



Amir D. Aczel was born in Haifa, Israel. Aczel's father was the captain of a passenger ship that sailed primarily in the Mediterranean Sea. When he was ten, Aczel's father taught his son how to steer a ship and navigate. This inspired Aczel's book *The Riddle of the Compass*.

When Aczel was 21 he studied at the University of California, Berkeley. He graduated with a BA in mathematics in 1975, and received a Master of Science in 1976. Several years later Aczel earned a Ph.D. in statistics from the University of Oregon.

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It is the most complex scientific endeavor ever brought to fruition. It is the culmination of billions of dollars, decades of research, and the effort of thousands. It is the Large Hadron Collider, and it is our window to a more fantastic and bizarre world, one where the incredibly small sheds light on the mysteries of the unfathomably large.

Present at the Creation was conceived with a lofty goal in mind: to explore the history of the sciences that led to the LHC's design, and the history of the scientists who made that design a reality. And Aczel succeeds admirably, offering an impressively thorough primer on the subatomic world as we understand it, as well as the theories and fields being explored at CERN, the European Organization for Nuclear Research, (like how penguins illustrate b-meson decay.)

But what may appear to be a mere scientific sales pitch is actually a joyous celebration of what humans can accomplish, with our imagination, our limitless drive to understand the universe, and especially our boundless knack for creative collaboration. This is as much the story of the people who make this research possible as it is a history and explanation for the LHC's existence. What a mind-bendingly terrific read.

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Amir D. Aczel
The Story of CERN and the Large Hadron Collider

PRESENT AT THE CREATION

The Large Hadron Collider

The Large Hadron Collider (LHC) is a gigantic scientific instrument near Geneva, where it spans the border between Switzerland and France about 100 m underground. It is a particle accelerator used by physicists to study the smallest known particles – the fundamental building blocks of all things. It will revolutionise our understanding, from the minuscule world deep within atoms to the vastness of the Universe.

Two beams of subatomic particles called 'hadrons' – either protons or lead ions – will travel in opposite directions inside the circular accelerator, gaining energy with every lap. Physicists will use the LHC to recreate the conditions just after the Big Bang, by colliding the two beams head-on at very high energy. Teams of physicists from around the world will analyse the particles created in the collisions using special detectors in a number of experiments dedicated to the LHC.