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Titolo	Exploring the Large Hadron Collider – The Discovery of the Higgs Particle [[electronic resource]] : The World Machine Clearly Explained / / by Michael Hauschild
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Sommario/riassunto	Michael Hauschild takes the reader of this essential back to the year 2012, when the discovery of the Higgs particle was announced at CERN, the European Organization for Nuclear Research near Geneva, Switzerland. The author vividly explains the Higgs mechanism for mass generation with the central role of the Higgs particle in current particle physics and the long hunt for its discovery at the Large Hadron Collider LHC. After a stop of more than two years, the LHC, the world's largest particle accelerator was put back into operation in spring 2015 to discover the secrets of nature at higher energy than ever before. An overview of future projects concludes this essential. This Springer essential is a translation of the original German 1st edition essentials, Neustart des LHC: die Entdeckung des Higgs-Teilchens by Michael Hauschild, published by Springer Fachmedien Wiesbaden GmbH, part of Springer Nature in 2018. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically different from a conventional translation. Springer Nature works continuously to further the

development of tools for the production of books and on the related technologies to support the authors. The Content Mass does it! - How the particles get their mass From UFOs and more! - The LHC goes into the next round The plan of the century! - Higgs, what next? The Target groups Scientifically interested laymen and students Lecturers and students of the Studium Generale and the natural sciences The Author Dr. Michael Hauschild is a particle physicist at CERN in Geneva and has been a member of the ATLAS experiment at the Large Hadron Collider LHC since 2005. During the first long measurement period of the LHC from 2010 to 2012, he witnessed the discovery of the Higgs particle in summer 2012.
