Press Release of the Salzburg Festival

Anton Zeilinger: Keynote Speaker for 2023 Opening Ceremony of the Salzburg Festival

Anton Zeilinger © ÖAW/Sepp Dreissinger

(SF, 3. May 2023) **Anton Zeilinger**, winner of the 2022 Nobel Prize in Physics, will deliver the keynote address during the opening ceremony of the 2023 Salzburg Festival.

Given the numerous challenges of our present times, which cast doubt upon agreements and fundaments, causing certainties to crumble and valid stories to be questioned, we wish to question our world with the help of great works of art and the astounding insights of science. “Anton Zeilinger is not only one of the most remarkable scientists of our times; he is also a gifted narrator, skilled in impressively conveying complex phenomena essential for our times,” says Artistic Director Markus Hinterhäuser. “He invokes the beauty of mathematics as much as the beauty of music. He questions the nature of truth and reality, asking what reality actually means. He examines our notions of space and time, using the fascinating tools of science.”

Anton Zeilinger won the Nobel Prize in Physics last year “for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science”. Quantum physics is considered the most precise description of nature and has delivered the building blocks of modern high technology, “with cataclysmic consequences for the reality we all inhabit”.

The Festival’s opening ceremony takes place at the Felsenreitschule on **27 July at 11 am**.

Anton Zeilinger, born in Ried im Innkreis, Austria, in 1945, completed his doctoral thesis at the Technical University of Vienna in 1971 under the supervision of Helmut Rauch, a pioneer of quantum physics. This was followed by a Fulbright Fellowship at the MIT, where he worked with the 1994 Nobel Prize laureate Clifford Shull, as well as guest appointments at the Institut Laue-Langevin in Grenoble, at the Collège de France, Oxford University, the Technical University in Munich and the Humboldt University in Berlin. In 1990, Zeilinger was appointed to the chair of experimental physics at Innsbruck University, in 1999 to the same position at Vienna University. He is currently professor emeritus at Vienna University and a Senior Scientist at the Institute for Quantum Optics and Quantum Information in Vienna (IQOQI Vienna), where he actively leads a research group of doctorate students and post-docs.

Zeilinger works on the foundations of quantum physics, focusing on the question whether – as Albert Einstein postulated – quantum physics describes reality, or whether – as according to Niels Bohr – science can only formulate what can be said about reality. In other, more modern, words, that it is about information. This current approach is the focus of robust international attention and has the potential not only to establish a new foundation for quantum physics, but also our entire world view. Zeilinger has conducted numerous fundamental experiments in quantum physics, some of which became the basis of a new information technology.

Outside the field of physics, Zeilinger was also behind important initiatives, for example the founding of the Institute of Science and Technology Austria (IST Austria), the founding of the International Academy at Traunkirchen and the project *Exile & Excellence*, a film about the personal histories of 16 outstanding scientists who had to leave Austria due to National Socialist persecution.

Apart from more than 550 scientific publications, some of which are considered benchmarks today, Anton Zeilinger also wrote two influential books on popular science, both of which are still highly esteemed among those interested in physics: *Einsteins Schleier* (2003) and *Einsteins Spuk* (2005; 13th edition in 2022).

Anton Zeilinger is a member of numerous academies and the holder of several honorary professorships and doctorates. Among his awards and prizes are the Austrian Decoration for Science and Art (2001), membership in the order Pour le Mérite (2001), the King Faisal Prize (2005), the Inaugural Isaac Newton Medal (2008), the Wolf Prize for Physics (2010), the Grand Decoration of Honour in Gold for Services to the Republic of Austria (2015), the Micius Quantum Prize (2019) and most recently the Nobel Prize in Physics (2022).