

Professor Rolf-Dieter Heuer

CERN is the world's preeminent laboratory in the field of high energy physics, and is the centre for physicists from all over the world involved in the search of a deeper understanding of the fundamental constituents and interactions of matter.

Leading this laboratory is Professor Rolf-Dieter Heuer, a highly respected leader in this internationally competitive field. Professor Heuer has provided key support for the Australian high energy physics program and has strong links with the University of Melbourne. He chairs the international advisory committee of the ARC Centre of Excellence for Particle Physics at the Terascale (CoEPP), which the University leads.

Following an illustrious research career in the study of high energy electron-positron collisions at the Deutsche Elektronen-Synchrotron (DESY) laboratory in Hamburg, and then at the Large Electron-Positron Collider (LEP) at CERN, Professor Heuer was appointed a C4 Professor at the University of Hamburg.

In 2004 he took up the role of Research Director of DESY. During his time at DESY, Professor Heuer oriented the particle physics groups towards CERN by joining both large experiments ATLAS and CMS that are located on the Large Hadron Collider in the 27 km circumference tunnel under the Swiss/French border near Geneva. ATLAS is searching for new discoveries in the head-on collisions of protons of extraordinarily high energy. This includes the origin of mass, extra dimensions of space, microscopic black holes, and evidence for dark matter candidates in the Universe. The CMS experiment investigates a wide range of physics, including the search for the Higgs boson, extra dimensions, and particles that could make up dark matter. It has similar scientific goals as the ATLAS experiment but uses different technical solutions and design to achieve these. Results from these experiments will answer some of the most profound questions about the origin, evolution and fate of the Universe.

While at DESY, Professor Heuer prepared not only the path to participate in the Large Hadron Collider experiments, but also fostered the participation in the electron-positron collider project. He also initiated the restructuring and focusing of German particle physics at the energy frontier with particular emphasis on the Large Hadron Collider. This resulted in the Helmholtz-Alliance "Physics at the Terascale" comprising all German University groups working at the energy frontier together with the Helmholtz centres DESY and Karlsruhe.

In 2009 Professor Heuer became Director-General of CERN and was given the task of bringing the multi-billion dollar Large Hadron Collider into operation. 2010 and 2011 have been remarkable years for CERN under Professor Heuer's leadership. The Large Hadron Collider operation in these years has surpassed expectations and the laboratory is now preparing for major discoveries in 2012.

CERN and the Large Hadron Collider have iconic status the world over. Following its foundation in 1954 under the umbrella of UNSECO, both CERN and UNESCO have sought to foster scientific cooperation, to make science education more attractive and to facilitate access to scientific knowledge for a fairer world. Professor Heuer has spoken of the need to bring science into mainstream culture. Under his direction, CERN has come to occupy a significant place in society as the embodiment of the human quest to understand the big questions. Experiments at CERN are advancing our understanding of the deepest laws of nature and the results are keenly followed by a broad cross section of our society. Australia has been part of the developments over the past two decades, but we have been particularly well served through Professor Heuer's unwavering support for our program in high energy particle physics. This has opened many opportunities for Australian staff and students to be involved in the biggest physics experiments of our time.

Rolf-Dieter Heuer is an intellectual with an outstanding career, an international leader of the largest of scientific facilities, and a strong supporter of our research program. It is fitting that

he be awarded an Honorary Doctor of Laws (*honoris causa*) from the University of Melbourne as recognition of his eminence in international science, his contribution to society, and his continuing support of physics at the University of Melbourne.