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| 09:00 | Registration |
| 09:30 | Conference opening |
| 09:30 | Invited lecture: <i>Optical Biosensors and their Medical Applications</i> Prof. Ing. Jiří Homola, CSc., DSc., Institute of Photonics and Electronics CAS |
| Biophysical Methods and Imaging 10:15 – 11:30 | <i>Nitrogen Soft X-Ray Source for Imaging of Biological Objects</i> Šárka Salačová |
| | <i>Detection of Aromatic Hydrocarbon Contaminants with Bioluminescent Bioreporters Attached on Tapered Optical Fiber Elements</i> Jakub Zajíc |
| | <i>Functionalized Nanofibers as a Specific Bionanosensor for Detection of Staphylococcus Aureus</i> Leontýna Varvařovská |
| | <i>Table-top Water-window Microscope Using a Capillary Discharge Plasma Source with Spatial Resolution 75 nm</i> Tomáš Parkman |
| | <i>Fluorescence Properties of Gold and Silver Clusters and Nanoparticles</i> Jan Svoboda |
| 11:30 | Lunch Break |
| 12:30 | Invited lecture: <i>Plasmon Enhanced Fluorophores for Superresolution Microscopy</i> Ing. Vladimíra Petráková, Ph.D., J. Hejrovský Institute of Physical Chemistry CAS |
| Advanced Methods for Biomedicine 12:30 – 15:00 | <i>Molecular Biology Methods in an Experimental Model for Leishmaniasis</i> Lucie Mrázková |
| | <i>The Measurement of Cellular Mechanical Properties in Cancer Research</i> Bibiana Kvasnicová |
| | <i>Improving the Properties of the Material Used for Modern Hip Prosthesis</i> Lucie Košinová |
| | <i>Eye Parameters and their Effect on Visual Acuity After Cataract Surgery</i> Markéta Žáková |
| | <i>Comparison of Multipotent Mesenchymal Stromal Cells from Human Adipose Tissue and Wharton's Jelly for Soft Tissue Reconstruction</i> Simona Stuchlíková |
| | <i>The Application of Contact Lenses as Carriers of Multipotent Mesenchymal Stromal Cells for Regenerative Medicine Applications</i> Eliška Vavřinová |
| | <i>Tribological Properties of Contact Lenses</i> Alena Škubníková |
| 15:00 | Coffee break |
| Data Analysing and Processing 15:30 – 16:45 | <i>Functional Differences of the Brain in Patients in the Presymptomatic and Manifestic Phases of Parkinson's Disease</i> Jana Kukačková |
| | <i>Comparison of Brain Iron Levels in the Basal Ganglia and Thalamus for the REM Sleep Disorder and Parkinson's Disease Patients</i> Pavla Marousková |
| | <i>Segmentation of Individual Parts of the Basal Ganglia on MRI Images Using Atlases</i> Vendula Lhotáková |
| | <i>Reconstruction and Properties of T2* Parametric Maps and their Relationship with QSM in Patients with REM Sleep Disorder and Parkinson's Disease</i> Jozefína Valřková |
| | <i>Accuracy of Energy Expenditure Measurement by Wearable Electronics</i> Olga Tsirkunová |
| 17:00 | Conference closing & awards the best contributions |