

Representatives of the Physical Society of Japan (JPS) and the German Physical Society (DPG) convened in Münster, Germany, during the United Nations' International Year of Quantum Science and Technology, to commemorate the centennial of the quantum revolution's advent. This revolution has brought unparalleled benefits and innovations to humanity. Looking ahead to the next century, even greater advancements and contributions to human society are anticipated. As physicists, we must reflect on the history of science, examine the principles guiding scientific endeavour, and deliberate on the responsibilities that science entails.

From the classical physics of the 17th century to the revolutionary quantum mechanics established around 1925, humanity has deepened its understanding of atomic-scale phenomena making the split of the atom possible. One hundred years after these breakthroughs, quantum principles now underpin much of modern life. Physicists will continue to refine, explore, and apply quantum mechanics, driving a quantum-enabled society forward. The societal contributions rooted in physical principles extend beyond quantum science. For example, the epochal advancement of AI technologies, as recognized in the 2024 Nobel Prize in Physics, draws on foundational concepts of physics and involves physicists in shaping a transformative future. Understanding our history is essential to envision the future. Scientific achievements in physics have been misused for hostile purposes in the past. Japan and Germany hold specific historical perspectives regarding World War II, which ended 80 years ago. Just before the end of the war, nuclear attacks were launched on Hiroshima and Nagasaki. As physicists, we must deeply consider the profound impact of physics on humanity and commit to shaping a better future.

The Russell-Einstein Manifesto of July 9, 1955, in London, and the Declarations by Nobel Laureates on July 15, 2024, in Lindau, and on July 16, 2025 in Chicago, affirm that nuclear war is incompatible with the survival of humanity. The Göttingen Declaration of April 12, 1957, in which 18 German physicists pledged not to engage in the production, testing, or use of nuclear weapons, significantly influenced national policy. These examples demonstrate that physicists are not only creators of groundbreaking physical knowledge but also contributors to addressing global existential challenges for human civilization, such as climate change, nuclear weapons and other potentially dangerous disruptive technologies.

Physicists' knowledge can help to understand the consequences of the use of nuclear weapons. Multiple scientific studies showed the short- and long-term consequences of high radiation doses, fallout and injection of soot into the stratosphere, which can lead to the devastation of regions, the extinction of species and the destruction of ecosystems. Physicists can contribute to avert such a disastrous future by developing necessary verification technologies for nuclear disarmament, and by raising public awareness about the consequences.

Addressing future challenges, including global warming, sustainable energy production, environmental pollution, and sustainable development, requires continuous interdisciplinary dialogue among scientists, policymakers, and stakeholders. Furthermore, science diplomacy and discourse within the global scientific community are imperative. Münster, the site of the Peace of Westphalia in 1648, offers a historical reminder that implies dedicating the fruits of science and our labor to peaceful purposes and human welfare—not to war, destruction, or the downfall of civilization. Four centuries of Newton's legacy and Münster's peace heritage collectively serve as a timeless message about physics and peace for humanity.

- We direct this declaration especially to the younger generations who create the future, urging them to engage with the global existential challenges of humanity, such as climate change or nuclear warfare, and to strive for human progress.
- We pledge, as physicists, to contribute to humanity's survival and advancement by supporting the aforementioned declarations and advocating for the peaceful application of physics.
- We call to strengthen the current international commitments to abstain from participating in the development, production, testing, deployment, or use of weapons of mass destruction, especially nuclear weapons.
- We also call for the resolution of international conflicts through peaceful and diplomatic means, without recourse to armed force.
- Finally, we invite physical societies and academic organizations worldwide to join us in this commitment.

14th November 2025 · Münster, Germany

This declaration was adopted by the General Assembly and the Board of Directors of the Physical Society of Japan and by the Council of the German Physical Society.



Prof. Klaus Richter
75th President of the DPG



Prof. Seiji Miyashita
81st President of the JPS

Supplement

Current Nuclear Issues and Physicists' Role

We warn that in this increasingly polarized world with many unsolved conflicts, there is a significantly rising risk that nuclear weapons will be used either by accident or intentionally. Nuclear weapons have caused and will, if used, again cause catastrophic consequences for societies and the planet as a whole. They carry the danger of further nuclear proliferation as well as the risk of escalation to a global war. Current regional proliferation cases are worrisome and should be addressed with high diplomatic priority. Nuclear arsenals are being modernized or expanded in all nuclear weapon states and supplemented by new weapon systems and technologies. An accelerated arms race can be observed in several sectors. The deployment of new disruptive technologies, such as Artificial Intelligence, Quantum Technologies or Space Technologies, in nuclear weapons systems carries a high risk of being misused. Physics and physicists have a special relationship to nuclear weapons, their functioning and their impact.

Archive: Scientists' efforts on nuclear disarmament

- **2025 Chicago Declaration for the Prevention of Nuclear War, by 129 Nobel laureates and the International Union of Pure and Applied Physics (IUPAP)**
<https://www.nobelassembly.org>
- **2024 Mainau Declaration on Nuclear Weapons, by 104 Nobel laureates**
<https://www.lindau-nobel.org/mainau-declaration-2024/>
- **1982 Erice statement, by Dirac, Kapitza and Zichichi**
<https://web.archive.org/web/20100728123008/http://www.federationofscientists.org/WfsErice.asp>
- **1955 Mainau Declaration on Nuclear Weapons, by 52 Nobel laureates**
<https://www.mainaudeclaration.org>
- **1955 Russell-Einstein Manifesto**
<https://pugwash.org/1955/07/09/statement-manifesto/>
- **1957 Göttingen Declaration**
<https://www.uni-goettingen.de/en/the+manifesto/54320.html>
- **1967 Decision Number Three**
Agreement of The Physical Society of Japan, September 9, 1967:
The Physical Society of Japan, hereafter, will not accept any funds from, or have any cooperative relationship with any domestic or foreign military agency.

The Circumstances Leading to this Decision: When the Eighth International Conference on the Physics of Semiconductors was held in 1966 in Kyoto under the auspices of the Physical Society of Japan, the Organizing Committee acquired funds from a military agency of the United States Government. This arrangement was neither discussed at an earlier meeting of the Council of the Physical Society of Japan nor reported in the Thirty-First General Assembly of the Society. Later, the question of this funding was raised by some members of the Society, who then demanded a special meeting to debate the issue. On September 9, 1967, the Thirty-Third General Assembly, an ad hoc meeting, was held to discuss this funding. Several Proposals were approved, including the above mentioned Decision Number Three.

Declaration for the Future

by the German Physical Society and the Physical Society of Japan

14th November 2025