



LPHYS'21

LPHYS'21. PROGRAM:

Seminar 1: Modern Trends in Laser Physics

Co-chairs:



Olga Kocharovskaya

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All time-slots in this schedule indicate the Central European Time (CET) (e.g. Paris time)

Monday, 19 July, 2021

SI.1 (16:00 – 17:30) Chair: Paul Corkum (Canada)

16:00 – 16:25 A Jimenez-Galan (Theory Department, Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Berlin, Germany), R E F Silva (Departamento de Fisica Teorica de la Meteria Condensada, Universidad Autónoma de Madrid, Madrid, Spain), O Smirnova, M Ivanov (Theory Department, Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Berlin, Germany)

Lightwave Control of Topological Properties in 2D Materials (invited talk) [Abstract](#)

16:25 – 16:50 C Ohae (Institute for Advanced Science, Univeristy of Electro-Communications, Tokyo, Japan), W Liu, J Zheng (Department of Engineering Science, Univeristy of Electro-Communications, Tokyo, Japan), M Katsuragawa (Department of Engineering Science, Univeristy of Electro-Communications, Tokyo, Japan; Institute for Advanced Science, Univeristy of Electro-Communications, Tokyo, Japan)

Tailoring Nonlinear Optical Phenomena by Artificially Manipulating the Relevant Optical Phases - Toward High-Resolution Laser Spectroscopy in the Vacuum Ultraviolet Region - (invited talk) [Abstract](#)

16:50 – 17:10 R Kienberger (Physik Department, Technische Universität München, München, Germany)
Attosecond Chronoscopy of the Photoemission Near a Band Gap of a Single-Element Layered System (invited talk) [Abstract](#)

17:10 – 17:50 D A Reis (Stanford PULSE Institute, Menlo Park CA, USA)
Recent Trends in Solid-State Harmonics (invited talk) [Abstract](#)

SI.2 (18:00 – 19:30)

18:00 – 18:25 D Budker (Department of Physics, University of California, Berkeley CA, USA; Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany)
Physics Opportunities with the Gamma Factory (invited talk) [Abstract](#)

18:25 – 18:50 C H Keitel, J Evers, K Z Hatsagortsyan, M Tamburini (Theory Division, Max Planck Institute for Nuclear Physics, Heidelberg, Germany)
High Quality X-Ray and Gamma-Ray Sources (invited talk) [Abstract](#)

18:50 – 19:15 J Evers (Max Planck Institute for Nuclear Physics, Heidelberg, Germany)

Fast Adaptive Resonant X-Ray Optics (invited talk) [Abstract](#)

19:15 – 19:35 [S Shwartz](#), E Strizhevsky, D Borodin, A Schori (Physics Department, Bar-Ilan University, Ramat Gan, Israel), S Francoual, R Röhlberger (DESY, Hamburg, Germany)

Efficient Interaction of X-Ray Heralded Photons with a Beam Splitter (invited talk) [Abstract](#)

S1.3 (20:00 – 21:30) Chair: Dmitry Budker (Germany)

20:00 – 20:25 [R Röhlberger](#) (Photon Science, DESY, Hamburg, Germany; X-ray Science, Helmholtz Institut Jena, Jena, Germany), [J von Zanthier](#) (Institute of Optics, Information and Photonics, University of Erlangen-Nuremberg, Erlangen, Germany)

Nuclear Quantum Imaging (invited talk) [Abstract](#)

20:25 – 20:45 [J von Zanthier](#) (Physics Department, University of Erlangen-Nuremberg, Erlangen, Germany)

Quantum Imaging with Incoherently Scattered Light (invited talk) [Abstract](#)

20:45 – 21:05 [A Palfy](#) (Physics Department, University of Erlangen-Nuremberg, Erlangen, Germany; Theory Division, Max Planck Institute for Nuclear Physics, Heidelberg, Germany)

Towards a Nuclear Clock with ^{229}Th [Abstract](#)

21:05 – 21:20 [Y V Radeonychev](#), [I R Khairulin](#) (Nonlinear dynamics and optics division, Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia), [F G Vagizov](#) (Department of Physics, Kazan Federal University, Kazan, Russia), [V A Antonov](#) (Nonlinear dynamics and optics division, Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia), [O Kocharovskaya](#) (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)

Acoustically Induced Transparency for Gamma-Ray and X-Ray Photons (invited talk) [Abstract](#)

21:20 – 21:35 [X Zhang](#) (Department of Physics, University of Toronto, Toronto, Canada), [Y Shvyd'ko](#) (Advanced Photon Source, Argonne National Laboratory, Argonne IL, USA), [O Kocharovskaya](#) (Department of Physics and Astronomy, Texas A&M University, College Station TX, USA)

Nuclear Ensembles with Switchable Transition Frequency Gradient: From Nuclear Memories to Spectral Intensity Enhancement (invited talk) [Abstract](#)

Tuesday, 20 July, 2021

S1.4 (16:00 – 17:30) Chair: Margaret Murnane (USA)

16:00 – 16:25 [D Keefer](#), [S Cavaletto](#), [S Mukamel](#) (Department of Chemistry and Department of Physics & Astronomy, UCI, Irvine CA, USA)

Ultrafast X-ray Stimulated Raman and Diffraction for Probing Molecular Coherences at Conical Intersections (invited talk) [Abstract](#)

16:25 – 16:50 [T Pfeifer](#) (Max-Planck-Institut für Kernphysik, Heidelberg, Germany)

Controlling the Electro-Optical Response of Atoms by Intense Lasers: Time-Resolved Emergence of the Rydberg Series and the Laser-Driven Continuum Threshold (invited talk) [Abstract](#)

16:50 – 17:10 [N Harkema](#) (Department of Physics, University of Arizona, Tucson AZ, USA), [C Cariker](#) (Department of Physics, University of Central Florida, Orlando FL, USA), [E Lindroth](#) (Department of Physics, Stockholm University, Stockholm, Sweden), [L Argenti](#) (Department of Physics, University of Central Florida, Orlando FL, USA), [A Sandhu](#) (Department of Physics, University of Arizona, Tucson AZ, USA)

Optical Control of Autoionizing Polaritons in Attosecond Spectroscopy (invited talk) [Abstract](#)

17:10 – 17:30 [V A Antonov](#), [I R Khairulin](#) (Nonlinear Dynamics and Optics Division, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia), [M Yu Ryabikin](#) (Faculty of Radiophysics, Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia; Nonlinear Dynamics and Optics Division, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia), [O A Kocharovskaya](#) (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)

Amplification of Attosecond Pulse Trains with Arbitrary Polarization by IR-Field-Dressed Plasma-Based X-Ray Lasers (invited talk) [Abstract](#)

S1.5 (18:00 – 19:30) Chair: Jorge Rocca (USA)

18:00 – 18:25 [D Bleiner](#), [L Masouduia](#) (Advanced Analytical Technologies, Empa, Zürich, Switzerland)

Scaling Laws and Optimal Parameters for Plasma X-ray Lasers (invited talk) [Abstract](#)

18:25 – 18:45 [J Nejd](#) (Institute of Physics ASCR, v.v.i. (FZU), ELI-Beamlines Project, Prague, Czech

Republic)

Laser-Driven X-Ray Sources at ELI Beamlines (invited talk) [Abstract](#)

18:45 – 19:10 [A Kabacinski](#), F Tissandier, J Gautier, M Kozlova, J-P Goddet, A Tafzi (LOA, ENSTA, École Polytechnique, CNRS, Palaiseau, France), E Oliva (Universidad Politecnica de Madrid, Madrid, Spain), F Tuitje, T Helk, C Spielmann (Abbe Center of Photonics, Jena, Germany), M Zürich (Department of Chemistry, University of California, Berkeley CA, USA), S Sebban (LOA, ENSTA, École Polytechnique, CNRS, Palaiseau, France)

Recent Progress on Laser-Driven Soft X-Ray Lasers at LOA (invited talk) [Abstract](#)

SI.6 (20:00 – 21:30) Chair: Philip Hemmer (USA)

20:00 – 20:20 D Serrano, A Ferrier, A Tallaire, [P Goldner](#) (Insitut de Recherche de Chimie Paris, Chimie ParisTech, Paris, France)

Nanoscale Rare Earth Doped Crystals for Optical Quantum Technologies (invited talk) [Abstract](#)

20:20 – 20:40 [A Ruskuc](#), A Faraon (Applied Physics, California Institute of Technology, Pasadena CA, USA)
Single Rare-Earth Ions in Solid State Hosts: a Platform for Quantum Networks (invited talk) [Abstract](#)

20:40 – 20:55 Y Boran (Department of Fundamental Sciences of Engineering, Sakarya University of Applied Sciences, Serdivan, Sakarya, Turkey), N Hart (Texas A&M Engineering Experiment Station, Texas A&M University, College Station TX, USA), J Zhou, [A A Kolomenskii](#), H A Schuessler (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)
Ionization Pathways of Photoelectrons in Sodium: Energy and Angular Distributions (invited talk) [Abstract](#)

20:55 – 21:15 [S A Malinovskaya](#) (Department of Physics, Stevens Institute of Technology, Hoboken, NJ, USA)
Transparency in a Two-Level System Using State Phase Control (invited talk) [Abstract](#)

21:15 – 21:30 [Y Shi](#), O Kocharovskaya (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)
EIT and EIT-Like Resonances in Inhomogeneously Broadened Ensemble of Quantum Emitters in Solids [Abstract](#)

Wednesday, 21 July, 2021

SI.7 (16:00 – 17:30) Chair: Marlan Scully (USA)

16:00 – 16:25 [F Nori](#) (Physics, University of Michigan, Ann Arbor MI, USA; Cluster of Pioneering Research, RIKEN, Saitama, Japan)
Quantum Nonlinear Optics Without Photons, How to Excite Two or More Atoms Simultaneously with a Single Photon, and Other Unusual Properties of Ultra-Strongly-Coupled QED Systems (invited talk) [Abstract](#)

16:25 – 16:50 [D W Wang](#) (Department of physics, Zhejiang University, Hangzhou, China)
Topological Phases of Quantized Light (invited talk) [Abstract](#)

16:50 – 17:15 [F Li](#) (Department of Physics, Xi'an Jiaotong University, Xi'an, China)
Realization of Quantum State Transfer and Quantum Gates by Use of a Single Photon with Different Degrees of Freedom (invited talk) [Abstract](#)

17:15 – 17:35 H-Y Yao, [S-W Li](#) (School of Physics, Beijing Institute of Technology, Beijing, China)
Enhancing Photoelectric Current by Nonclassical Light (invited talk) [Abstract](#)

SI.8 (18:00 – 19:30) Chair: Mikhail Lukin (USA)

18:00 – 18:25 [M S Zubairy](#) (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)
Stochastic Noise-Free Amplification (invited talk) [Abstract](#)

18:25 – 18:50 A A Pushkina, G Maltese, J I Costa-Filho, P Patel (Department of Physics, University of Oxford, Oxford, UK), [A I Lvovsky](#) (Department of Physics, University of Oxford, Oxford, UK; Laboratory for Quantum Optics, Russian Quantum Center, Moscow, Russia)
Super-Resolution Linear Optical Imaging in the Far Field (invited talk) [Abstract](#)

18:50 – 19:15 [V M Akulin](#) (Mathematics and Electronics, National Research University Higher School of Economics, Moscow, Russia; Quantum Physics and Information, Kharkevich Institute of the Information Transmission Problems of the Russian Academy of Sciences, Moscow, Russia), A

Mandilara (Department of Physics, Nazarbayev University, Astana, Kazakhstan)

Detecting the Event of a Single Photon Loss on Quantum Signals (invited talk) [Abstract](#)

19:15 – 19:35 V Rodimin (Quantum communication group, Russian Quantum Center, Moscow, Russia; National University of Science and Technology (NUST) 'MISIS', Moscow, Russia), A Tayduganov (National University of Science and Technology (NUST) 'MISIS', Moscow, Russia), D Kronberg (Quantum communication group, Russian Quantum Center, Moscow, Russia), Y Durkin, A Zharinov (National University of Science and Technology (NUST) 'MISIS', Moscow, Russia), [Y Kurochkin](#) (Quantum communication group, Russian Quantum Center, Moscow, Russia; National University of Science and Technology 'MISIS', Moscow, Russia)

Strong Reference Quantum Key Distribution: Security Consideration and Experimental Realization (invited talk) [Abstract](#)

S1.9 (20:00 – 21:30) Chair: Alexander Lvovsky (UK)

20:00 – 20:25 [R Folman](#) (Physics, Ben Gurion University of the Negev, Beer-Sheva, Israel)
Matter-Wave Interferometers on the Atom Chip (invited talk) [Abstract](#)

20:25 – 20:50 [B M Garraway](#) (Physics and Astronomy, University of Sussex, Brighton, UK)
Dressing Ultra-Cold Atoms for Rings and Shells (invited talk) [Abstract](#)

20:50 – 21:10 [D Sorokin](#), [S Makarenko](#), [A Ulanov](#) (Quantum optics, International Center for Quantum Optics & Quantum Technologies Limited liability company, Moscow, Russia), [A Lvovsky](#) (Department of Physics, University of Oxford, Oxford, UK; Quantum optics, International Center for Quantum Optics & Quantum Technologies Limited liability company, Moscow, Russia)
Interferobot: Robotic Alignment of an Optical Interferometer [Abstract](#)

21:10 – 21:35 [V S Malinovsky](#), [S Carrasco](#), [M H Goerz](#) (CISD, US Army Research Laboratory, Adelphi MD, USA), [M A Kasevich](#) (Department of Physics, Stanford University, Stanford CA, USA)
Robust Atomic Fountain Interferometry (invited talk) [Abstract](#)

Thursday, 22 July, 2021

S1.10 (16:00 – 17:30) Chair: Gerd Leuchs (Germany)

16:00 – 16:20 [M D Reid](#), [M Thenabadu](#), [P Drummond](#) (Centre for Quantum Technology Theory, Swinburne University of Technology, Melbourne, Australia)
Macroscopic Realism and a Retrocausal Model for Reality (invited talk) [Abstract](#)

16:20 – 16:45 [G S Agarwal](#) (Department of Physics and Astronomy, Texas A&M University, College Station TX, USA), [X Qian](#) (Department of Physics, Stevens Institute of Technology, Hoboken, NJ, USA)
Complementarity, Wave Particle Duality and Quantum Entanglement- Theory and Experiments (invited talk) [Abstract](#)

16:45 – 17:10 [L Yuan](#) (School of Physics and Astronomy, Shanghai Jiao Tong University, Shanghai, China)
Studies of Synthetic Dimensions: From Classical Light to Quantum Regime (invited talk) [Abstract](#)

17:10 – 17:30 [Y H Kuan](#), [S W Shao](#) (Physics, National Central University, Taoyuan, Taiwan), [I K Liu](#) (School of Mathematics, Statistics & Physics, Joint Quantum Centre (JQC) Durham-Newcastle, Newcastle University, Newcastle upon Tyne, UK), [J Ruseckas](#) (Baltic Institute of Advanced Technology, Vilnius, Lithuania), [G Juzeliunas](#) (Institute of Theoretical Physics and Astronomy, Vilnius University, Vilnius, Lithuania), [Y J Lin](#) (Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan), [W T Liao](#) (Physics, National Central University, Taoyuan, Taiwan)
Synthetic Gauge Potentials for the Dark State Polaritons in Atomic Media [Abstract](#)

S1.11 (18:00 – 19:30) Chair: Philippe Grangier (France)

18:00 – 18:25 [S F Yelin](#) (Physics Department, Harvard University, Cambridge MA, USA)
Quantum Optics and Application with Cooperative 2D Arrays (invited talk) [Abstract](#)

18:25 – 18:45 [A S Dudalov](#), [A A Kalachev](#) (Kazan Scientific Center of RAS, Kazan, Russia)
Heralded Single-Photon Qubits from Photonic Molecules (invited talk) [Abstract](#)

18:45 – 19:05 [I Novikova](#), [Z Niu](#) (Physics, College of William and Mary, Williamsburg VA, USA), [N Prajapati](#) (Physics, College of William and Mary, Williamsburg VA, USA; National Institute of Standards and Technology, Boulder CO, USA)

Quantum-Enhanced Two-Photon Spectroscopy Using Two-mode Squeezed Light (invited talk) [Abstract](#)

19:05 – 19:20 E E Mikhailov, S L Cuozzo, I Novikova (Physics, William & Mary, Williamsburg VA, USA) *Low-Light Shadow Imaging Using Quantum-Noise Detection with a Camera* (invited talk) [Abstract](#)

19:20 – 19:30 I Tutunnikov (Department of Chemical and Biological Physics, Weizmann Institute of Science, Rehovot, Israel), J Qiang, K Lin, P Lu, W Zhang, F Sun (State Key Laboratory for Precision Spectroscopy, East China Normal University, Shanghai, China), K V Rajitha (Department of Chemical and Biological Physics, Weizmann Institute of Science, Rehovot, Israel), Y Silberberg (Department of Complex Systems, Weizmann Institute of Science, Rehovot, Israel), Y Prior (Department of Chemical and Biological Physics, Weizmann Institute of Science, Rehovot, Israel), J Wu (State Key Laboratory for Precision Spectroscopy, East China Normal University, Shanghai, China), I Sh Averbukh (Department of Chemical and Biological Physics, Weizmann Institute of Science, Rehovot, Israel) *Echoes in Single Quantum Systems* [Abstract](#)

SI.12 (20:00 – 21:30)

20:00 – 20:20 S Varro (Theoretical Solid State Physics, Wigner Research Centre for Physics, ELI-ALPS, ELI-HU Ltd, Budapest, Szeged, Hungary)

Scattering of Light by Rough Surfaces; per Aspera ad Astra (invited talk) [Abstract](#)

20:20 – 20:40 A Afanasev (Physics, George Washington University, Washington DC, USA)

Superkick Effect in Absorption of Twisted Photons (invited talk) [Abstract](#)

20:40 – 21:00 C Roy (Physics, University of North Texas, Denton TX, USA), Z Brankovic (Institute for Multidisciplinary Research, University of Belgrade, Belgrade, Serbia), Y Rostovtsev (Physics, University of North Texas, Denton TX, USA)

Weakly Aligned Molecules: From Molecular Detectors to Room-Temperature Tunable Masers (invited talk) [Abstract](#)

21:00 – 21:20 X Guo, A Lvovsky, T Barrett, J Spall (Department of Physics, University of Oxford, Oxford, UK)

Towards End-to-End Optical Training of Neural Networks [Abstract](#)

21:20 – 21:35 W Shannon (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA), V V Kocharovsky, S Tarasov (Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia), V V Kocharovksy (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)

Permanent of a Linear-Law Circulant Matrix and Its Large-Size Asymptotics [Abstract](#)

Friday, 23 July, 2021

SI.13 (14:00 – 15:30) Chair: Alexey Kalachev (Russia)

14:00 – 14:25 R B Liu (Department of Physics, The Chinese University of Hong Kong, Shatin, Hong Kong; The Hong Kong Institute of Quantum Information Science and Technology, The Chinese University of Hong Kong, Shatin, Hong Kong; Centre for Quantum Coherence, The Chinese University of Hong Kong, Shatin, Hong Kong)

Quantum Nonlinear Spectroscopy of Arbitrary Quantum Correlations via Spin Sensing (invited talk) [Abstract](#)

14:25 – 14:45 Q Li (Physics, Chinese University of Hong Kong, Shatin, Hong Kong)

Measuring Soft Matters Using Nanodiamond Based Orientation Sensing (invited talk) [Abstract](#)

14:45 – 15:10 M Nesladek, M Nesladek (Physics, University Hasselt @ IMEC, division IMOMECE, Hasselt, Belgium)

Electrically-Read Nuclear Spin Qubits Using NV Electron Spins (invited talk) [Abstract](#)

15:10 – 15:30 P Hemmer (Electrical and Computer Engineering Department, Texas A&M University, College Station TX, USA)

Biosensing Applications of Quantum Emitters in Diamond and Phosphors (invited talk) [Abstract](#)

SI.14 (16:00 – 17:30) Chair: Yuri Rostovtsev (USA)

16:00 – 16:25 N Davidson (Weizmann Institute of Science, Rehovot, Israel)

Solving Computational Problems with Coupled Lasers (invited talk) [Abstract](#)

16:25 – 16:50 V V Kocharovskaya, E R Kocharovskaya, A V Mishin (Plasma Physics and High-Power Electronics Division, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia), V V Kocharovsky (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA)
Double Frequency Combs and Coherent Parametric Mechanism of Self-Mode Locking in the Superradiant Lasers (invited talk) [Abstract](#)

16:50 – 17:05 E R Kocharovskaya, A V Mishin (Plasma Physics and High-Power Electronics Division, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia), V V Kocharovsky (Department of Physics and Astronomy, Texas A&M University, College Station, TX, USA), VI V Kocharovsky (Plasma Physics and High-Power Electronics Division, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia)
Spontaneous Symmetry Breaking in a CW Superradiant Lasing in a Symmetric Low-Q Cavity (invited talk) [Abstract](#)

17:05 – 17:30 S Chuchurka, V Sukharnikov, A Benediktovitch (Photon Science, DESY, Hamburg, Germany), N Rohringer (Photon Science, DESY, Hamburg, Germany; Department of Physics, Hamburg University, Hamburg, Germany)
Probabilistic Stochastic Methodology for the Light-Matter Interaction (invited talk) [Abstract](#)

S1.15 (18:00 – 19:30) Chair: Svetlana Lukishova (USA)

18:00 – 18:20 R Zhang (State Key Laboratory of Advanced Optical Communication Systems and Networks, Department of Electronics, and Center for Quantum Information Technology, Peking University, Beijing, China; Beijing Academy of Quantum Information Sciences, Beijing, China; Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany), E Klinger (Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany), F Pedreros Bustos (Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Aix Marseille Univ, CNRS, CNES, LAM, Marseille, France; Johannes Gutenberg-Universität Mainz, Mainz, Germany), A Akulshin (Optical Sciences Centre, Swinburne University of Technology, Melbourne, Australia; Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany), H Guo (State Key Laboratory of Advanced Optical Communication Systems and Networks, Department of Electronics, and Center for Quantum Information Technology, Peking University, Beijing, China), A Wickenbrock (Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany), D Budker (Helmholtz-Institut Mainz, GSI Helmholtzzentrum für Schwerionenforschung, Mainz, Germany; Johannes Gutenberg-Universität Mainz, Mainz, Germany; Department of Physics, University of California, Berkeley, Berkeley CA, USA)
Stand-Off Magnetometry with Directional Emission from Sodium Vapors (invited talk) [Abstract](#)

18:20 – 18:40 V Sukharnikov, S Chuchurka, A Benediktovitch (CFEL, DESY, Hamburg, Germany), N Rohringer (CFEL, DESY, Hamburg, Germany; Department of Physics, Universität Hamburg, Hamburg, Germany)
Superfluorescence of Compact System: Exact Solution and Stochastic Treatment [Abstract](#)

18:40 – 19:05 H A Schuessler (Department of Physics and Astronomy, Texas A&M University, College Station TX, USA), A Takamine (Nishina Center for Accelerator-Based Science, RIKEN, Wako, Japan), M Wada (KEK WNSC, Wako, Japan), H Iimura (JAEA, Tokai Mura, Japan), J Lassen (TRIUMF, Vancouver, Canada)
Nuclei at Extreme Deformations and Configurations: Touching Horizons with On-Line Laser Spectroscopy (invited talk) [Abstract](#)

19:05 – 19:25 A V Sokolov (Institute for Quantum Science and Engineering, Texas A&M University, College Station, TX, USA)
Applications of Molecular Coherence: from Ultrafast Waveform Synthesis to Detecting Coronavirus (invited talk) [Abstract](#)

19:25 – 19:40 C B Reynolds (Department of Physics and Astronomy, Texas A&M University, College Station TX, USA), V V Kocharovsky (Department of Physics and Astronomy, Texas A&M University, College Station TX, USA; Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia), V V Kocharovsky (Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia; Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia)

SI.16 (20:00 – 21:30)

- 20:00 – 20:25 [P N Melentiev](#) (Institute of Spectroscopy, Troitsk, Moscow, Russia), [B N Khlebtsov](#) (Institute of Biochemistry and Physiology of Plants and Microorganisms, Saratov, Russia), [A S Gritchenko](#), [A S Kalmykov](#) (National Research University Higher School of Economics, Moscow, Russia), [D S Kudryavtsev](#), [I A Ivanov](#), [V A Mozhaeva](#) (Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia), [A E Siniavin](#) (Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia; N.F. Gamaleya National Research Center for Epidemiology and Microbiology, Ivanovsky Institute of Virology, Moscow, Russia), [B Kang](#) (Nanjing University, Nanjing, China), [V I Tsetlin](#) (Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia), [V I Balykin](#) (Institute of Spectroscopy, Troitsk, Moscow, Russia)
Ultrafast and Ultrasensitive Detection and Imaging of Single Cardiac Troponin-T Molecules and SARS-CoV-2 Viral Particles (invited talk) [Abstract](#)
- 20:25 – 20:45 [S G Lukishova](#), [J Brone](#) (The Institute of Optics, University of Rochester, Rochester NY, USA), [D Khan](#) (Physics and Astronomy, University of Rochester, Rochester NY, USA), [Z Li](#) (The Institute of Optics, University of Rochester, Rochester NY, USA)
Ultrabright Photoluminescence Spikes and Step-Wise Photoluminescence Increase from Colloidal Silver Nanoparticles for Patch Nanoantennas (invited talk) [Abstract](#)
- 20:45 – 21:05 [D Kurouski](#) (Texas A&M University, College Station, TX, USA)
Plasmon-Driven Chemistry on Mono and Bimetallic Nanostructure (invited talk) [Abstract](#)
- 21:05 – 21:25 [E Kumi-Barimah](#), [G Jose](#) (Chemical and Process Engineering, University of Leeds, Leeds, UK)
Ultrafast Laser Plasma Engineering of Functional Metal Oxide Thin Films [Abstract](#)

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