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Thursday, 2<sup>nd</sup> July | Arrival

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Friday, 3<sup>rd</sup> July

10:30 – 11:00 | Registration

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11:00 – 13:00 | Opening & Scientific Session I

Welcome & Introductory Lecture

- **Prof. Paweł Moskał**  
*First imaging of quantum entanglement in humans – Developing Quantum Entanglement PET scanner in Poland*

Keynote Lectures

- **Prof. Ryszard Horodecki**  
*Quantum correlations and their singularities*
- **Prof. Karol Życzkowski**  
*Quantum Entanglement and the Geometry*

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13:00 – 14:30 | Lunch Break

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14:30 – 16:00 | Scientific Session II

- **Prof. Antonio Di Domenico (Sapienza University of Rome, Italy)**  
*Entanglement, discrete symmetries and time paradoxes in neutral K-mesons: The “Back from the Future” quantum effect*
- **Prof. Kenji Shimazoe (University of Tokyo, Japan)**  
*A ring-type quantum entangled PET (QEPET) system with GAGG-SiPM and its performance*
- **Dr. Jan Kotodyński (Institute of Physics, Polish Academy of Sciences, Poland)**  
*Quantum information meets particle physics: Detecting entanglement in para-positronium annihilation photons*

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16:00 – 16:40 | Coffee Break

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16:40 – 18:10 | Scientific Session III

- **Prof. Ivica Friščić (University of Zagreb, Croatia)**  
*Study of azimuthal correlations of Compton-scattered gamma from ortho-positronium*
- **Prof. Alan J. Barr (University of Oxford, UK)**  
*Measuring quantum entanglement at the Large Hadron Collider*
- **Prof. Steven Bass (Kitzbuehel Centre for Physics, Austria)**  
*The origin of gauge symmetries with connection to long-range quantum entanglement*

18:30 | Networking Dinner

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Saturday, 4<sup>th</sup> July

09:30 – 11:00 | Scientific Session IV

- **Prof. Shiva Abbaszadeh (UC Santa Cruz, USA)**  
*Noise-Reduced Transmission Tomography Using Photon-Pair Correlations*
- **Prof. Petar Žugec (University of Zagreb, Croatia)**  
*Klein–Nishina meets Pryce–Ward: Semi-classical simulations of annihilation photon correlations*
- **Dr. Michał Eckstein (Jagiellonian University, Poland)**  
*Correlations beyond quantum entanglement and how to find them*

11:00 – 11:40 | Coffee Break

11:40 – 13:10 | Scientific Session V

- **Prof. Francesco Giacosa (Jan Kochanowski University, Poland)**  
*Twin Sites and Strong Locality in the (3,3,2,2) Bell Scenario*
- **Dr. Peter Caradonna (University of Tokyo, Japan)**  
*Compton scattering tomography of annihilation photons*
- **Dr. Dorota Grabowska (University of Washington, USA)**  
*Quantum Magic in Non-Abelian Gauge Theories*

13:10 – 14:40 | Lunch Break

14:40 – 16:10 | Scientific Session VI

- **Prof. Krzysztof Kutak (Institute of Nuclear Physics, Poland)**  
*Entropy production in Deep Inelastic Scattering*
- **Dr. Sebastiano Mariazzi (University of Trento & TIFPA, Italy)**  
*Towards production of positronium clouds with selected quantum numbers for entanglement studies*
- **Dr. Juan Ramón Muñoz de Nova (Consejo Superior de Investigaciones Científicas, Spain)**  
*Entanglement: a practical resource for Quantum Field Theory*

16:10 – 16:50 | Coffee Break

16:50 – 18:20 | Scientific Session VII

- **Prof. Juana Antonio Aguilar Saavedra (IFT UAM/CSIC, Spain)**  
*Quantum entanglement and particle decay*
- **Prof. Mihael Makek (University of Zagreb, Croatia)**  
*Positron Emission Tomography imaging with quantum-entangled Compton scatter events – status*
- **Prof. Roman Skibiński (Jagiellonian University, Poland)**  
*Search for quantum entanglement in NN and Nd scattering*
- **Mr. Deepak Kumar (Jagiellonian University, Poland)**  
*Measuring polarization correlation of annihilation photons in  $e^+e^-$  decays using modular J-PET*

18:20 – 18:50 | Discussion and Closing Remarks

18:30 | Networking Dinner