

**Pécs Workshop**  
**on**  
**Quantum Information and Quantum Optics**

**May 28-30, 2012**

**Pécs, Hungary**

**Final Program**

**Happy Birthday Mark!**



## Monday, May 28

### Session One: 8:30–10:00

Presider: Anton Zeilinger

Time	No.	Title	Author
8.30 - 8.45	1	Welcoming address	József Bódis, Rector University of Pécs
8.45 - 9.30	2	Quantum algorithms for function testing	Mark Hillery
9.30 - 10.00	3	On the origin of (statistical) temperature in quantum Universe	Vladimir Buzek
10.00 - 10.30	4	Sequential quantum measurements	János Bergou
Coffee			

### Session Two: 11:00–12:30

Presider: Mark Hillery

Time	No.	Title	Author
11.00 - 11.30	5	Interference effects in intense-laser--atom interaction processes	Wilhelm Becker
11.30 - 12.00	6	Quantum communications with highly entangled photons	Steve Barnett
12.00 - 12.30	7	Strategies for optimum state discrimination and their mutual relations	Ulrike Herzog
Lunch			

### Session Three: 14:00–15:30

Presider: Gerd Leuchs

Time	No.	Title	Author
14.00 - 14.30	8	The rich world of few qubit dynamics: chaos via measurements in the entanglement	Tamás Kiss
14.30 - 15.00	9	Quantum walks: theory and experiment	Igor Jex
15.00 - 15.30	10	Quantum compatibility: when two measurements come from one	Daniel Reitzner
Coffee			

### Session Four: 16:00–17:30

Presider: Vladimir Buzek

Time	No.	Title	Author
16.00 - 16.30	11	Quantum cost for sending entanglement	Dagmar Bruß
16.30 - 17.00	12	The quantum vacuum as the foundation of quantum optics: Maxwell's equations and a sum rule for elementary particles	Gerd Leuchs
17.00 - 17.30	13	Accessible nonlinear witnesses	Norbert Lütkenhaus
	14		
18.00 -	Conference dinner		

## Tuesday, May 29

### Session Five: 8:30–10:00

**Prsider: Barry Sanders**

Time	No.	Title	Author
8.30 - 9.00	15	The Hamiltonian for Quantum Nonlinear Optics	Leonard Mlodinow
9.00 - 9.30	16	Dual-symmetric quantization of dielectric, magnetic and meta-media	Peter Drummond
9.30 - 10.00	17	Critical exponent of a quantum noise driven phase transition: the open system Dicke-model	Péter Domokos
10.00 - 10.30	18	Quantum-ensured comparative voting and anonymous broadcast channels	Ho Trung Dung
<b>Coffee</b>			

### Session Six: 11:00–12:30

**Prsider: Luiz Davidovich**

Time	No.	Title	Author
11.00 - 11.30	19	Wavefront entanglement of photons	Anton Zeilinger
11.30 - 12.00	20	Relativistic Effects in Atom and Neutron Interferometry, and the Differences Between Them	Daniel Greenberger
12.00 - 12.30	21	State estimation	Berge Englert
<b>Lunch</b>			

### Session Seven: 14:00–15:30

**Prsider: Wilhelm Becker**

Time	No.	Title	Author
14.00 - 14.30	22	Universal Quantum Simulation for Fun & Profit	Barry Sanders
14.30 - 15.00	23	Quantumness Witnesses	Saverio Pascazio
15.00 - 15.30	24	Posters*	
<b>Coffee</b>			

### Session Eight: 16:00–17:30

**Prsider: Steve Barnett**

Time	No.	Title	Author
16.00 - 16.30	25	Quantum Nonlocality and Gaussian Smoothing of the Wigner Distribution Function	Hai-Wong Lee
16.30 - 17.00	26	Entanglement in scattering and rescattering	Mihály Benedict
17.00 - 17.30	27	Experimental Demonstration of Quantum Digital Signatures	John Jeffers
<b>Banquet</b>			

### Wednesday, May 30

#### Session Nine: 8:30–10:00

Presider: Berge Englert

Time	No.	Title	Author
8:30-9:00	28	Transition from antibunching to bunching of photons emitted by spontaneously decaying surface plasmons	Sándor Varró
9.30 - 10.00	29	Parallelization and factorization theorems in Quantum Metrology	Giulio Chiribella
10.00 - 10.30	30	Tests of nonlocality and realism with BEC	Margaret Reid
10:30-11:00	<b>Coffee</b>		

#### Session Ten: 11:00–12:30

Presider: János Bergou

Time	No.	Title	Author
11.00 - 11.30	31	Quantum metrology and decoherence	Luiz Davidovich
11.30 - 12.00	32	Improving estimation and discrimination by abstention	Emili Bagan
12.00 - 12.30	33	Weak randomness and quantum encryption	Jan Bouda
12.30 - 12.35	34	Farewell address	
12:35 -14:00	<b>Lunch</b>		
<b>Departure</b>			

Poster Session: Posters will be exhibited throughout the meeting

No.	Title	Author
1	Programmed quantum discrimination of qbits with added classical information	Andrew J.T. Colin
2	Amplification by state comparison	Electra Eleftheriadou
3	Helicity & Spin	Robert Cameron



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