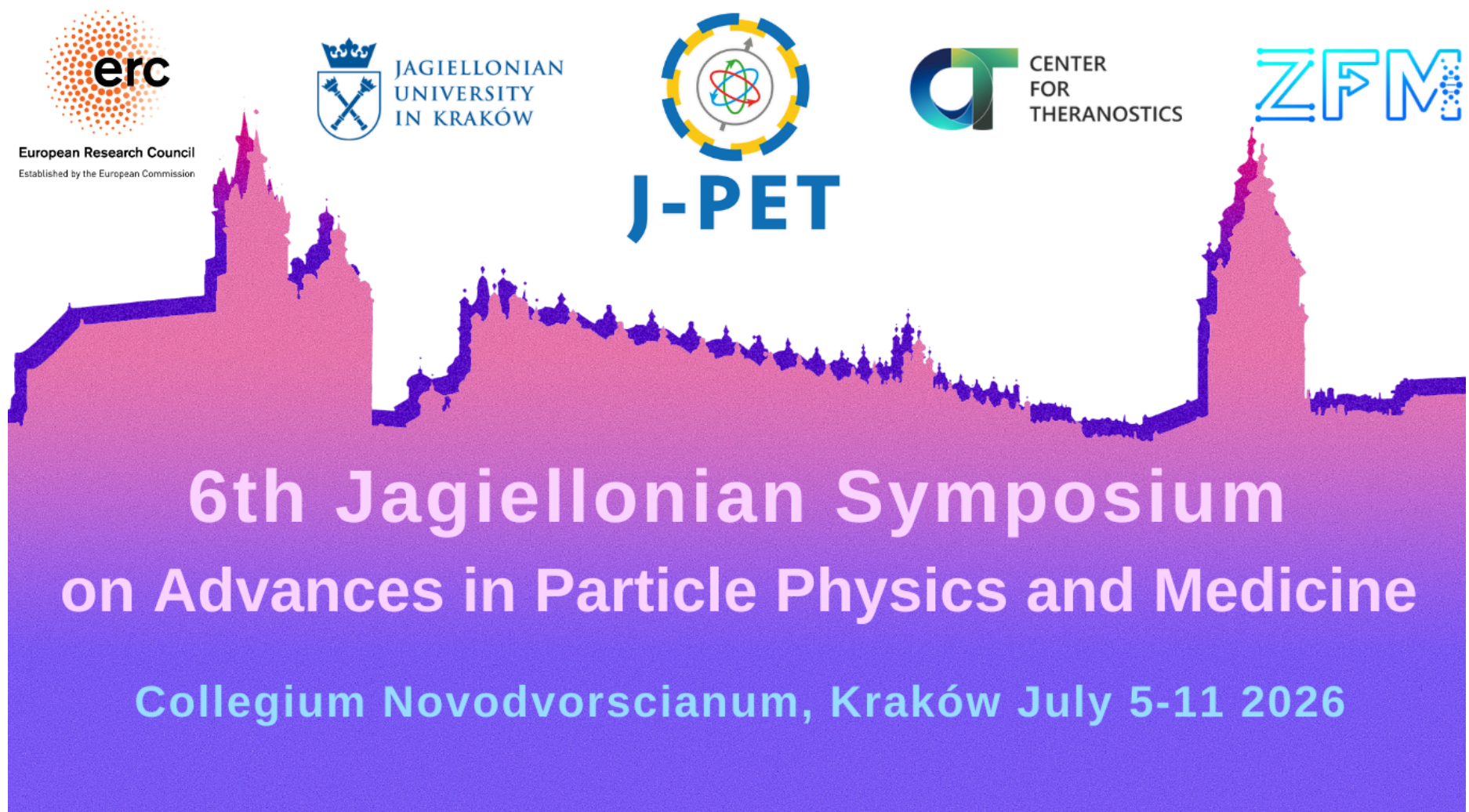

Event Program of JS2026



The event program is being updated continuously.

05 July 2026 - Collegium Maius (Jagiellońska street 15)

- 15:45 – 17:00 Guided tours through Collegium Maius
- 16:30 – 19:30 Welcome Reception in Collegium Maius

06 July 2026 - Collegium Novodvorscianum (Anny Street 12)

- 8:30 – 9:00 Registration and Coffee a Priori

9:00 – 9:40 Opening Ceremony

- Chairs: Prof. Paweł Moskal, Prof. Ewa Stępień
- * Prof. Wojciech Macyk, Rector for Research of the Jagiellonian University
- Welcome from European Society for Molecular Imaging
- P. Moskal, E. Stępień: Advancing Molecular Imaging with Jagiellonian PET

9:40 – 10:10 Opening lecture.

- Prof. Habib Zaidi
- “Advanced Computational Models for Theranostic Digital Twins”

10:10 – 10:40 Coffee break

10:40 – 12:30 Multiplexed PET and Positronium Imaging

- **Keynote: Prof. Craig Levin** -> “*Biological Multiplexing With PET: Interrogating Multiple Disease Biomarkers In A Single PET Scan*”

- **Invited Prof. Jinyi Qi** -> Positronium imaging with PennPET
- **Invited: Narendra Radhoo** -> *“Positronium Lifetime Imaging On The Biograph Vision Quadra: From Validation To First In-Vivo Clinical Results”*
- **Invited: Prof. Hsin-Hsiung Huang** -> *“Fast 3D Positronium Lifetime Estimation”*
- Manish Das -> *“Evaluation of Novel $\beta^+\gamma$ Emitters For Positronium Lifetime Imaging With The Modular J-PET Scanner”*

12:30 – 14:00 Lunch

14:00 – 15:10 Particle therapy monitoring

- **Keynote: Prof. Katia Parodi** -> *“Advanced On-Board Imaging For Precision Small Animal Proton And Light Ion Radiation Research”*
- Aafke Kraan -> *“A Deep Learning Framework For Water-Equivalent Portal Dose Reconstruction And Treatment Error Detection Using E-PID Imaging For Phantoms And Patients”*
- Giulio Lovatti -> *“In-Beam PET For First In Vivo Proton Range Assessment In Small-Animal Therapy With Online Image Reconstruction”*
- Szymon Niedźwiecki -> *“Range Monitoring In Proton Therapy Using The J-PET Scanner: Extended Experimental Studies”*

15:10 – 16:50 PET imaging innovations (QE)

- **Keynote: Prof. Kenji Shimazoe** -> *“Positronium Ratio Imaging, Quantum Entangled PET And Double Photon Emission Imaging With A Ring-Type Compton-PET Scanner”*
- **Invited: Prof. Youngho Seo** -> *“Imaging Technology Developments For Therapeutic Radiopharmaceuticals”*
- **Invited: Prof. Mizuki Uenomachi** -> *“Nuclear Medicine Imaging With Angular Correlation Measurement For Local Microenvironment Sensing”*
- **Invited: Prof. Krzysztof Starosta** -> *“Positronium Imaging Through Energy Measurements In 3-Gamma Annihilation Events”*
- Macoto Fujimoto -> *“In Vivo Positronium Ratio Imaging Via Direct Localization of O-Ps Three-Photon Annihilation”*

16:50 – 17:20 Coffee break

17:20 – 18:20 Radiopharmaceuticals for theranostics

- **Invited: Prof. Renata Mikołajczak** -> *“From Radiopharmaceutical Development To Clinical Trials – Polatom’s Experience”*
- **Invited: Dr. Martina Benešová-Schäfer** -> *“Subtype-Specific Insights In Breast Cancer Radiotheranostics”*
- Prof. Agnieszka Kyzioł, *“Sustainable Inorganic-Organic Hybrids As Drug Delivery Systems”*

19:00 Public lecture in the historical hall of Collegium Novum.

Prof. Simon Cherry *“Seeing is believing”*

07 July 2026 - Collegium Novodvorscianum

- 8:30 – 9:00 Coffee a Priori

9:00 – 10:15 Artificial intelligence for medicine

- **Keynote: Prof. M. Mahesh** -> *“Artificial Intelligence In Medicine”*
- **Invited: Prof. Joanna Polańska** -> *“An NLP-Based AI System For Post-Radiation Patient Triage”*
- Dr. Martyna Krzykawska-Serda -> *“AI-Enhanced In Vitro And In Vivo Imaging of Preclinical Cancer Models”*
- Dr. Pavel Nuklin, *“AI-based delineation of lymphoma lesions in FDG PET”*

10:15 – 10:45 Coffee break

10:45 – 12:30 Quantum entanglement in positron emission tomography

- **Invited: Prof. Mihael Makek** -> *“Quantum Entanglement of Positron Annihilation Quanta: From Exploration of Fundamental Aspects To Application In PET Imaging”*
- **Invited: Prof. Shiva Abbaszadeh** -> *“Interaction Profiling of $\beta^+\gamma$ Isotopes With An Edge-On CZT-Based Imaging System: A Monte Carlo Simulation Study”*
- **Invited: Dr. Peter Caradonna** -> *“Operational Signatures of Bell Photons Beyond Polarization Filters”*

- **Invited: Prof. Tomasz Sowiński** -> *“Towards Rigorous Entanglement Detection of Para-Positronium Annihilation Photons”*
- Koki Nakamura -> *“Preliminary In Vivo Mouse Imaging Study Using Quantum Entanglement-Based PET”*
- Deepak Kumar -> *“Measuring the Polarization Correlation of Annihilation Photons in e^+e^- Decays using Modular J-PET”*

12:30 – 14:00 Lunch

14:00 – 15:20 PET and Brain-PET imaging innovations

- **Keynote: Prof. Taiga Yamaya** -> *“Beyond Scale: Detector Physics Perspectives On The Future of PET”*
- **Invited: Prof. Sun Il Kwon** -> *“Progress In Developing A Small Two-Head Prototype Scanner For Reconstruction-Free Direct Positron Emission Imaging”*
- **Invited: Prof. Sadek Nehmeh** -> *“Ultra-High-Performance Brain PET (UHB-PET): Preliminary Results”*
- Pawel Moskal -> First in-human Quantum Entanglement imaging

15:20 – 15:50 Coffee break

15:50 – 16:30 Antimatter in fundamental and material physics

- **Keynote: Prof. Antonio Di Domenico** -> *“Testing Matter-Antimatter And Other Discrete Symmetries In Particle Physics”*
- Neha Chug -> *“Status of CPT Symmetry Test In Ortho-Positronium Decays With The Modular J-PET Detector”*

17:00 Baroque Concert in St. Anne's Collegiate Church

08 July 2026 - Collegium Novodvorscianum

- 8:30 – 9:00 Coffee a Priori

9:00 – 10:00 Advances in Theranostics

- **Keynote: Prof. Elżbieta Pamuła** -> *“Inhalable Drug Delivery Systems Based On Lipids And Polymers To Treat Lung Diseases”*
- **Invited: Prof. Mirosław Janowski** -> *“PET-Guided Endovascular Medicine”*
- Dr. Michal Bišta -> *“AI-Designed Mini-Proteins For Targeted Imaging And Radiotherapy”*

10:00 – 10:25 **Keynote: Prof. Paweł Olko**

- “Why Standardization Matters in Radiation Medicine: The Perspective of the International Commission on Radiation Units and Measurements (ICRU)”

10:25 – 11:00 Panel: Medical experiments and clinical trials

- Chair: Prof. Mahesh, Panelists: Prof. Beyer, Prof. Olko
- Prof. Schulz, Prof. Janowski, Prof. Stępień

11:00 – 11:30 Coffee break

11:30 – 12:30 PET imaging innovations

- **Keynote: Prof. Paul Lecoq** -> *“Meta-scintillators: A Door Open To The 10 Ps Time-of-Flight PET Challenge”*
- **Invited: Ahmadsreza Rezaei** -> *“Quantitative reconstructions of Activity and Attenuation from time-of-flight PET data”*
- Satyam Tiwari -> *“Optimizing Event Selection And Quantifying Spatial Resolution In Detector-Scattered Attenuation Correction (DSAC)”*

12:30 – 14:00 Lunch

14:00 – 15:00 Antimatter in material physics and medicine

- **Keynote: Prof. Filip Tuomisto** -> *“Defects In Semiconductors As Seen By Positrons”*
- **Invited: Dr. Sodai Takyu** -> *“Toward Positronium Imaging: Body Temperature Dependence And Gamma-Ray-Induced Positron Imaging”*
- Torsten Staab -> *“The DRS4 Chip For PALS Measurements – The PSI Evaluation Board And The Integrated LifetimeSpec Tabletop Spectrometer: A Comparison”*

15:00 – 17:30 Poster session and coffee

17:45 Departure from Auditorium Maximum

18:30 -- 21:30 Conference Banquet at Manor House in Modlnica

09 July 2026 - Collegium Novodvorscianum

- 8:30 – 9:00 Coffee a Priori

9:00 – 10:30 PET imaging innovations Total-body PET

- **Keynote: Prof. Qiyu Peng**, Total-Body PET and wearable brain-PET
- Keyvan Tayefi Ardebili, *“Feasibility Study of 3-Gamma Imaging With Total-Body J-PET”*
- Martin Readler -> *“Distinct Spatial Resolution Advantages of Combining The TB-J-PET With A Brain PET Insert”*
- Gašper Razdevšek -> *“Flexible, Mobile And Modular PET Imaging”*
- Kurumi Narita, *“Performance Evaluation of A Brain PET Prototype With Crosshair Light-Sharing Detectors”*

10:30 – 11:10 Panel: Democratizing PET worldwide

- Chair: Prof. Beyer, Panelists: Prof. Lecoq, Prof. Moskal, ...

11:10 – 11:40 Coffee break

11:40 – 12:30 Progress in cell therapy imaging

- **Keynote: Prof. Maciej Kurpisz** -> *“Stem Cell Imaging For Cardiovascular Cellular Therapies”*
- Bartosz Leszczyński -> *“From Syngeneic To Human Melanoma Models: Longitudinal Micro-CT Tracking of Metastatic Progression In Mice”*

12:30 – 14:00 Lunch

14:00 – 15:00 PET and Positronium imaging innovations

- **Invited: Prof. Chien-Min Kao** -> *“A Fast Positron Lifetime Tomography Method And Initial Phantom And Animal Results”*
- **Invited: Prof. Peter Joerg** -> *“MC simulation studies of o-Ps imaging of single-cell tumor growth models in anthropomorphic phantoms”*
- Ermias Beyene -> *“NEMA Phantom Characteristics of Simultaneous Double Isotope Imaging With J-PET Using ^{55}Co + ^{18}F And ^{52}Mn + ^{18}F Isotopes”*

15:00 – 15:30 Coffee break

15:30 – 17:00 Antimatter in fundamental and material physics

- **Keynote: Prof. Jakub Cizek** -> *“Light-Induced Desorption of Positronium”*
- **Invited: Prof. Taras Kavetsky** -> *“Positron Annihilation In Bionanotechnology: Design Principles For Polymer-Based Biosensors”*
- Marian Cholewa -> *“Development And Applications of New Nanomaterials For High Speed, High Efficiency And High-Resolution Radiation Detectors”*

10 July 2026 - Collegium Novodvorscianum

- 8:30 – 9:00 Coffee a Priori

9:00 – 10:30 Exotic atoms and nuclei, nuclear physics

- **Keynote: Prof. Takatsugu Ishikawa** -> *“Studies of The Phi-Nucleon Interaction Using Final-State Interactions”*
- **Invited: Dr. Raffaele Del Grande** -> TBA
- **Invited: Prof. Ihor Kadenko** -> *“Concept of Using Secondary Neutrons To Produce ^{99}Mo In A Composite Target”*
- Lars Eggimann -> *“From Medical Isotope Research To Fundamental Nuclear Physics: Sub-Threshold $^{99\text{m}}\text{Tc}$ Production Suggests Possible Bound Dineutron State”*

Alessio Porcelli “ μ PPET Detector System”

10:40 -- 11:10 Coffee break

11:10 – 12:30 Antimatter in fundamental and material physics

- **Keynote: Prof. David Cassidy** -> *“Advances In Positronium Microwave Spectroscopy”*
- **Invited: Dr. Sushil Sharma**, “Portable J-PET modules as a reconfigurable detection system for antimatter physics”

- **Invited: Dr. Fredrik Olof Andre Parnefjord Gustafsson** -> *“Probing The Nuclear Periphery Via The Cold Annihilation of Antiprotonic Atoms”*
- Milena Piotrowska -> *“Beyond The Exponential Law: What Fluorescence Reveals About Quantum Decay”*

12:30 – 14:00 Lunch

14:00 -- 15:00 Exotic atoms and nuclei, nuclear physics

- **Keynote: Prof. Yasuyuki Nagashima** -> *“Generation of Exotic Ions Through The Collision of Slow Positrons With Solid Surfaces And Their Applications In Atomic Physics”*
- **Invited: Prof. Kenta Itahashi** -> TBA
- Sumit Kundu -> *“Validated Optical Photon Modeling of Long Plastic Scintillators For Precision Timing Applications”*

15:00 – 16:15 PET and Positronium Imaging innovations

- **Keynote: Prof. Volkmar Schultz** -> *“How AI Is Reshaping Next-Generation PET Systems Design ”*
- **Invited: Dr. Pete Jones** -> *“Accelerator Based PET Innovations: Position Sensitive Imaging And ⁴⁴Ti/⁴⁴Sc Generator Development”*
- Siddharth Parashari -> *“Integration of Compton Camera With PET: A Compton-PET System Towards Multi-Energy Radionuclide Imaging”*
- Anand Pandey -> *“Positronium Lifetime Imaging Through Iterative Reconstruction Methods Utilizing J-PET And Biograph Vision Quadra”*

16:00 – 16:30 Coffee break

16:30 – 17:00 Closing Lecture

Prof. Stefan Ulmer – First transportation of antimatter

17:00 – 17:30 Closing Ceremony