

Chapter 5

Introduction



Umberto Vattani

This 20th edition of the Edoardo Amaldi Conference is dedicated to International cooperation, security, safeguards and on the processes of non-proliferation of nuclear weapons.

The Italian physicist Edoardo Amaldi (one of the main collaborators of Enrico Fermi at the research institute in Via Panisperna) was the first to promote the Conferences (which started in June 1988), so that the principle of peaceful use of nuclear energy would be acknowledged by people and nations.

We are grateful to:

The High Representative of the European Union for Foreign Affairs and Security Policy, Federica Mogherini;

The Director-General of the International Atomic Energy Agency (IAEA), Yukya Amano;

The Accademia Nazionale dei Lincei, for hosting this conference today at Palazzo Corsisni, and to its President Alberto Quadrio-Curzio; for inviting representatives from 15 countries (China, USA, Russia, Iran, France, Germany, Japan, Israel, Italy, Pakistan, United Kingdom, Turkey, Canada, Egypt, and Finland) to discuss and analyse—in the context of international cooperation—the problems relating to nuclear non-proliferation and disarmament.

To emphasize the topical issue of this conference, I wish to point out that just four days ago the Norwegian Nobel Committee awarded the Nobel Peace Prize to ICAN, *International Campaign to Abolish Nuclear Weapons*. And I am pleased to recall that the Nobel Peace Prize was also awarded to the European Union in 2012, to the International Atomic Energy Agency in 2005, and to the non-governmental organization PUGWASH in 1995.

U. Vattani (✉)
Foundation Italy-Japan, Rome, Italy
e-mail: fondazione@italiagiappone.it

The XX Amaldi Conference, named after Edoardo Amaldi from the third edition on (the Conference, which was held in 1990, was being organized by the great physicist before his untimely death) coincides with the 60th anniversary of the IAEA and the EURATOM Treaty.

Through the EU Joint Research Centre in the nuclear field, Euroatom was established in 1957 to promote the peaceful use and exploitation of energy from nuclear fusion, so as to produce safe, sustainable and environmentally-friendly energy supply to be used not only in industrial applications, but also in the medical field.

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was approved in 1968 by the United Nations General Assembly, and came into force in 1970. The Treaty states that countries possessing nuclear weapons shall not transfer to a third party fissile material and nuclear technology.

The non-nuclear weapon States, on the other hand, shall not develop nor obtain mass destruction weapons. Moreover, the transfer of nuclear technology to be utilized for peaceful purposes must take place under the strict control of the International Agency for Atomic Energy (IAEA). The Treaty was originally signed by 3 nuclear-weapon States (USA, URSS, and United Kingdom) and by 40 non-nuclear weapon States. France and China signed in 1992. In 1995 the Treaty was renewed for an indefinite period; every 5 years a Conference monitors its implementation. North Korea, which joined the NPT in 1985, announced its withdrawal in 2003; but, more controversial is the position of Iran, whose development programme has been defined as potentially dangerous by the AIEA. Nonetheless, Iran did not give up its programme and continues to sustain that it is oriented solely towards the peaceful use of nuclear power.

The earthquake and tsunami that devastated the Tohoku region of Japan on 11 March 2011, and triggered a series of accidents at the Fukushima nuclear power plant, are unfortunate events which demonstrate that security issues—dealing with the exploitation of nuclear Energy—are of fundamental importance for the future of humanity.

This will be presented shortly by Professor Suzuki.

The term “information security”, often used interchangeably with the term “cybersecurity”, refers to a problem concerning the growing information technology that is being employed by the modern society, as well as to the parallel diffusion and specialization of attackers, the so called “hackers”.

Therefore, there are two problems connected to security: the first is that of *prevention* (that is, measures aimed at reducing the probability of accidental damage or events, such as unforeseen malfunctioning of the system, also those caused unknowingly by the user, or by fires, floods or other catastrophic events); the second is that of *protection* (that is, preventing that unauthorized users gain access to restricted information or data and modify or destroy them).

These problems will be presented by Dr. Neuneck.

The first presentation of this session will be by Dr. Michael Kuske on the topic of “Euroatom Nuclear Safety Framework”. He will take the place of Professor

Massimo Garribba, Director—General For Energy, European Commission, who was not able to leave Geneva due to institutional commitments.

Prof. Tatsujiro Suzuki, from the University of Nagasaki, will follow with a presentation on the topic of “Updating from Lessons Learnt from Fukushima”.

The session will conclude with a talk by Dr. Götz Neuneck, University of Hamburg, on the topic of “Cybersecurity and Nuclear Security: How are They Related—an Overview”.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

