

Conference program

(INV) - invited talk (25 + 5 minutes)
(HT) - hot topics talk (12 + 3 minutes)

Sunday, June 26

Hall: Alfa

15:00-19:00 Registration "Radisson Blu hotel Lietuva" conference center

16:30-18:30 Walking city tour (meeting point "Radisson Blu hotel Lietuva" lobby)

Monday, June 27

Hall: Alfa

8:00-9:00 Registration and welcome coffee

9:00-9:15 Welcome greetings (Hall Alfa)

Plenary Lecture 1 Chair: Joachim Burgdörfer

Hall: Alfa

9:15-10:00 Light driven ionization processes
... and the role of the photon's momentum
Reinhard Dörner [VIDEO](#)
Germany
(Plen-1)

10:00-10:30 Coffee break

Parallel session (A1) Chair: Reinhard Dörner

Hall: Alfa

Invited speakers:

10:30-11:00 First instants following XUV photoionization: attosecond
and femtosecond dynamics in molecules, from carbon
structures to proteins
Franck Lépine [VIDEO](#)
France(A1-1-INV)

11:00-11:30 Ultrafast spectroscopy of bio-chromophores with
few-femtosecond UV pulses
Rocío Borrego Varillas [VIDEO](#)
Italy(A1-2-INV)

11:30-12:00 All-XUV-Optical Nonlinear Absorption Spectroscopy with
Free-Electron Lasers
Christian Ott [VIDEO](#)
Germany(A1-3-INV)

12:00-12:30 Attosecond science at the Linac Coherent Light Source:
recent developments and future directions
Agostino Marinelli, USA
(A1-4-INV)

Parallel session (B1) Chair: Károly Tókési

Hall: Beta

Invited speakers:

10:30-11:00 Highly charged ions interacting with 2D materials
Marika Schleberger,
Germany (B1-1-INV)

11:00-11:30 Interaction of trapped atoms with twisted light
Andrey Surzhykov [VIDEO](#)
Germany
(B1-2-INV)

11:30-12:00	Probing charge-transfer neutralization reactions of atmospheric importance using the ion storage facility DESIREE	Richard Thomas VIDEO Sweden(B1-3-INV)
12:00-12:30	Experimental Studies of Nonperturbative Dynamics in Heavy-Ion-Atom Collisions	Pierre-Michel Hillenbrand VIDEO Germany (B1-4-INV)
12:30-14:15 Lunch break		
Plenary Lecture 2 Chair: Rosario González-Férez Hall: Alfa		
14:15-15:00	Quantum gases of ultracold polar molecules	Silke Ospelkaus-Schwarzer, Germany (Plen-2)
15:00-15:30 Coffee break		
Parallel session (A2) Chair: Silke Ospelkaus-Schwarzer Hall: Alfa		
Invited speakers:		
15:30-16:00	Ultracold RbCs Molecules: Robust Storage Qubits and Rotationally Magic Traps	Simon L. Cornish VIDEO UK(A2-1-INV)
16:00-16:30	Self-Pinning Transition of a Tonks-Girardeau Gas in a Bose-Einstein Condensate	Thomas Busch Japan (A2-2-INV)
16:30-17:00	TBA	Cristiane Morais-Smith, The Netherlands (A2-3-INV)
Hot topics:		
17:00-17:15	A Weakly-Interacting Many-Body System of Rydberg Polaritons based on Electromagnetically Induced Transparency	Ite A. Yu, Taiwan (A2-1-HT)
17:15-17:30	Response of Small Helium Clusters to Strong Laser Fields	Maksim Kunitski, Germany (A2-2-HT)
Parallel session (B2) Chair: Darius Abramavičius Hall: Beta		
Invited speakers:		
15:30-16:00	Absolute Measurement of a THz Transition Frequency Referenced to a Magnetic Dipolar Transition in Ca ⁺ ion	Caroline Champenois, France (B2-1-INV)
16:00-16:30	Extending coherent multidimensional spectroscopy to new target systems and new light sources	Lukas Bruder VIDEO Germany(B2-2-INV)
16:30-17:00	Terahertz Frequency	Luigi Consolino VIDEO Italy(B2-3-INV)
Hot topics:		
17:00-17:15	Quantitative Study of Enantiomer-Specific State Transfer	Johannes Bischoff VIDEO German (B2-1-HT)
17:15-17:30	K-LL Auger Decay of Doubly Excited States of Argon	Matjaz Žitnik VIDEO Slovenia (B2-2-HT)
17:30-19:15 Poster session 1 and coffee break		
19:15-21:30 Welcome Party		

Tuesday, June 28

Hall: Alfa

8:00-9:00 Registration and welcome coffee

Plenary Lecture 3 Chair: Gediminas Juzeliūnas

Hall: Alfa

9:00-9:45 Attoscience and Quantum Information Maciej Lewenstein [VIDEO](#)
Spain(Plen-3)

9:45-10:15 Coffee break

Parallel session (A3) Chair: Wen-Te Liao

Hall: Alfa

Invited speakers:

10:15-10:45 Molecular polaritonics and subwavelength cavity QED Johannes Feist [VIDEO](#)
Spain(A3-1-INV)

10:45-11:15 New Perspectives on Quantum Geometry, Superconductivity and Bose-Einstein Condensation Päivi Törmä [VIDEO](#)
Finland(A3-2-INV)

11:15-11:45 Quantum light-induced nonadiabaticity in molecular systems Agnes Vibok [VIDEO](#)
Hungary(A3-3-INV)

11:45-12:15 A fresh perspective on the Casimir effect Almut Beige [VIDEO](#)
United Kingdom(A3-4-INV)

Parallel session (B3) Chair: Marika Schleberger

Hall: Beta

Invited speakers:

10:15-10:45 Spectroscopy of helium-tagged molecular ions Elisabeth Gruber, Austria
(B3-1-INV)

10:45-11:15 Environmental Effects on Electron Attachment Jaroslav Kočíšek [VIDEO](#)
Czech Republic
(B3-2-INV)

11:15-11:45 Charge migration in betaine by impact of fast atomic ions Patrick Rousseau [VIDEO](#)
France(B3-3-INV)

11:45-12:15 Ultrafast Processes in Amino-Acids, Amino-Acids Derivatives and Clusters of Amino-Acids Induced by Ionizing Radiation Sergio Diaz-Tendero [VIDEO](#)
Spain(B3-4-INV)

12:15-14:00 Lunch break

Plenary Lecture 4 Chair: Daniela Rupp

Hall: Alfa

14:00-14:45 Probing Nuclear Dynamics with Electron Scattering Juraj Fedor [VIDEO](#)
Czech Republic
(Plen-4)

14:45-15:15 Coffee break

Parallel session (A4) Chair: Agnes Vibok

Hall: Alfa

Invited speakers:

15:15-15:45	High Resolution Resonant Auger Spectroscopy of Ultrafast-decaying. Core-ionized Atoms	Tommaso Mazza, Germany (A4-1-INV)
15:45-16:15	Attosecond Science at the FERMI Free Electron Laser	Carlo Callegari, Italy (A4-2-INV)
16:15-16:45	Two-Color X-Ray Pump-Probe Spectroscopy at SwissFEL	Kirsten Andrea Schnorr, Switzerland (A4-3-INV)

Hot topics:

16:45-17:00	Anisotropic dynamics of two-photon ionization: real time imaging of photoemission	J�r�mie Caillat VIDEO France (A4-1-HT)
17:00-17:15	Rabi Dynamics Driven by a Seeded FEL at XUV-wavelengths	Mattias Bertolino VIDEO Sweden (A4-2-HT)

Parallel session (B4) Chair: Krzysztof Sacha
Hall: Beta

Hot topics:

15:15-15:30	Wave-packet dynamic in a SU(2) non-Abelian Gauge field	Wilkowski David VIDEO Singapore (B4-1-HT)
15:30-15:45	Quantum fluids of light in hot atomic vapors	Tangui Aladjidi VIDEO France(B4-2-HT)
15:45-16:00	Manifestation of relative phases in collision of BoseBose droplets	Mariusz Gajda VIDEO Poland(B4-3-HT)
16:00-16:15	Precision Measurements and Pauli Blocking with Quantum Degenerate Metastable 3He	Yuri van der Werf VIDEO The Netherlands (B4-4-HT)

Invited speakers

16:15-16:45	Non-equilibrium state preparation in driven-dissipative atomic quantum gases	Andr� Eckardt VIDEO Germany (B4-1-INV)
16:45-17:15	Synthetic Gauge Fields with Ultracold Atoms	Monika Aidelsburger, VIDEO Germany (B4-2-INV)

17:10-19:00 Poster session 2 and coffee break

Public lecture Chair: Gediminas Juzeli nas
Hall: Alfa

19:15	Time, Einstein and the coolest stuff in the universe	William Phillips, USA (Pub-Lect-1) Cancelled lecture
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Wednesday, June 29

8:00-9:00 Registration and welcome coffee

Plenary Lecture 5 Chair: Francesco Saverio Cataliotti Cataliotti
Hall: Alfa

9:00-9:45 Dynamically symmetry breaking in a bipartate optical lattice Ian B. Spielman [VIDEO](#)
USA(Plen-5)

9:45-10:35 **CONFERENCE PHOTO**
Coffee break

Young Scientist Prize Lecture Chairs: Maciej Lewenstein, Joachim Burgdörfer
Hall: Alfa

10:35-11:30 Young Scientist Prize Award Ceremony and Lecture by Jordi Tura i Brugués, The Netherlands
Jordi Tura i Brugués " Detecting Bell correlations in quantum many-body systems" (Plen-6) [VIDEO](#)

11:30-12:05 AMOPD General Assembly

12:05-12:45 EGAS General Assembly

12:45-14:00 Lunch

14:00 Option 1: Tour to Trakai Castle;
Option 2: Visit to Laser company "Light conversion"
and Labs of Dept. Phys. of Vilnius university;
Meeting point: Radisson Blu hotel lobby (1st floor)

19:30 Conference dinner
19:15 Busses will leave Radisson BLU hotel, meeting point hotel lobby (1st floor)

Thursday, June 30

8:00-9:00 Registration and welcome coffee

Plenary Lecture 7 Chair: H el ene Perrin
Hall: Alfa

9:00-9:45 Spatiotemporal Control of Brain Function Using Holographic Valentina Emiliani [VIDEO](#)
France (Plen-7)

9:45-10:15 Coffee break

Parallel session (A5) Chair: Christophe Blondel
Hall: Alfa

Invited Speakers:

10:15-10:45 Probing of the ground-state atomic alignment-to-orientation conversion in an external magnetic field with different polarizations of the probe beam Marcis Auzinsh [VIDEO](#)
Latvia(A5-1-INV)

10:45-11:15 Dual Comb Spectroscopy for Electronic Fingerprinting Birgitta Schultze-Bernhardt,
Austria (A5-2-INV)

11:15-11:45 Cavity mode-dispersion spectroscopy Roman Ciurylo [VIDEO](#)
Poland(A5-3-INV)

11:45-12:15	A Decade with Quantum Biology: How Non-Trivial is Quantum Mechanics of Photosynthetic Light-Harvesting?	Tomáš Mančal VIDEO CzechRepublic (A5-4-INV)
Hot topic:		
12:15-12:30	Reversing time with ultra-cold atoms for quantum undo operations	Ivana Mastroserio VIDEO Italy(A5-1-HT)
Parallel session (B5) Chair: Mikhail Ivanov Hall: Beta		
Invited Speakers:		
10:15-10:45	Towards attosecond imaging at the nanoscale using extreme ultraviolet high harmonic sources	Jan Rothhardt VIDEO Germany(B5-1-INV)
10:45-11:15	Influence of Shape Resonances on the Angular Dependence of Molecular Photoionization Delay	Fabian Holzmeier, France (B5-2-INV)
11:15-11:45	Tightly-Focused Elliptically Polarized Light: a Highly Efficient Tool for Chiral Discrimination	Laura Rego VIDEO UK(B5-3-INV)
11:45-12:00	Observing the complex dynamics in uracil via simulated XUV spectra	Lena Bäuml VIDEO Germany (B5-4-INV)
Hot topic:		
12:00-12:15	Sub-cycle Optical Pulses Generated via Parallel Parametric Waveform Synthesis for Attosecond Science	Roland E. Mainz, Germany (B5-1-HT)
12:30-14:00 Lunch break		
Plenary Lecture 8 Chair: Franck Lépine Hall: Alfa		
14:00-14:45	Atomic Physics at FAIR: Quantum Dynamics in Extreme Electromagnetic Fields	Thomas Stöhlker VIDEO Germany (Plen-8)
14:45-15:15 Coffee break		
Parallel session (A6) Chair: Thomas Stöhlker Hall: Alfa		
Invited Speakers:		
15:15-15:45	Studies of reactive and inelastic collisions in a cryogenic multipole trap	Robert Wild VIDEO Austria (A6-1-INV)
15:45-16:15	New Insights on The Ozone Formation	Marjan Mirahmadi, Germany (A6-2-INV)
16:15-16:45	X-rays from the Universe	Jörn Wilms, Germany (A6-3-INV)
Hot topics:		
16:45-17:00	A Levitating Droplet as a Toy Atom	Javier Tello Marmolej VIDEO Sweden (A6-1-HT)
17:00-17:15	Experimental study of X-ray photon-induced desorption from molecular ices: indirect mechanism and astrophysical implications	Romain Basalgète VIDEO France (A6-2-HT)

Parallel session (B6) Chair: Karolina Słowik**Hall: Beta**

Invited Speaker:

15:15-15:45	Nonlinear optical phenomena from high repetition rate laser-matter interactions in transparent solids	Audrius Dubietis VIDEO Lithuania(B6-1-INV)
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Hot topics:

15:45-16:00	High-resolution manipulation and imaging of cold atoms through a multimode fiber	Sébastien Garcia VIDEO France(B6-1-HT)
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16:00-16:15	Partial cross sections for mutual neutralization involving H ⁻ and D ⁻	Arnaud Dochain VIDEO Belgium(B6-2-HT)
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Invited Speaker:

16:15-16:45	The Fate of Knockout- Damaged PAHs and Fullerenes: Bridging Ultrashort and Ultralong Timescales	Michael Gatchell, Sweden (B6-2-INV)
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Hot topics:

16:45-17:00	Progress towards a molecular lattice clock to search for time-variation of the proton-to-electron mass ratio	Jonas Rodewald VIDEO UK (B6-3-HT)
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17:00-17:15	The origin of enhanced O ₂ + production from photoionized CO ₂ clusters	Smita Ganguly, Sweden (B6-4-HT)
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17:15-19:00 Poster session 3 and coffee break

Friday, July 1**Hall: Alfa**

8:00-9:00 Registration and welcome coffee

Plenary Lecture 9 Chair: Alicia Palacios**Hall: Alfa**

9:00-9:45	Lightwave Electronics in Trivial, Topological, and Strongly Correlated Solids	Mikhail Ivanov VIDEO Germany (Plen-9)
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9:45-10:15 Coffee break

Parallel session (A7) Chair: Almut Beige**Hall: Alfa**

Invited speakers:

10:15-10:45	Realizing a topological gauge theory in an optically dressed Bose-Einstein condensate	Leticia Tarruell, Spain (A7-1-INV) Cancelled talk
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10:45-11:15	Speeding up a trapped ion quantum processor via Rydberg interaction	Markus Hennrich VIDEO Sweden(A7-2-INV)
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11:15-11:45	Mott-squeezed states with ultra-cold fermions	Emilia Witkowska, Poland (A7-3-INV)
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11:45-12:15	Rydberg molecules : spectra and scattering properties	Shuhei Yoshida, Austria (A7-4-INV)
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Parallel session (B7) Chair: H el ene Perrin**Hall: Beta**

Invited speakers:

10:15-10:45	Accurate determination of the fine-structure constant using atom interferometry	Saida Guellati-Khélifa, France (B7-1-INV)
10:45-11:15	Ultrastable frequency transfer through optical fiber links at the continental scale	Anne Amy-Klein VIDEO France(B7-2-INV)
11:15-11:45	Towards stimulated decay of antihydrogen atoms	Chloé Malbrunot VIDEO Switzerland (B7-3-INV)
11:45-12:15	An Apparatus for the Production of Squeezed Momentum State Superpositions in Atom Interferometers	Leonardo Salvi VIDEO Italy(B7-4-INV)
12:15-14:00	Lunch break	
Parallel session (A8) Chair: Mažena Mackoit-Sinkevičienė Hall: Alfa		
14:00-15:30	EPS Young Minds Session	
14:00-14:20	The European Research Council – funding opportunities for bright minds	Christian Oswald VIDEO Belgium (A8-1-YMS)
14:20-14:40	Hybrid GaSb/Si spectroscopic sensing technology as a generic technology platform for next-generation IoT and health applications	Augustinas Vizbaras VIDEO Lithuania (A8-2-YMS)
14:40-15:00	Career Opportunities in the Scientific and Industrial Laser Technologies	Gediminas Račiukaitis VIDEO Lithuania (A8-3-YMS)

15:00-15:20	Discover Modern Trends in Optoelectronics Research at FTMC: Materials, Technology and Applications for Terahertz Photonics	Gintaras Valušis VIDEO Lithuania (A8-4-YMS)
15:30	Closing	
Parallel session (B8) Chair: Gediminas Gaigalas		
Hall: Beta		
Invited speakers:		
14:00-14:30	Recent Developments of NIST Atomic Databases and Online Tools	Yuri Ralchenko VIDEO USA(B8-1-INV)
14:30-15:00	Magnetometry with a nanometric-thin K vapor cell	Rodolphe Momier VIDEO France (B8-2-INV)
15:00-15:30	Competitive Dehydrogenation and Backbone Fragmentation of Super-Hydrogenated PAHs	Mark Stockett VIDEO Sweden (B8-3-INV)
15:30-16:00	Coffee break	
Closing ceremony;		
Concert by Petras Vyšniauskas (saxophone) and Aleksandra Žvirblytė (piano) in Hall Alfa		