

# SCIENTIFIC PROGRAM

## Notes:

**IL:** Invited lectures (35'+5')

Short lectures (15'+5'):

**IB:** Imaging and Biophotonics

**MS:** Metrology and Sensors

**MM:** Microphotonics and Microfabrication

**WG:** Wave and Geometrical Optics

**AF:** Advanced Fiber Technologies

**QO:** Quantum Optics

## MONDAY, SEPTEMBER 3, 2018

12:00 Lunch

### 13:30 - 15:30 IMAGING AND BIOPHOTONICS I

Chairman: Pavel Zemánek

13:30 **IL-1 Holographic Micro-Endoscopy Based on Multimode Waveguides**  
Čižmár T.<sup>1,2,3</sup>, Turtaev S.<sup>2,3</sup>, Leite I.<sup>2,3</sup>, Šiler M.<sup>1,3</sup>, Tyc T.<sup>1</sup>, Plöschner M.<sup>3</sup> | <sup>1</sup>Brno, CZ; <sup>2</sup>Jena, GER; <sup>3</sup>Dundee, UK

14:10 **IL-2 Coherence-Gated Holographic Microscopy: Application in Biomedical Imaging**  
Chmelík R., Ďuriš M., Petráček J., Antoš M. | Brno, CZ

14:50 **IB-1 Phase and Intensity at the Output of Multimode Optical Fiber Calibrated with Internal Reference Modes**  
Jákl P.<sup>1</sup>, Šiler M.<sup>1</sup>, Trägårdh J.<sup>1</sup>, Ježek J.<sup>1</sup>, Zemánek P.<sup>1</sup>, Čižmár T.<sup>1,2</sup> | <sup>1</sup>Brno, CZ; <sup>2</sup>Jena, GER

15:10 **IB-2 The Optical Vortex Scanning Microscope – Simple Imaging Procedures**  
Popiołek-Masajada A., Masajada J., Lamperska W. | Wroclaw, PL

15:30 - 16:00 Coffee Break

### 16:00 - 18:30 IMAGING AND BIOPHOTONICS II

Chairman: Radim Chmelík

16:00 **IL-3 Contact and Intraocular Lenses, Their Manufacture, and Optical Behavior**  
Wichterle K. | Ostrava, CZ

16:40 **IL-4 High-Fidelity Fast Tracking of Protein Motion**  
Holanová K., Bujak Ł., Marín A.G., Piliarik M. | Prague, CZ

17:20 **IL-5 Optical Coherence Tomography (OCT) with 2 nm Axial Resolution Using a Compact Laser Plasma Soft X-Ray Source**  
Wachulak P., Bartnik A., Fiedorowicz H. | Warsaw, PL

18:00 **IB-3 Compressive Imaging in Laser Spectroscopy**  
Žídek K., Hlubuček J., Denk O. | Prague, CZ

18:20 **Optical Conference on Wave and Quantum Aspects of Contemporary Optics - HISTORY**  
Szoplik T. | Warszawa, PL

19:00 Welcome drink in hotel Galant Lednice

**9:00 - 10:20 METROLOGY AND SENSORS I**

*Chairman: Petr Hlubina*

9:00 **MS-1 An Optical Magnetometer Based on the Magneto-Optical Kerr Effect**

*Senderáková D., Držík M., Maxová V., Iliť T. | Bratislava, SK*

9:20 **MS-2 Coordinate Interferometric Measurement for High-Resolution Lithography**

*Lazar J., Holá, M., Čížek, M., Oulehla J., Řeřucha Š., Číp, O., Šarbort, M., Hucl V. | Brno, CZ*

9:40 **MS-3 Optical Fibers Forming to Ionizing Radiation Sensors Preparation**

*Jelínek M., Mikel B. | Brno, CZ*

10:00 **MS-4 Investigating the Use of the Hydrogen Cyanide (HCN) as an Absorption Media for Laser Spectroscopy**

*Hošek M., Řeřucha Š., Pravdová L., Číp O. | Brno, CZ*

10:20 - 11:00 *Coffee Break*

**11:00 - 12:20 METROLOGY AND SENSORS II**

*Chairman: Jan Hrabina*

11:00 **MS-5 Surface Plasmon Resonance for Air Used for Characterization of a Metallic Layer**

*Chylek J., Hlubina P., Ciprian D. | Ostrava, CZ*

11:20 **MS-6 Measurement System for Characterization of Angular and Spectral Distribution of LED Based Sources**

*Šerý M.<sup>1</sup>, Ježek J.<sup>1</sup>, Ják P.<sup>1</sup>, Škereň M.<sup>2</sup>, Zemánek P.<sup>1</sup> | <sup>1</sup>Brno, <sup>2</sup>Husinec-Řež, CZ*

11:40 **MS-7 Linearized and Compensated Interferometric System for High-Velocity Traceable Length Calibration on a Metre Scale**

*Řeřucha Š., Mikel B., Matěj Z., Holá M., Jelínek M., Jedlička P., Číp O., Lazar J. | Brno, CZ*

12:00 **MS-8 Absolute Long Distance Measurements with Mode-Filtered Frequency Comb**

*Lešundák A.<sup>1</sup>, Voigt D.<sup>2</sup>, Číp O.<sup>1</sup>, van den Berg S.<sup>2</sup> | <sup>1</sup>Brno, CZ; <sup>2</sup>Delft, NL*

12:20 - 14:00 *Lunch*

**14:00 - 15:00 METROLOGY AND SENSORS III**

*Chairman: Ondřej Číp*

14:00 **MS-9 Analysis of Fringe Patterns with Variable Density Using Modified Variational Image Decomposition Aided by Hilbert Transform**

*Cywińska M., Trusiak M., Patorski K. | Warsaw, PL*

14:20 **MS-11 Optical Characterization of Thin Films on Plastic Foil**

*Kohut T., Postava K., Pištora J. | Ostrava, CZ*

14:40 **MS-12 Optical Activity Temperature-Dependent Measurements of Chiral Solutions Using Mueller Matrix Spectroscopic Ellipsometry**

*Vala D., Mičica M., Postava K., Pištora J. | Ostrava, CZ*

15:00 - 15:30 *Coffee Break*

**15:30 - 16:30 METROLOGY AND SENSORS IV**

*Chairman: Břetislav Mikel*

15:30 **MS-13 Bragg Grating Based Fabry-Perot Interferometer in Polymer Fiber for Strain and Hydrostatic Pressure Measurements**

*Statkiewicz-Barabach G.<sup>1</sup>, Mergo P.<sup>2</sup>, Urbanczyk W.<sup>1</sup> | <sup>1</sup>Wroclaw, <sup>2</sup>Lublin, PL*

15:50 **MS-14 A Fast Method of Phase Retrieval From Zero-Mean Spectral Interferogram**

*Żołnacz K., Martynkien T., Olszewski J. | Wroclaw, PL*

16:10 **MS-15 Recent Developments in Laser-Based Spectroscopy for Trace Gas Detection**

*Nikodem M., Stachowiak D., Jaworski P. | Wroclaw, PL*

**16:30 - 18:30 TUESDAY POSTER SESSION**

**METROLOGY AND SENSORS**

**P-1 Compensation of the Refraction Index Fluctuations**

*Holá M., Lazar J., Šarbort M., Oulehla J., Hrabina J. | Brno, CZ*

**P-2 Laser Standard for Dissemination of Precise Frequencies**

*Hrabina J., Pravdová L., Čížek M., Číp O. | Brno, CZ*

**P-3 Customized Photomasks and Calibration Targets by E-Beam Lithography**

*Matějka M.<sup>1</sup>, Horáček M.<sup>1</sup>, Andok R.<sup>2</sup>, Krátký S.<sup>1</sup>, Knápek A.<sup>1</sup>, Kolařík V.<sup>1</sup> | <sup>1</sup>Brno, CZ; <sup>2</sup>Bratislava, SK*

**P-4 Laser System for Measuring MEMS Relief by Deep Reactive Etching**

*Maňka T., Šerý M., Lazar J., Krátký S., Zemánek P. | Brno, CZ*

**P-5 Optical Fiber Based Ionizing Sensors Preparation**

*Mikel B., Jelínek M. | Brno, CZ*

**P-6 Direct Conversion of Absolute Distance to Frequency Via Optical Frequency Comb, Passive Optical Cavity and Microwave Time Standard**

*Pravdová L., Hucl V., Čížek M., Hrabina J., Řeřucha Š., Lazar J., Číp O. | Brno, CZ*

**P-7 White-Light Interferometry Without Depth Scan**

*Pavlíček P., Mikeska E. | Olomouc, CZ*

**P-8 Sensing of Liquid Analytes Using Surface Plasmon Resonance at Different Angles of Incidence**

*Kaňok J., Chlebus R., Ciprian D., Hlubina P. | Ostrava, CZ*

**P-9 Efficiency of Optimization Tools for Tokamak Plasma Polarimetry Data Inversion**

*Bieg B., Chrzanowski J. | Szczecin, PL*

**P-10 Optical Amplification for Quantum Sources of Ultrastable Optical Frequency**

*Vojtěch J., Havlíš O., Šlapák M., Radil J., Horváth T., Kundrát J., Altmann M., Škoda P., Münster P., Smotlacha V., Altmannová L., Velc R., Vohnout R., Hažlinský M. | Prague, CZ*

**P-11 A New Approach to a Reflected Light Mode Microinterferometer**

*Litwin D., Galas J., Radziak K., Wikliński P., Daszkiewicz M., Czyżewski A. | Warsaw, PL*

## DESIGN AND MANUFACTURE OF OPTICAL COMPONENTS

**P-12 Polymer Based Mach-Zehnder Interferometer for on Chip Sensing Applications**

*Ďurišová J., Gašo P., Pudiš D., Figurová M. | Žilina, SK*

**P-13 Integrated Optical Waveguide Structures for LOC Applications**

*Gaso P., Jandura D., Pudiš D. | Žilina, SK*

**P-14 3D Polymer Based Air-Bridge Waveguides for on Chip Applications**

*Goraus M., Pudiš D., Urbancová P., Jandura D., Gašo P. | Žilina, SK*

**P-15 Design and Preparation of Polymer-Based Microspectrometer Using Laser Lithography**

*Jandura D., Markotan M., Pudiš D. | Žilina, SK*

**P-16 Ag Decorated 3D Nanocones for Application in SERS**

*Lettrichová I.<sup>1</sup>, Pudiš D.<sup>1</sup>, Laurenčíková A.<sup>2</sup>, Novák J.<sup>2</sup>, Gašo P.<sup>1</sup>, Jandura D.<sup>1</sup>, Goraus M.<sup>1</sup>, Kováč J., Jr.<sup>3</sup> |  
<sup>1</sup>Žilina, <sup>2</sup>Bratislava, SK*

**P-17 Polymer Photonic Structures for Lab-on-Fiber Applications**

*Martinček I., Goraus M., Káčik D. | Žilina, SK*

**P-18 Modification of Photocurrent of Photodiode with 1D and 2D PhC PDMS Membranes**

*Suslik L., Pudiš D., Goraus M., Tlaczala M. | Žilina, SK*

**P-19 Woodpile Structure - Effective Diffractive Photonic Element**

*Urbancová P., Goraus M., Pudiš D., Gašo P. | Žilina, SK*

**P-20 Numerical Investigation of Critical Fiber Optic High-Speed Transmission System Properties**

*Ladányi L., Scholtz L., Solanská M., Mullerová J. | Liptovský Mikuláš, SK*

## QUANTUM OPTICS

**P-21 Modeling of Optical Burst Switching Networks**

*Solanská M., Scholtz L., Ladányi L., Mullerová J. | Liptovský Mikuláš, SK*

19:00

*Dinner in hotel Galant Lednice*

**9:00 - 10:40 MICROPHOTONICS AND MICRO FABRICATION I**

*Chairman: Dušan Pudiš*

9:00 **IL-6 Double Wavelength Multifunctional Optical Tweezers**

*Drobczyński S. | Wrocław, PL*

9:40 **MM-1 Tool Fabrication for Automated Indirect Optical Micro-Manipulation**

*Kubacková J., Bánó G., Tomori Z. | Košice, SK*

10:00 **MM-2 Two-laser Optical Tweezers as a Micro-viscometer**

*Lamperska W., Drobczyński S., Masajada J. | Wrocław, PL*

10:20 **MM-3 Anomalous Shift of the Most Probable Position of a Particle in a Unstable Optically Created Potential**

*Šiler M.<sup>1</sup>, Ornigotti L.<sup>2</sup>, Brzobohatý O.<sup>1</sup>, Jákl P.<sup>1</sup>, Ryabov A.<sup>3</sup>, Holubec V.<sup>3,4</sup>, Zemánek P.<sup>1</sup>, Filip R.<sup>3</sup> | <sup>1</sup>Brno, <sup>2</sup>Olomouc, <sup>3</sup>Prague, CZ; <sup>4</sup>Leipzig, DE*

10:40 - 11:00 *Coffee Break*

**11:00 - 12:40 MICROPHOTONICS AND MICROFABRICATION II**

*Chairman: Sławomir Drobczyński*

11:00 **IL-7 3D Polymer Based Woodpile Structure Applied on the Led Surface**

*Pudiš D., Goraus M., Gašo P., Urbancová P. | Žilina, SK*

11:40 **MM-4 Optically Assembled Tunable Colloidal Waveguide**

*Brzobohatý O., Chvátal L., Jonáš A., Šiler M., Ježek J., Zemánek P. | Brno, CZ*

12:00 **MM-5 Orbital Motion from Optical Spin: The Extraordinary Momentum of Circularly Polarized Light Beams**

*Svak V., Brzobohatý O., Šiler M., Jákl P., Zemánek P., Simpson S. | Brno, CZ*

12:20 **MM-6 Motion of Optically Levitated Nanoparticle in Nonlinear Regime**

*Damková J.<sup>1</sup>, Šiler M.<sup>1</sup>, Jákl P.<sup>1</sup>, Svak V.<sup>1</sup>, Chvátal L.<sup>1</sup>, Filip R.<sup>2</sup>, Brzobohatý O.<sup>1</sup>, Zemánek P.<sup>1</sup> | <sup>1</sup>Brno, <sup>2</sup>Olomouc, CZ*

12:40 - 14:00 *Lunch*

**14:00 - 15:00 PRESENTATIONS OF COMPANIES**

*Chairman: Pavel Zemánek*

14:00 **Beyond Human Vision – Hyperspectral Imaging in Plant Phenotyping**

*Fajkus J., PSI (Photon Systems Instruments) | Drásov, CZ*

14:20 **New Measurement Potions in 3D Microscopy**

*Jiřkovský K., OLYMPUS | Prague, CZ*

14:40 **Topography Measurement of Diffuse Surfaces**

*Schovánek P., MEOPTA | Přerov, CZ*

15:30 *Conference trip*

19:30 *Conference dinner in ATC Apollo*

**9:00 - 10:40 WAVE AND GEOMETRICAL OPTICS I**

*Chairman: Jiří Čtyroký*

**9:00 IL-8 Dynamic Gratings Induced by Mode Instabilities in Fiber Lasers**

*Peterka P., Aubrecht J., Cajzl J., Podrazký O., Todorov F., Kašík I., Honzátko P. | Prague, CZ*

**9:40 WG-1 Microstructure and Optical Properties of the Black Silicon Layers**

*Jurečka S.<sup>1</sup>, Králik M.<sup>1</sup>, Pinčík E.<sup>2</sup> | <sup>1</sup>Liptovský Mikuláš, <sup>2</sup>Bratislava, SK*

**10:00 WG-2 Optical Fields Generated in Spin-Polarized VCSELs**

*Drong M.<sup>1</sup>, Fördös T.<sup>1,3</sup>, Peřina J.<sup>2</sup>, Jaffrès H.<sup>3</sup>, Postava K.<sup>1</sup>, Pištora J.<sup>1,1</sup>Ostrava, <sup>2</sup>Olomouc CZ; <sup>3</sup>Paris, FR*

**10:20 WG-3 Polarizing Fibre Facet Grating with High Modal Reflectance**

*Vaněk M., Honzátko P. | Prague, CZ*

*10:40 - 11:00 Coffee Break*

**11:00 - 12:40 WAVE AND GEOMETRICAL OPTICS II**

*Chairman: Waclaw Urbanczyk*

**11:00 WG-4 Bragg Gratings in Subwavelength Grating Metamaterial Waveguides**

*Čtyroký J.<sup>1</sup>, Kwiecien P.<sup>1</sup>, Richter I.<sup>1</sup>, Schmid J. H.<sup>2</sup>, Cheben P.<sup>2</sup>, Wangüemert-Pérez J. G.<sup>3</sup>, Molina-Fernández Í.<sup>3</sup>, Ortega-Moñux A.<sup>3</sup>, Litvik J.<sup>4</sup>, Dado M.<sup>4</sup> | <sup>1</sup>Prague, CZ; <sup>2</sup>Ottawa, CAN; <sup>3</sup>Málaga, ES; <sup>4</sup>Žilina, SK*

**11:20 WG-5 Novel Effects and Functionalities in Subwavelength Photonic and Plasmonic Structures**

*Kwiecien P.<sup>1</sup>, Richter I.<sup>1</sup>, Kuzmiak V.<sup>1</sup>, Čtyroký J.<sup>1</sup>, Petráček J.<sup>2</sup> | <sup>1</sup>Prague, <sup>2</sup>Brno, CZ*

**11:40 WG-6 Modelling of Incoherent Propagation in Periodic Structures**

*Ciomba P.<sup>1</sup>, Postava K.<sup>1</sup>, Fördös T.<sup>1,2</sup>, Jaffrès H.<sup>2</sup> Pištora J.<sup>1</sup> | <sup>1</sup>Ostrava, CZ; <sup>2</sup>Palaiseau Cedex, FR*

**12:00 WG-7 Spatial Light Modulator Correction Using Optical Vortex Dynamics Criterion**

*Szatkowski M., Popiołek-Masajada, A., Masajada, J. | Wrocław, PL*

**12:20 WG-8 Optical Systems for Laser Produced Plasma EUV and Soft X-Ray Sources**

*Bartnik A., Fiedorowicz H., Wachulak P., Fok T., Węgrzyński Ł. Warsaw, PL*

*12:40 - 14:00 Lunch*

**14:00 - 15:40 ADVANCED FIBER TECHNOLOGIES I**

*Chairman: Ryszard Buczyński*

**14:00 IL-9 Ultrafast All-Optical Switching Using Dual-Core Photonic Crystal Fibers**

*Bugár I.<sup>1,2</sup>, Stajanča P.<sup>3</sup>, Čurilla L.<sup>4</sup>, Longobucco M.<sup>1</sup>, Pysz D.<sup>1</sup>, Uherek F.<sup>2</sup>, Baltuška A.<sup>5</sup>, Buczyński R.<sup>1</sup> | <sup>1,4</sup>Warsaw, PL; <sup>2</sup>Bratislava, SVK; Berlin, <sup>3</sup>GER; <sup>5</sup>Vienna, AUT*

**14:40 AF-1 Phosphate Glass Based Bioresorbable Optical Fibers**

*Podrazký O.<sup>1</sup>, Peterka P.<sup>1</sup>, Kašík I.<sup>1</sup>, Kral R.<sup>1</sup>, Nitsch K.<sup>1</sup>, Cihlár A.<sup>1</sup>, Bystřický A.<sup>1</sup>, Ceci-Ginistrelli E.<sup>2</sup>, Pugliese D.<sup>2</sup>, Boetti N.G.<sup>2</sup>, Janner D.<sup>2</sup>, Milanese D.<sup>2,3</sup> | <sup>1</sup>Prague, CZ; <sup>2</sup>Torino, <sup>3</sup>Trento, ITA*

15:00 **AF-2 Watt-Level, Broadband Mid-Infrared Supercontinuum Generation in Selected Soft-Glass Fibers - Recent Works at MUT**  
*Swiderski J. | Warsaw, PL*

15:20 **AF-3 All-Normal Dispersion Supercontinuum Generation in a Microstructured Birefringent Fiber Pumped with a Pulsed Fiber Laser**  
*Tarnowski K.<sup>1</sup>, Soboń G.<sup>2</sup>, Martynkien T.<sup>1</sup>, Mergo P.<sup>3</sup>, Poturaj K.<sup>3</sup>, Urbańczyk W.<sup>1</sup> | <sup>1,2</sup>Wrocław, <sup>3</sup>Lublin, PL*

15:40 - 17:00 *Coffee Break and THURSDAY POSTER SESSION*

**17:00 - 18:20 ADVANCED FIBER TECHNOLOGIES II**  
*Chairman: Ivan Richter*

17:00 **IL-10 Development of Nanostructured Core Optical Fibers**  
*Anuskiewicz A., Kasztelan R., Filipkowski A., Stepniewski G., Stefaniuk T., Siwicki B., Pysz D., Klimczak M., Buczynski R. | Warsaw, PL*

17:40 **IL-11 Twisted Microstructured Optical Fibers**  
*Napiórkowski M., Urbańczyk W. | Wrocław, PL*

19:00 *Conference dinner in Riding hall, Lednice Castle*

## THURSDAY POSTER SESSION

### QUANTUM OPTICS

**P-22 PT Symmetric Breaking and Photonic Transmission in Optical Systems**  
*Durajski A.P.<sup>1</sup>, Jarosik M.W.<sup>1</sup>, Szczesniak R.<sup>1</sup>, Leonski W.<sup>2</sup> | <sup>1</sup>Czestochowa, <sup>2</sup>Zielona Gora, PL*

**P-23 Linear-Optical Quantum Router – Experimental Implementation**  
*Černocho A.<sup>1</sup>, Lemr K.<sup>1</sup>, Bartkiewicz K.<sup>1,2</sup> | <sup>1</sup>Olomouc, CZ; <sup>2</sup>Poznań, PL*

**P-24 Experimental Attack on Quantum Money Scheme Using Machine Learning**  
*Jiráková K.<sup>1</sup>, Bartkiewicz K.<sup>1,2</sup>, Černocho A.<sup>1</sup>, Lemr K.<sup>1</sup> | <sup>1</sup>Olomouc, CZ; <sup>2</sup>Poznań, PL*

**P-25 Experimental Measurement of Nonlinear Entanglement Witness for Hyper-Entangled States**  
*Trávníček V.<sup>1</sup>, Bartkiewicz K.<sup>1,2</sup>, Černocho A.<sup>1</sup>, Lemr K.<sup>1</sup> | <sup>1</sup>Olomouc, CZ; <sup>2</sup>Poznań, PL*

**P-26 Kerr-Type Nonlinear Quantum Oscillator - Quantum Correlations, Chaotic and Regular Dynamics**  
*Kalaga J. K.<sup>1</sup>, Jarosik M. W.<sup>2</sup>, Szczesniak R. <sup>2</sup>, Leoński W.<sup>1</sup> | <sup>1</sup>Zielona Góra, <sup>2</sup>Częstochowa, PL*

### WAVE AND GEOMETRICAL OPTICS

**P-27 Cellular Mechanotransduction Processes Studied with Optical Tweezers**  
*Adamczyk O., Rajfur Z. | Cracow, PL*

**P-28 On Correction of the Resonant Condition in the Effect of Surface Plasmon Resonance**  
*Bezděková I., Chlebus R., Ciprian D., Hlubina P. | Ostrava, CZ*

**P-29 Determination and Modeling of Spatial-Frequency Dependent Gouy Phase in Terahertz Time Domain Spectroscopy**  
*Koleják P.<sup>1</sup>, Postava K.<sup>1</sup>, Mičica M.<sup>1</sup>, Kužel P.<sup>2</sup>, Kadlec F.<sup>2</sup>, Pištora J.<sup>1</sup> | <sup>1</sup>Ostrava, <sup>2</sup>Prague, CZ*

**P-30 Tolerance Analysis of Coherent Combining Optical System**

*Gontar P., Jabczynski J.K. | Warsaw, PL*

**P-31 Over 10 W Time-Averaged Power Supercontinuum Generation in the 1900-2600 nm Spectral Band**

*Michalska M., Grzes P., Swiderski J. | Warsaw, PL*

**P-32 Birefringence of Pure and Doped Lithium Niobate Crystals**

*Tarjányi N., Káčik D. | Žilina, SK*

**P-33 On Multi-Level Higher-Order-Diffraction Gratings**

*Horáček M.<sup>1</sup>, Šerý M.<sup>1</sup>, Ježek J.<sup>1</sup>, Meluzín P.<sup>1</sup>, Král S.<sup>1</sup>, Jákł P.<sup>1</sup>, Škereň M.<sup>2</sup> | <sup>1</sup>Brno, <sup>2</sup>Husinec-Řež, CZ*

**ADVANCED FIBER TECHNOLOGIES**

**P-34 Optical Frequency Transfers Between ISI CAS and CESNET**

*Hucl V.<sup>1</sup>, Čížek M.<sup>1</sup>, Pravdová L.<sup>1</sup>, Řerucha Š.<sup>1</sup>, Hrabina J.<sup>1</sup>, Jelínek M.<sup>1</sup>, Mikel B.<sup>1</sup>, Smotlacha V.<sup>2</sup>, Havlíš O.<sup>2</sup>, Vojtěch J.<sup>2</sup>, Lazar J.<sup>1</sup>, Číp O.<sup>1</sup> | <sup>1</sup>Brno, <sup>2</sup>Prague, CZ*

**P-35 Wavelength Dependent Characterization of a Multimode Fiber Endoscope**

*Pikálek T., Trägårdh J., Simpson S., Jákł P., Šiler M., Tučková T.M., Uhlířová H., Hons M., Tyc T., Čižmár T. | Brno, CZ*

**IMAGING AND BIOPHOTONICS**

**P-36 Microfluidic Cultivation and Laser Tweezers Raman Spectroscopy of E.Coli under Antibiotic Stress**

*Ježek J.<sup>1</sup>, Pilát Z.<sup>1</sup>, Bernatová S.<sup>1</sup>, Kirchoff J.<sup>2</sup>, Tannert A.<sup>2</sup>, Neugebauer U.<sup>2</sup>, Samek O.<sup>1</sup>, Zemánek P.<sup>1</sup> | <sup>1</sup>Brno, CZ; <sup>2</sup>Jena, DE<sup>2</sup>*

**P-37 Optofluidic Techniques for Directed Evolution of Enzymes**

*Pilát Z., Ježek J., Samek O., Zemánek P., Buryška T., Damborský J., Prokop Z. | Brno, CZ*

**P-38 Instrumentation Based on Raman Spectroscopy for Monitoring Microorganisms of Biotechnological Interest**

*Samek O., Šerý M., Maňka T., Pilát Z., Bernatová S., Ježek J., Šiler M., Zemánek P., Hároniková, A., Gonová, D., Márová, I. | Brno, CZ*

**P-39 Multimode Fiber-Based Endoscope for High Resolution Fluorescence Imaging of Bulk Tissue**

*Tučková T., Jákł P., Hons M., Šiller M., Trägårdh J., Pikálek T., Dražanová E., Krátká L., Simpson S., Tyc T., Uhlířová H., Čižmár T. | Brno, CZ*

**P-40 Comparison of Contrast Sensitivity Tests for Two Types of Targets: Gabor Patches and Modulated by Bessel Profiles**

*Patrzykont M., Wosik J., Pniewski J. | Warsaw, PL*

**P-41 Motion of Optically Bound Sphere Dimers in Tractor Beam**

*Chvátał L., Damková J., Ježek J., Oulehla J., Brzobohatý O., Zemánek P. | Brno, CZ*



**9:00 - 10:40 QUANTUM OPTICS I**

*Chairman: Jan Peřina Jr.*

**9:00 IL-12 Deterministic Implementation of Cubic Quantum Nonlinearity**

*Marek P., Filip R., Furusawa A. | Olomouc, CZ*

**9:40 IL-13 Experimental Tests of Coherence and Entanglement Conservation under Unitary Evolutions**

*řernoch A.<sup>1</sup>, Bartkiewicz K.<sup>2</sup>, Lemr K.<sup>1</sup>, Soubusta J.<sup>1</sup> | <sup>1</sup>Olomouc, CZ; <sup>2</sup>Poznań, PL*

**10:20 QO-1 Performing Controlled Quantum Teleportation on Mixed Biseparable States**

*Barasinski A. | Olomouc, CZ*

*10:40 - 11:00 Coffee Break*

**11:00 - 12:20 QUANTUM OPTICS II**

*Chairman: Jan Soubusta*

**11:00 IL-14 Research of Spin-Ordered Materials by Light**

*Janda T. | Prague, CZ*

**11:40 QO-2 Higher-Order Sub-Poissonian- Like Nonclassical Fields**

*Peřina Jr. J., Michálek V., Arkhipov I.I., Haderka O. | Olomouc, CZ*

**12:00 QO-3 Three-Qubit System and Quantum Correlations**

*Kalaga J. K.<sup>1</sup>, Leoński W.<sup>1</sup>, Peřina Jr. J.<sup>2</sup> | <sup>1</sup>Zielona Góra, PL; <sup>2</sup>Olomouc, CZ*

**12:20 CONFERENCE CLOSURE**

*Zemánek P.*

*12:30 Lunch, Departure*