell's demon in a quantum system (speaker: Brandes)
15:30-16:15		Coffee Break
		Chairperson: DiDomenico
16:15-16:45		Entanglement, bosons and fermions (speaker: Tichy)
16:55-17:15	Probing the dynamics of open quantum systems with elastic scattering of halo nuclei (speaker: Diaz-Torres)	
	Dinner at Hotel America at 20:00!	Social Dinner at Orso Grigio at 20:00!

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	Friday (28.02.2014)	
	Chairperson: Pikovski	
9:00-9:30	Particles of light: Thermodynamics and Bose-Einstein condensation of light in a photon box (speaker: Weitz)	
9:30-10:00	Frustration, entanglement, topology: physics of complex quantum matter (speaker: Illuminati)	
10:00-10:30	On the robustness of entanglement in analogue gravity systems (speaker: Friis)	
10:30-11:15	Coffee break	
	Chairperson: Buchleitner	
11:15-11:45	Spectroscopic signatures of vibronic coherence in artificial dimers: evidence for quantum energy transfer? (speaker: Collini)	
11:45-12:15	Quantum transport in macromolecules: an effective field theory approach (speaker: Schneider)	
12:15-12:45		
12:45-14:30	Lunch Break/The END	
Dinner at La Baracca at 19:00		