



SCHEDULE

Monday, 18 May 2015

Großer Festsaal, 1st floor, University of Vienna, Universitätsring 1, 1010 Vienna

08:45 – 09:00	Opening ceremony
09:00 – 09:45	David Wineland (NIST) Exploring quantum with trapped ions
09:45 – 10:30	Wojciech Zurek (Los Alamos National Laboratories) Quantum Theory of the Classical: Decoherence, Quantum Darwinism, and Objective Reality
10:30 – 11:00	<i>Coffee break</i>
11:00 – 11:45	Nicolas Gisin (University of Geneva) Spins, Magnets, PR-boxes and Weak Measurements
11:45 – 12:30	Philippe Grangier (Institut d'Optique / CNRS) Contexts, Systems and Modalities: a new ontology for quantum mechanics
12:30 – 14:30	<i>Lunch break & posters session I</i>
14:30 – 15:15	Rudolf Grimm (University of Innsbruck & IQOQI Innsbruck) Atom interferometry in a Fermi sea
15:15 – 16:00	Artur Ekert (Oxford University) The ultimate physical limits of privacy for the paranoid ones
16:00 – 16:30	<i>Coffee break</i>
16:30 – 19:30	Lab tours & individual excursions

Tuesday, 19 May 2015

Großer Festsaal, 1st floor, University of Vienna, Universitätsring 1, 1010 Vienna

09:00 – 09:45	Alain Aspect (Institut d'Optique Graduate School) An atomic Hong-Ou-Mandel experiment
09:45 – 10:30	Ian Walmsley (Oxford University) A la recherche du clair perdu: quantum memories for the real world
10:30 – 11:00	<i>Coffee break</i>
11:00 – 11:45	Mikhail Lukin (Harvard University) New interface between quantum optics and nanoscience
11:45 – 12:30	Rainer Blatt (University of Innsbruck & IQOQI Innsbruck) Quantum Information Science with Trapped Ca ⁺ Ions
12:30 – 14:30	<i>Lunch break & posters session II</i>
14:30 – 14:50	Andrew White (University of Queensland) Going down drains into blind alleys: from reality to causality in the quantum world
14:50 – 15:10	Samuel Werner (NIST) Neutron Interferometry beyond Newton
15:10 – 15:25	Lauriane Chomaz (University of Innsbruck & IQOQI Innsbruck) Dipolar quantum physics with strongly magnetic atoms
15:25 – 15:40	Magdalena Zych (University of Queensland) Bell Inequalities for Temporal Order of Events
15:40 – 15:55	Ana Predojevic (University of Innsbruck) Quantum effects from quantum dots embedded in photonic nanowires
15:55 – 16:30	<i>Coffee break</i>
16:30 – 16:45	Daqing Wang (MPI for the Science of Light, Erlangen) A sub- λ^3 -volume cantilever-based Fabry-Pérot resonator for cavity-QED studies
16:45 – 17:00	Georg Heinze (ICFO) Controlled rephasing of single collective spin excitations in a cold atomic ensemble for temporally multiplexed quantum memories
17:00 – 17:15	Kathrin Buczak (VCQ & ATI, TU Vienna) Creation and charge state dynamics of NV centres for quantum applications
17:15 – 17:30	Philipp Haslinger (UC Berkeley) Atom-interferometry constrains on dark energy theories

Boltzmann Lecture 2015 – Public Talk

Auditorium Maximum, lower ground floor, University of Vienna, Universitätsring 1,

19:30 – 20:30	<i>Reception in the arcades</i>
20:30 – 21:30	Stefan W. Hell (MPI for Biophysical Chemistry, Göttingen & German Cancer Research Center) Optical microscopy: the resolution revolution

Wednesday, 20 May 2015

Großer Festsaal, 1st floor, Austrian Academy of Sciences (ÖAW),
Dr. Ignaz Seipel-Platz 2, 1010 Vienna

09:00 – 09:45	Serge Haroche (College de France, Paris) Dipole-dipole interactions in a cold Rydberg atom gas explored by microwave spectroscopy
09:45 – 10:15	Markus Arndt (VCQ & University of Vienna) From Quantum Soccer to Matter-wave physics with Biomolecules and tailored Nanoparticles
10:15 – 10:45	<i>Coffee break</i>
10:45 – 11:15	Alipasha Vaziri (Institute for Molecular Pathology & University of Vienna) Towards a dynamic map of neuronal circuits
11:15 – 11:45	Thomas Jennewein (University of Waterloo) Testing quantum correlations of three entangled photons generated in cascaded parametric down-conversion
11:45 – 14:00	<i>Lunch break & group photo</i>
14:00 – 14:45	Peter Zoller (University of Innsbruck & IQOQI Innsbruck) Quantum Optics of Chiral Networks with Atoms, Photons and Spins
14:45 – 15:30	Charles Bennett (IBM Research Division, New York) Boltzmann's Brain and Wigner's Friend
15:30 – 16:00	<i>Coffee break</i>
16:00 – 16:45	Issachar Unna (Hebrew University of Jerusalem) Einstein's Confrontation With Quantum Mechanics (1922-1927)
16:45 – 17:30	Helmut Rauch (ATI, Vienna University of Technology) Anton: his time as neutron scientist

Conference dinner

Festsäle, 1st floor, University of Vienna, Universitätsring 1, 1010 Vienna

19:30 – 23:00	Welcome After-Dinner speech by Daniel Greenberger (The City College of New York) Speakers' Corner
---------------	--

Thursday, 21 May 2015

Großer Festsaal, 1st floor, University of Vienna, Universitätsring 1, 1010 Vienna

09:00 – 09:25	Markus Aspelmeyer (VCQ & University of Vienna) New Frontiers in Quantum Optomechanics: from levitation to gravitational quantum physics
09:25 – 9:50	Stefan Bernet (Medical University of Innsbruck) Light field control with "thick" spatial light modulators and diffractive optical elements
9:50 – 10:15	Gregor Weihs (University of Innsbruck) Photon Sources and the Foundations of Quantum Mechanics
10:15 – 10:40	Markus Oberthaler (KIP Heidelberg University) Entanglement in mesoscopic atomic systems
10:40 – 11:10	<i>Coffee break</i>
11:10 – 11:35	Hermann Batelaan (University of Nebraska-Lincoln) Controlled double slit electron diffraction
11:35 – 12:00	Philip Walther (VCQ & University of Vienna) Photonic Quantum Computation and Quantum Simulation
12:00 – 12:25	Jörg Schmiedmayer (VCQ & ATI & TU Vienna) Does an isolated many body quantum system relax?
12:25 – 12:50	Gabriel Molina-Terriza (Macquarie University) Controlling the interaction of photons with nanostructures
12:50 – 14:30	<i>Lunch break on individual basis at near-by restaurants</i>
14:30 – 14:55	Johannes Kofler (MPI of Quantum Optics, Garching) Requirements for a loophole-free Bell test using imperfect setting generators
14:55 – 15:20	Kaoru Sanaka (Tokyo University of Science) Photon-photon interaction with linear optics and semiconductor devices
15:20 – 15:45	Rupert Ursin (VCQ & IQOQI Vienna) Experiments with quantum entanglement in space
15:45 – 16:10	Christoph Simon (University of Calgary) Towards global entanglement
16:10 – 16:40	<i>Coffee break</i>
16:40 – 17:05	Nathan Langford (QuTech & Kavli Inst. of Nanoscience, TU Delft) Digital quantum simulation of the ultrastrongly coupled Rabi model in a circuit QED system
17:05 – 17:30	Simon Gröblacher (Delft University of Technology) Quantum experiments: from small to large
17:30 – 17:55	Anthony Klein (University of Melbourne) Some early experiments in neutron optics presented in honour of Anton Zeilinger
17:55 – 18:20	Julian Voss-Andreae (Portland, Oregon) Sculptures inspired by Physics, Proteins, and People

Friday, 22 May 2015

Großer Festsaal, 1st floor, University of Vienna, Universitätsring 1, 1010 Vienna

09:00 – 09:25	Paul Kwiat (University of Illinois) Superdense Teleportation Using Hyperentangled Photons
09:25 – 9:50	Terry Rudolph (Imperial College London) How Einstein and/or Schroedinger should have discovered Bell's Theorem in 1936
9:50 – 10:15	Dirk Bouwmeester (University of Leiden) Knots of light, gravitational radiation, and plasma
10:15 – 10:40	Ernst Rasel (Leibniz University Hannover) Quantum Gravimetry
10:40 – 11:10	<i>Coffee break</i>
11:10 – 11:35	Daniel Greenberger (The City College of New York) To be announced
11:35 – 12:00	Marek Zukowski (University of Gdansk) Swapping Entanglement with Quanton
12:00 – 12:25	Caslav Brukner (VCQ & University of Vienna & IQOQI Vienna) Reconstructions of quantum theory - pros and contras
12:25 – 12:50	Harald Weinfurter (LMU Munich) Verschränkt - not only entangled
12:50 – 13:20	Anton Zeilinger (VCQ & University of Vienna & ÖAW)

SPONSORS OF QUPON 2015

