



1st Juhannus Distinguished Lecture in Physics

by

Nobel Laureate Prof. Anton Zeilinger

The Theoretical Optics and Photonics group and the Experimental Quantum Optics group, together with the Photonics Flagship PREIN, are proud and honoured to announce, that

Prof. Anton Zeilinger

Institute for Quantum Optics and Quantum Information Vienna, Austria

will give a **public lecture** at Tampere University

Tuesday, June 4th at 17:00 o'clock Lecture Hall A210 – City Centre Campus, Main Building

Nobel Laureate Prof. Anton Zeilinger is one of the most distinguished physicists in quantum science and foundations. Amongst many other things, he is known for matter wave interferometry, the discovery of three-particle entanglement as an extreme demonstration of quantum nonlocality, the experimental realization of quantum teleportation, and countless seminal works on quantum foundations, communications and computing. In addition to being awarded the Nobel Prize in Physics in 2022, he received some of the most prestigious prizes of physics, e.g., Wolf-Prize, King Faisal Prize, Heisenberg medal, Descartes Prize, Isaac Newton Medal and many more.

In his public lecture, Prof. Anton Zeilinger:

Quantum Entanglement: from foundations to applications and back

Quantum entanglement - the connection between two or more widely separated measurement results was called by Einstein "spooky" action. The Nobel prize winner Erwin Schrödinger called it "the essential feature" which forces us to abandon our cherished views of the world. In the talk the Nature of entanglement will be presented in a way open to the general public, leading to applications in quantum communication and quantum computation. Such experiments led to new fundamental question which might lead to new applications.

