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# The Ring Tetralogy: What Did We Learn from the LHC and How We Will Use It

Guest Editor:

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## **Message from the Guest Editor**

Dear Colleagues,

The Large Hadron Collider (LHC) and the ATLAS and CMS detectors have shown exceptional performance over the last 10 years. In the first run, the Higgs boson was discovered; subsequently, data collected in the second run have been used to put the whole Standard Model theory under the microscope. This proposed Special Issue is aiming to collect review articles covering what has been learned from the second run's results, and how this will guide us through the next steps in the HEP research field, looking at four different physics sectors, namely: (1) EW physics, (2) QCD physics (3) Higgs physics, and (4) beyond the Standard Model physics.

Prof. Dr. Marina Cobal Guest Editor











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# Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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