



The 12 founding member states of CERN in 1954^[1]

the provisional council was dissolved, even though the name changed to the current *Organisation Européenne pour la Recherche Nucléaire* (European Organization for Nuclear Research) in 1954.^[9] According to [Lew Kowarski](#), a former director of CERN, when the name was changed, the abbreviation could have become the awkward OERN, and [Werner Heisenberg](#) said that this could "still be CERN even if the name is [not]".

CERN's first president was Sir [Benjamin Lockspeiser](#). [Edoardo Amaldi](#) was the general secretary of CERN at its early stages when operations were still provisional, while the first Director-General (1954) was [Felix Bloch](#).^[10]

The laboratory was originally devoted to the study of [atomic nuclei](#), but was soon applied to [higher-energy physics](#), concerned mainly with the study of interactions between [subatomic particles](#). Therefore, the laboratory operated by CERN is commonly referred to as the **European laboratory for particle physics** (*Laboratoire européen pour la physique des particules*), which better describes the research being performed there.

Director General	Fabiola Gianotti
Website	home.cern (https://home.cern/)

Founding members

At the sixth session of the CERN Council, which took place in Paris from 29 June - 1 July 1953, the convention establishing the organization was signed, subject to ratification, by 12 states. The convention was gradually ratified by the 12 founding Member States: [Belgium](#), [Denmark](#), [France](#), the [Federal Republic of Germany](#), [Greece](#), [Italy](#), the [Netherlands](#), [Norway](#), [Sweden](#), [Switzerland](#), the [United Kingdom](#), and [Yugoslavia](#).^[11]

Scientific achievements

Several important achievements in particle physics have been made through experiments at CERN. They include:

- 1973: The discovery of [neutral currents](#) in the [Gargamelle bubble chamber](#);^[12]
- 1983: The discovery of [W and Z bosons](#) in the [UA1](#) and [UA2](#) experiments;^[13]
- 1989: The determination of the number of light [neutrino families](#) at the [Large Electron-Positron Collider](#) (LEP) operating on the [Z boson peak](#);
- 1995: The first creation of [antihydrogen](#) atoms in the [PS210 experiment](#);^[14]
- 1999: The discovery of direct [CP violation](#) in the [NA48 experiment](#);^[15]
- 2010: The isolation of [38 atoms of antihydrogen](#);^[16]
- 2011: Maintaining [antihydrogen](#) for over 15 minutes;^[17]
- 2012: A [boson](#) with mass around 125 GeV/c² consistent with the long-sought [Higgs boson](#).^[18]

In September 2011, CERN attracted media attention when the [OPERA Collaboration](#) reported the detection of possibly [faster-than-light neutrinos](#).^[19] Further tests showed that the results were flawed due to an incorrectly connected [GPS](#) synchronization cable.^[20]

The 1984 [Nobel Prize for Physics](#) was awarded to [Carlo Rubbia](#) and [Simon van der Meer](#) for the developments that resulted in the discoveries of the [W](#) and [Z bosons](#). The 1992 [Nobel Prize for Physics](#) was awarded to CERN staff researcher [Georges Charpak](#) "for his invention and development of particle detectors, in particular the [multiwire proportional chamber](#)". The 2013 [Nobel Prize for Physics](#) was awarded to [François Englert](#) and [Peter Higgs](#) for the theoretical description of the [Higgs mechanism](#) in the year after the [Higgs boson](#) was found by CERN experiments.

Computer science

The [World Wide Web](#) began as a CERN project named [ENQUIRE](#), initiated by [Tim Berners-Lee](#) in 1989 and [Robert Cailliau](#) in 1990.^[21] Berners-Lee and Cailliau were jointly honoured by the [Association for Computing Machinery](#) in 1995 for their contributions to the development of the [World Wide Web](#).

Based on the concept of [hypertext](#), the project was intended to facilitate the sharing of information between researchers. The first website was activated in 1991. On 30 April 1993, CERN announced that the [World Wide Web](#) would be free to anyone. A copy^[22] of the original first webpage (<http://www.w3.org/History/19921103-hypertext/hypertext/WWW/TheProject.html>), created by Berners-Lee, is still published on the [World Wide Web Consortium's](#) website as a historical document.

Prior to the Web's development, CERN had pioneered the introduction of Internet technology, beginning in the early 1980s.^[23]

More recently, CERN has become a facility for the development of [grid computing](#), hosting projects including the [Enabling Grids for E-sciencE](#) (EGEE) and [LHC Computing Grid](#). It also hosts the [CERN Internet Exchange Point](#) (CIXP), one of the two main [internet exchange points](#) in Switzerland.

Particle accelerators
