



Saturday 29 June 2024 (Collegium Maius)

17:00-20:00 **WELCOME RECEPTION @ Collegium Maius, Stuba Communis**

17:00 – 18:30 **GUIDED TOUR THROUGH COLLEGIUM MAIUS**

08:30-09:00 COFFEE A PRIORI		
09:00-09:30 OPENING		<i>chairs: Paweł Moskał, Ewa Stępień</i>
09:30-10:00	Opening talk: Long-term Covid 19 effect on reproductive health - vaccination versus disease!	Prof. Maciej Kurpisz Institute of Human Genetics, Polish Academy of Sciences, Poland
10:00-10:30 COFFEE BREAK		
10:30-11:30 TOTAL-BODY PET		<i>chairs: Shiva Abbaszadeh, Karol Lang</i>
10:30	Key talk: Total-Body PET: In Search of the "Killer App"	Prof. Ramsey Badawi University of California, Davis, USA
11:00	Key talk: Toward More Affordable Multi-Dimensional PET Imaging	Prof. Sadek Nehmeh Weill Cornell Medicine, NY USA
11:30-11:50 COFFEE BREAK		
11:50-12:25 POSITRONIUM IN MEDICINE		<i>chairs: Sylwia Ptasieńska, Jaquin Herraiz</i>
11:50	First positronium imaging of humans	Prof. Paweł Moskał Jagiellonian University, Poland
12:00	Invited talk: From SPLIT to SIMPLE: High-Resolution Statistical Image Reconstruction Methods for Positronium Lifetime Imaging	Prof. Jinyi Qi University of California, Davis, USA
12:25-14:00 LUNCH @ Collegium Novodvorscianum Gallery		
14:00-15:15 EXTRACELLULAR VESICLES FOR THERANOSTICS		<i>chairs: Małgorzata Przybyło, Maciej Kurpisz</i>
14:00	Invited talk: Insight into proteome of follicular fluid-derived extracellular vesicles following vitamin D3 and insulin treatment – an in vitro study on a pig model	Prof. Małgorzata Grzesiak Jagiellonian University, Poland
14:25	Invited talk: The role of extracellular vesicles secreted by senescent vascular smooth muscle cells in modulation of immune cell function	Prof. Grażyna Mosieniak Nencki institute of Experimental Biology, Poland
14:50	Invited talk: Leukemic extracellular vesicles as drivers of T cell-mediated immunosuppression	Prof. Katarzyna Piwocka Nencki institute of Experimental Biology, Poland
15:15-15:45 COFFEE BREAK		
15:45-17:00 PET IMAGING INNOVATIONS		<i>chairs: Barbara Błasiak, Ramsey Badawi</i>
15:45	Invited talk: Total-body multi-parametric PET imaging: recent advancements and future perspective for its clinical adoption	Prof. Nikolaos Karakatsanis Weill Cornell Medical College, USA
16:10	Invited talk: Multi-organ kinetic modelling and connectome analysis for Total-Body PET	Prof. Adriana Tavares University of Edinburgh, UK
16:35	Invited talk: Ultrafast Timing Reconstruction-free Direct Positron Emission Imaging (dPEI)	Prof. Sun Il Kwon University of California, USA

Monday 1 July 2024 (Collegium Novodvorscianum)

08:30-09:00 COFFEE A PRIORI		
09:00-10:50 NOVEL BIOMARKERS FOR THERANOSTICS		<i>chairs: Grażyna Mosieniak, Kuangyu Shi</i>
09:00	Key talk: Proteomic profiles of melanoma-derived and lymphocyte-derived exosomes from plasma of melanoma patients	Prof. Piotr Wiślak Medical University of Gdańsk,, Poland
09:30	Key talk: Radioisotope labelled somatostatin receptor antagonists as a promising tool to improve the diagnosis and treatment of patients with neuroendocrine tumours	Prof. Alicja Hubalewska - Dydejczyk Jagiellonian University, Poland
10:00	Invited talk: Integrative Biophysical and Computational Approaches for Melanoma Drug Combination Selection via Glycosylation-Based Biomarkers	Prof. Tomasz Kobiela Warsaw University of Technology, Poland
10:25	Invited talk: Design, Synthesis, and Evaluation of Novel Gold Nanorod-Based Theranostic Agents for Anticancer Therapy	Dr. Martyna Krzykawska-Serda Jagiellonian University, Poland
10:50-11:20 COFFEE BREAK		
11:20-13:05 TOTAL-BODY PET		<i>chairs: Alicja Hubalewska-Dydejczyk, Sadek Nehmeh</i>
11:20	Key talk: Total-Body PET: where are we today?	Prof. Axel Rominger Bern University, Switzerland
11:50	Invited talk: Clinical practice and clinical research on the Total Body PET	Dr. Adrienne Brouwers University Medical Center Groningen, Netherlands
12:15	Invited talk: Molecular transport imaging of radiotracers with total-body dynamic PET	Prof. Guobao Wang University of California, Davis, USA
12:40	Invited talk: Quantitative modeling of human physiology using PET	Dr. Thomas Lund Andersen Rigshospitalet, Denmark
13:05-14:30 LUNCH @ Collegium Novodvorscianum Gallery		
14:30-15:45 POSITRONIUM IN FUNDAMENTAL AND MATERIAL PHYSICS		<i>chairs: Angela di Fulvio, Jerzy Dryzek</i>
14:30	Invited talk: New bunched positron beam at the AntiMatter Laboratory in Trento: planned quantum experiments with positronium	Prof. Roberto Sennen Brusa University of Trento, Italy
14:55	Invited talk: Study of the mechanism of positronium formation on solid surfaces	Prof. Jakub Cizek Charles University, Czech Republic
15:20	Invited talk: Doppler cooling of positronium with a broadband laser pulse	Dr. Lisa Glöggler CERN, Switzerland
15:45-16:15 COFFEE BREAK		
16:15-17:55 EXOTIC ATOMS AND NUCLEI, NUCLEAR PHYSICS		<i>chairs: Anzori Georgdze, Tomasz Kozik</i>
16:15	Invited talk: Novel approaches to light hypernuclei with heavy ion beams, image analyses and machine learning	Prof. Takehiko R. Saito RIKEN, Japan
16:40	Invited talk: Observations of electron emissions from the DD reaction: its implications in fundamental and applied research	Dr. Rakesh Dubey University of Szczecin, Poland
17:05	Invited talk: Chiral symmetry restoration in nucleus observed in pionic atoms	Prof. Kenta Itahashi RIKEN, Japan
17:30	Invited talk: Kaonic Atoms with the SIDDHARTA-2 experiment	Dr. Fabrizio Napolitano Laboratori Nazionali di Frascati - INFN, Italy
19:00-20:30 CLASSICAL CONCERT @ Collegium Maius		

Tuesday 2 July 2024 (Collegium Novodvorscianum)

08:30-09:00 COFFEE A PRIORI		
09:00-09:50 SCANDIUM FOR PET		<i>chairs: Barbara Błasiak, Ihor Kadenko</i>
09:00	Invited talk: Possibilities of producing scandium isotopes in Poland	Dr. Jarosław Choiński University of Warsaw, Poland
09:25	Invited talk: Production of theranostic pair $^{43/44}\text{Sc} - ^{47}\text{Sc}$ on calcium targets	Dr. Rafał Walczak Institute of Nuclear Chemistry and Technology, Poland
09:50-10:20 COFFEE BREAK		
10:20-11:10 POSITRONIUM IN MEDICINE		<i>chairs: Karol Lang, Mihael Makek</i>
10:20	Invited talk: Enhanced Two-Component Positronium Lifetime Imaging in Time-of-Flight PET	Prof. Hsin-Hsiung Huang University of Central Florida, USA
10:45	Invited talk: Challenges and prospects of the positronium imaging reconstruction in J-PET	Dr. Roman Shopa National Centre for Nuclear Research, Poland
11:10	An analytic, moment-based method to estimate orthopositronium lifetimes in positronium lifetime imaging	Lucas Berens University of Chicago, USA
11:30-11:40 SHORT BREAK		
11:40-12:45 POSITRONIUM IN MEDICINE		<i>chairs: Sylwia Ptasińska, Jinny Qi</i>
11:40	Invited talk: Ortho-Positronium Lifetime Spectroscopy for 2-D Liver Tissue Imaging	Prof. Angela di Fulvio University of Illinois, USA
12:05	Invited talk: Positronium lifetime measurement using a clinical PET system for biomedical applications	Dr. Sodai Takyu National Institutes for Quantum and Radiological Sci. and Tech., Japan
12:30	Preliminary studies of positronium lifetime estimation in human livers	Manish Das Jagiellonian University, Poland
12:45-14:10 LUNCH @ Collegium Novodvorscianum Gallery		
14:10-15:55 POSITRONIUM IN FUNDAMENTAL AND MATERIAL PHYSICS		<i>chairs: Eryk Czerwiński, Roberto Brusa</i>
14:10	Key talk: Search for New Particle in Positronium Decay	Prof. Hong Joo Kim Kyungpook National University, South Korea
14:40	Invited talk: Application of spin-polarized positron annihilation spectroscopy to spintronics materials	Prof. Atsuo Kawasuso National Institutes for Quantum Science and Technology, Japan
15:05	Invited talk: Remarks on Positronium in molecular matter and other	Prof. Jerzy Dryzek Institute of Nuclear Physics PAS, PL
15:30	Invited talk: S-QM/MM approach to positronium in liquids	Prof. Marcio Varella University of Sao Paulo, Brazil
15:55-16:25 COFFEE BREAK		
16:25-18:00 POSITRONIUM IN FUNDAMENTAL AND MATERIAL PHYSICS		<i>chairs: Jens von den Linden, Ryugo Hayano</i>
16:25	Invited talk: Many-body theory of positron and positronium interactions with atoms and molecules	Prof. Dermot Green Queen's University Belfast, UK
16:50	Invited talk: Late-time decay for electromagnetic bound states	Prof. Francesco Giacosa Jan Kochanowski University of Kielce, Poland
17:15	Invited talk: Studies of ortho-positronium mean lifetime with the J-PET tomograph	Dr. Sushil Sharma Jagiellonian University, Poland
17:40	QFT approach to positronium decays	Dr. Milena Piotrowska Jan Kochanowski University of Kielce, Poland

Wednesday 3 July 2024 (Collegium Novodvorscianum)

08:30-09:00 COFFEE A PRIORI		
09:00-10:40 ARTIFICIAL INTELIIGENCE FOR MEDICINE		<i>chairs: Thomas Beyer, Marian Cholewa</i>
09:00	Key talk: Artificial intelligence in medical imaging: influencing precision care	Prof. Damini Dey Cedar Sinai, LA, USA
09:30	Key talk: Knowledge-guided Artificial Intelligence for Personalized Nuclear Medicine Theranostics	Prof. Kuangyu Shi Bern University, Switzerland
10:00	Deep learning in online adaptive MRI guided radiotherapy at the MRIdian MR-Linac	Maria Kawula LMU Hospital, Germany
10:20	Advancing cardiac detection in chest X-ray images using Machine Learning: A practical application of AI in medical imaging	Dr. Narendra Rathod Jagiellonian University, Poland
10:40-11:10 COFFEE BREAK		
11:10-12:10 MULTI-TRACER PET IMAGING		<i>chairs: Hsin-Hsiung Huang, Guobao Wang</i>
11:10	Invited talk: Multiplexed PET based on triple coincidences	Prof. Joaquin L. Herraiz Complutense University of Madrid, Spain
11:35	Extension of MLEM algorithm for simultaneous dual-tracer PET image reconstruction	Dr. Lech Raczyński National Centre For Nuclear Research, Poland
11:55	Developing of dual-tracer imaging with modular J-PET	Ermias Yitayew Beyene Jagiellonian University, Poland
12:10-13:30 LUNCH @ Collegium Novodvorscianum Gallery		
13:30-14:50 QUANTUM ENTANGLEMENT IN PET		<i>chairs: Francesco Giacosa, Atsuo Kawasuso</i>
13:30	Key talk: Quantum Entanglement and Multimodality Techniques	Prof. Shiva Abbaszadeh UC Santa Cruz, California
14:00	Invited talk: Probing polarization correlations of annihilation quanta in Compton scattering experiment and their implementation in Positron emission tomography	Prof. Mihael Makek University of Zagreb, Croatia
14:25	Invited talk: A first detailed study of the quantum decoherence of entangled gamma photons	Prof. Julien Bordes University of York, UK
14:50-15:20 COFFEE BREAK		
15:20-16:25 QUANTUM ENTANGLEMENT IN PET		<i>chairs: Paulo Fonte, Pragya Das</i>
15:20	Invited talk: Theoretical Framework for Multiple Compton Scattering of PET Annihilation Photons	Dr. Pietro Caradonna University of York, UK
15:45	Studies of the quantum entanglement of photons from electron-positron annihilation in the porous material using J-PET scanner	Deepak Kumar Jagiellonian University, Poland
16:05	Positron emission tomography imaging using polarization-correlated annihilation quanta – experimental study	Ana Marija Kozuljević University of Zagreb, Croatia
19:30-20:30 Public lecture: Artificial Intelligence and Medicine: Crossing the Rubicon		Prof. Piotr Słomka Cedars-Sinai Medical Center USA

08:30-09:00 COFFEE A PRIORI		
09:00-10:35 PARTICLE THERAPY MONITORING		<i>chairs: Katia Parodi, Antoni Ruciński</i>
09:00	Key talk: Image-guided FLASH proton therapy	Prof. Karol Lang University of Texas at Austin, USA
09:30	Invited talk: Compton cameras for cancer treatment assessment	Prof. Gabriela Llosa IFIC (CSIC-UV), Spain
09:55	Range monitoring capabilities with the SiFi-CC Compton camera: spectral-spatial imaging with Monte Carlo-simulated data	Dr. Jorge Roser Universtität zu Lübeck, Germany
10:15	Short-term response of melanoma spheroids and melanocytes to FLASH proton therapy - the use of colorimetric microscopy and infrared microscopy	Dr. Martyna Durak-Kozica Jagiellonian University, Poland
10:35-11:05 COFFEE BREAK		
11:05-12:45 EXTRACELLULAR VESICLES FOR THERANOSTICS		<i>chairs: Małgorzata Grzesiak, Ali dinari</i>
11:05	Key talk: Developing a strategy to measure concentrations of extracellular vesicles in human plasma for biomarker exploration	Prof. Rienk Neuwland Amsterdam University Medical Center, Nederland
11:35	Invited talk: The glycosylation status of melanoma cells directly affects the proteome composition of extracellular vesicles they release	Prof. Małgorzata Przybyło Jagiellonian University, Poland
12:00	Invited talk: Probing red blood cell - derived microparticles (RMPs): Insights from Raman spectroscopy and complementary techniques	Prof. Katarzyna Marzec AGH University of Science and Technology, Poland
12:25	Possibilities of using extracellular vesicles (EVs) of microbial origin as natural carriers of drugs used in anticancer therapies – EVs-DDS (EVs-based Drug Delivery System)	Patrycja Kowalska Warsaw University of Technology, Poland
12:45-15:00 LUNCH & POSTER SESSION & CONFERENCE PHOTO @ Collegium Novodvorscianum Gallery		
Chairs: <i>Małgorzata Przybyło, Martyna Krzykawska-Serda, Ihor Kadenko, Ryugo Hayano, Ramsey Badawi, Ashutosh Bhardwaj</i>		
	1. Two axes sliding gantry for total-body J-PET / CT scanner	Tevfik Kaplanoglu Jagiellonian University, Poland
	2. Study of $3\gamma/2\gamma$ positronium decay ratio in materials using the J-PET scanner	Szymon Parzych Jagiellonian University, Poland
	3. Method of Time-Over-Threshold - energy calibration of J-PET scanner with an external source	Szymon Parzych Jagiellonian University, Poland
	4. Calibration of PALS system with CRM materials for bio-medical studies	Karol Kubat Jagiellonian University, Poland
	5. Exploring Novel Techniques for Optical Vortex Beam Generation and Detection Using Mach-Zehnder Interferometer and Spiral Zone Plate	Sharareh Jalali Urmia University, Iran
	6. Tests of T, CP and CPT discrete symmetries via kaons' transitions at KLOE-2	Szymon Gamrat Jagiellonian University, Poland
	7. Mirror Matter in Ortho-Positronium Decay Searches using the J-PET Detector	Justyna Mędrala-Sowa Jagiellonian University, Poland
	8. TOF-sims deeper examination of lipid alterations in extracellular vesicles in the urine of type 1 diabetes patients	Magdalena Skalska Jagiellonian University, Poland
	9. SRG Induced Three-body Forces	Vaibhav Chahar Jagiellonian University, Poland
	10. Short-term response of melanoma spheroids and melanocytes to FLASH proton therapy - the use of colorimetric microscopy and infrared microscopy	Martyna Durak-Kozica Jagiellonian University, Poland

	11. Multi-Photon decays of ortho-Positronium with J-PET	Pooja Tanty Jagiellonian University, Poland
	12. Effect of N-glycosylation on protein sorting into microvesicles and exosomes released by WM115 melanoma cells	Magdalena Wilczak Jagiellonian University, Poland
	13. A vision to increase the availability of PET diagnosis by combining a low-cost modular J-PET tomograph with the $^{44}\text{Ti}/^{44}\text{Sc}$ generator	Aleksander Khreptak Jagiellonian University, Poland
	14. Spectroscopic methods in the study of the effect of the ketogenic diet on glial scar development in terms of time and gender	Kamil Kawoń AGH University of Krakow, Poland
	15. Study of defects in TiO ₂ polymorphs using positron annihilation	Oksana Melikhova Charles University, Czech Republic
	16. Cross sections of (p,x) reactions on ^{12}C , ^{14}N and ^{16}O for $^{10,11}\text{C}$ production	Nadia Sakhno International Nuclear Safety Center of Taras Shevchenko National University of Kyiv, Ukraine
	17. In vitro characterization of large-scale produced extracellular vesicles with cryo-EM and lensless holographic microscopy – proof of concept	Kamil Wawrowicz Jagiellonian University, Poland
	18. Feasibility study of pet image reconstruction using single-scattered events with TOF	Ritesh Verma IITB, Mumbai, India
	19. Production of ^{64}Cu radioisotope by proton irradiation in a medical cyclotron for theranostic applications	Jakub Gauza University of Warsaw/Voxel S.A., Poland
	20. Verification of Proton beam Range using photopolymerized PMMA base plastics scintillator	Sunghwan Kim Cheongju University, South Korea
	21. Towards total-body J-PET: overview of data correction techniques for image reconstruction	Aurelien Coussat Jagiellonian University, Poland
	22. Positron annihilation lifetime measurement of plasma clots and thrombi	Simbarashe Moyo Jagiellonian University, Poland
	23. Towards the positronium studies in proton beam therapy with J-PET system	Wiktor Mryka Jagiellonian University, Poland
	24. Optimizing the length of a single ring of the Total body J-PET	Keyvan Tayefi Ardebili Jagiellonian University, Poland
	25. CP symmetry study using the Polarization vector of ortho-Positronium annihilation Photon	Kavya Valsan Eliyan Jagiellonian University, Poland
	26. Unravelling Extracellular Vesicle Morphology: Machine Learning approach for Biomarker Identification	Kriti Awasthi Jagiellonian University, Poland
	27. The effect of heme oxygenase-1 on the p53 pathway depends on heme availability	Swati Sweta Ghadei Jagiellonian University, Poland
15:00-16:55 PARTICLE DETECTION TECHNOLOGIES		<i>chairs: Hong Joo Kim, Łukasz Kapton</i>
15:00	Invited talk: Development of fast scintillation detectors for photon-counting CT	Prof. Dennis Schaart Delft University of Technology, Netherlands
15:25	Invited talk: A limited-angle PET imager with ultrafast flat-panel detectors	Prof. Rok Pestotnik Jožef Stefan Institute, Slovenia
15:50	Invited talk: Modeling the effect of neutron damage on LGAD sensors	Prof. Ashutosh Bhardwaj University of Delhi, India
16:15	Organic high-Z scintillators for a flexible and fast total body nuclear imaging	Angelica De Gregorio Sapienza University of Rome, Italy
16:35	Development of HPGe Detectors for Ultra High Rate Spectroscopy and Imaging	Dr. Joanna Szornel Lawrence Berkeley National Laboratory, USA
16:55-17:25 COFFEE BREAK		

17:25-18:50 EDUCATION AND BIO-ALGORITHMS AND MED-SYSTEMS*chair: Ewa Stępień*

17:25	Invited talk: Nurturing the Future Stars of Physics: The International Physics Olympiad	Prof. Ryugo Hayano University of Tokyo, Japan
17:50	Invited talk: How do digital technologies fit into clinical reasoning education?	Prof. Andrzej Kononowicz Jagiellonian University Medical College, Poland
18:15	Invited talk: Story of the Bio-Algorithms and Med-Systems	Prof. Irena Roterman-Konieczna Jagiellonian University Medical College, Poland
18:40	Introduction into the ESMI	Prof. Ewa Stępień Jagiellonian University, Poland

20:00-23:00 CONFERENCE DINNER IN GALICYJSKA RESTAURANT

Friday 5 July 2024 (Collegium Novodvorscianum)

09:00-09:30 COFFEE A PRIORI		
09:30-10:30 POSITRONIUM IN FUNDAMENTAL AND MATERIAL PHYSICS <i>chairs: Takatsugu Ishikawa, Milena Piotrowska</i>		
09:30	Dark Matter in Positronium and J-PET prospects	Dr. Elena Perez del Rio Jagiellonian University, Poland
09:50	Advancements in sensitivity of CPT symmetry test for ortho-positronium decays in J-PET	Neha Chug Jagiellonian University, Poland
10:10	Ortho-Positronium Detection with a High-Resolution PET Scanner	Firas Abouzahr University of Texas at Austin, USA
10:30-11:00 COFFEE BREAK		
11:00-12:55 PARTICLE THERAPY MONITORING <i>chairs: Renata Kopeć, Gabriela Llosa</i>		
11:00	Key talk: A high-resolution, spherical in-beam PET scanner for range monitoring and biological guidance of ion beam therapy	Prof. Katia Parodi Ludwig Maximilian University, Munich, Germany
11:30	Invited talk: Proton therapy range monitoring using the J-PET scanner	Dr. Antoni Ruciński Institute of Nuclear Physics PAS, Poland
11:55	PET Image-Guidance in Conventional and FLASH Proton Therapy	Dr. John Cesar University of Texas at Austin, USA
12:15	Experimental characterization of LET spectra in proton therapy	Dr. Jan Gajewski Institute of Nuclear Physics PAS, Poland
12:35	Differential Cross Sections Measurement of ¹² C fragmentation on C, O and H in the Energy Range of interest for Carbon Ion Therapy Applications	Dr. Ilaria Mattei FOOT collaboration, Italy
12:55-14:15 LUNCH @ Collegium Novodvorscianum Gallery		
14:15-15:55 PET IMAGING INNOVATIONS <i>chairs: John Cesar, Sushil Sharma</i>		
14:15	Invited talk: Resistive Plate Chambers for brain PET imaging and particle tracking and timing	Prof. Paolo Fonte Laboratory of Instrumentation and Experimental Part. Phys., Portugal
14:40	Simulation studies of a brain PET insert for the total body J-PET tomograph	Dr. Martin Rädler Jagiellonian University, Poland
15:00	Walk-Through PET scanner: A high throughput, high resolution scanner	Dr. Meysam Dadgar Ghent University, Belgium
15:20	Design study of a breast-dedicated PET/SPECT detector built from inorganic scintillators and WLS fibers	Prof. Anzori Georgadze Kiev Institute for Nuclear Research, Ukraine
15:40	Evaluation of lesion contrast and performance characteristics in Modular J-PET scanner	Dr. Faranak Tayefi Ardebili Jagiellonian University, Poland
15:55-16:25 COFFEE BREAK		
16:25-17:50 ARTIFICIAL INTELIGENCE FOR MEDICINE <i>chairs: Konrad Klimaszewski, Fabrizio Napolitano</i>		
16:25	Invited talk: Deep learning for data corrections in quantitative NM imaging	Prof. Dimitris Visvikis National Institute of Health and Medical Sciences, France
16:50	Invited talk: Experimental data-driven predictive modeling of DNA damage induced by low-temperature plasma radiation	Prof. Sylwia Ptasińska University of Notre Dame, USA
17:15	Application of Deep Learning-Based Methods in medical imaging	Prof. Marian Cholewa University of Rzeszow, Poland
17:35	Unravelling Extracellular Vesicle Morphology: Machine Learning approach for Biomarker Identification	Kriti Awasthi Jagiellonian University, Poland

08:30-09:00 COFFEE A PRIORI		
09:00-10:20 POSITRONIUM IN FUNDAMENTAL AND MATERIAL PHYSICS		<i>chairs: Jakub Cizek, Marcio Varella</i>
09:00	Key talk: Experimental studies on the positronium negative ion, a three-body bound state composed of a positron and two electrons	Prof. Yasuyuki Nagashima Tokyo University of Science, Japan
09:30	Invited talk: Applying positron-emission diagnostic techniques to magnetically confined electron-positron pair plasma	Dr. Jens von den Linden Max Planck Institute for Plasma Physics, Germany
09:55	Invited talk: Possibility to Detect Electrolyte Disorder Using PET with Positron Annihilation Lifetime Spectroscopy	Prof. Radek Zaleski Marie Curie-Skłodowska University in Lublin, Poland
10:20-10:50 COFFEE BREAK		
10:50-12:30 EXOTIC ATOMS AND NUCLEI, NUCLEAR PHYSICS		<i>chairs: Magdalena Skurzok, Rakesh Dubey</i>
10:50	Invited talk: Formation of long lived nuclear molecules in (p, ² He) nuclear reactions on ¹⁸¹ Ta and ¹⁵⁹ Tb	Prof. Ihor Kadenko Taras Shevchenko National Uni. of Kyiv, Ukraine
11:15	Invited talk: Spectroscopy of antiprotonic atoms	Prof. Tomasz Sowiński Institute of Physics PAS, Poland
11:40	Invited talk: Structure of Xi hypernuclei	Prof. Emiko Hiyama RIKEN, Japan
12:05	Invited talk: The eta-deuteron interaction studied in coherent neutral-pion and eta-meson photoproduction on the deuteron	Prof. Takatsugu Ishikawa Osaka University, Japan
12:30-14:00 LUNCH @ Collegium Novodvorscianum Gallery		
14:00-14:45 NOVEL PHARMACEUTICALS FOR THERANOSTICS		<i>chairs: Zdenka Kuncic, Mitchell Albert</i>
14:00	Invited talk: Improvement of cancer contrast in MRI using nanoparticles in the animal model	Prof. Barbara Błasiak The Henryk Niewodniczański Institute of Nuclear Physics PAS, Poland
14:25	Targeted Cellular Tracking of Pancreatic Tumor Cells via Magnetic Particle Spectroscopy/ Imaging (MPS/MPI)	Dr. Ali Dinari Jagiellonian University, Poland
14:45-15:15 COFFEE BREAK		
15:15-16:35 MEDICAL IMAGING INNOVATIONS		<i>chairs: Bartosz Leszczyński, Yasuyuki Nagashima</i>
15:15	Key talk: Uncovering Novel Treatment Strategies to Combat Life-Threatening Infections with Multimodal Imaging	Prof. Greetje Vande Velde KU Leuven, Belgium
15:45	Invited talk: Superparamagnetic nanoparticles – a versatile platform for imaging and theranostic innovations	Prof. Zdenka Kuncic University of Sydney, Australia
16:10	Invited talk: Recent Advances in Hyperpolarized Xenon-129 Molecular Imaging: Are We Close for a Practical Application?	Prof. Mitchell Albert Lakehead University, Canada

Sunday 7 July 2024 (Collegium Novodvorscianum)

09:00-09:30 COFFEE A PRIORI		
09:30-11:30 PET IMAGING INNOVATIONS		<i>chairs: Radosław Zaleski, Dimitris Visvikis</i>
09:30	Key talk: Bench-to-clinical research on novel application-specific PET systems	Prof. Taiga Yamaya National Institutes for Quantum and Radiological Science and Technology (QST), Japan
10:00	Invited talk: Exploring PET imaging with scattered photons and polarization characteristics	Prof. Pragya Das Indian Institute of Technology Bombay, India
10:25	Invited talk: New tricks with old PETs	Dr. Tom Leadbeater University of Cape Town, South Africa
10:50	Optical quality control of plastic scintillators for the total-body J-PET scanner	Dr. Łukasz Kapłan Jagiellonian University, Poland
11:10	Using 3D CNNs for distortion corrections in PET imaging	Dr. Konrad Klimaszewski National Centre for Nuclear Research, Poland
11:30-12:00 COFFEE BREAK		
12:00-13:15 CLOSING SESSION		<i>chairs: Paweł Moskał, Ewa Stępień</i>
12:00-12:45	Closing talk: Beginnings and Prospects of PET	Prof. Abass Alavi University of Pennsylvania, USA
12:45-13:15 CLOSING CEREMONY		
13:15-14:30 LUNCH @ Collegium Novodvorscianum Gallery		
14:30-17:00 NETWORKING		