

Editorial

Why a New Journal in High Energy Physics

Guido Emilio Tonelli ^{1,2,3}

¹ Department of Physics, University of Pisa, 56126 Pisa, Italy; guido.tonelli@pi.infn.it or guido.tonelli@cern.ch

² INFN (Istituto Nazionale di Fisica Nucleare), 56127 Pisa, Italy

³ CERN (European Organization for Nuclear Research), 1217 Geneva, Switzerland

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It is a true honor and a privilege for me to introduce you the first issue of this new journal, *Highlights in High Energy Physics* (HiHEP). It is an open access journal, publishing four issues per year, edited by Scilight Press, a rapidly growing international publishing press focused on academic, peer-reviewed works. Here (<https://www.sciltp.com/journals/hihep/>) you can find additional information on the new journal and on the publishing press (<https://www.sciltp.com/>).

Among the members of the Editorial Board (<https://www.sciltp.com/journals/hihep/about/editorialTeam>) that I have the honor to chair you will find many worldwide known scientists distributed with a careful balance in gender and regions

The scope of the journal is to present the most important results produced in High-Energy Physics (HEP). In particular, the main topics we would like to cover are listed here: Higgs Physics, Neutrino Physics, Physics Beyond the Standard Model, Top Quark and Electroweak Physics, Quark and Lepton Flavour Physics, Strong Interactions and Hadron Physics, Heavy ions, Astro-particle Physics and Cosmology, Dark Matter Detection, Collider Physics, Underground and Large Array Physics, Gravitation Waves astronomy, Gauge Field Theories, Quantum Gravity Theories, New Formal Theories, Accelerator Physics and Future Facilities, Present Detectors and R&D for Future Facilities, Computing, AI and Data Handling.

As you might have noticed the journal will not cover only the traditional results coming from colliders physics. We plan to host also the most exciting results in gravitational waves astronomy, or astro-particle physics since these experiments study some of the most energetic phenomena of the cosmos and their findings could be of extreme interest for all scientists. A particular attention will be dedicated also to new theories as well as to new results considered relevant for the field at large. The journal will give a particular attention to a critical discussion of the main achievements, hosting different points of view and soliciting in depth comparison of hot-from-the-press results. Main goal of the journal would be to distribute quickly, and in a critical format, the most relevant information among scientists willing to stay tuned with the latest developments. By presenting the scientific highlights it will ideally connect the various fields of activity in High-Energy Physics.

We are living a very exciting moment in HEP. Just because everything seems to fit within the “Standard Models” (SM of Particle Physics, Lambda-CDM Cosmology etc.). But we know already that this will not be the end of the story. We desperately need a new description of nature that will incorporate the impressive list of phenomena that we are not able to explain today. We don’t know when and where new physics will appear, as unquestionable evidence of new particles or new interactions. It could manifest itself in an outstanding new discovery in particle physics, or in a striking new astrophysical observation. It could even be a breakthrough produced by a completely new theory.

This is why we need an exploration in all possible directions. Very likely new physics will impact several observables in various fields, and we need to react rapidly to any possible hint. To discover new physics, we need specialists in the various disciplines, but they should have a global vision on what is happening in different fields of the frontier research. To allow a more effective circulation of the information among scientists of the various disciplines we would ask authors to write their papers highlighting the physics content of their findings, while trying to avoid, whenever possible, excessively complex technical details.



Finally, another important goal of the new journal will be to offer visibility to a new generation of scientists, contributing therefore to shape the future leadership of the field. As editorial choice we would like to invite some of the youngest protagonists of our field to cover the most recent results, mostly in form of review papers or papers comparing critically results coming from different experiments or competing theoretical approaches. Too often, particularly within the large collaborations, individuals providing key contributions to outstanding analyses or even completely new results, are well known. But this is not always true outside. This journal will be the right tool to promote early career of the most promising scientists, providing them an opportunity to shine worldwide.

For this first issue we have exceptionally decided to publish the proceedings of *The Rise of Particle Physics*, a beautiful conference held in Rome on 23–24 September 2024, to mark the fiftieth anniversary of the discovery of the J/ψ . Going through the papers of Nobel Prize winners, like Sam Ting and Giorgio Parisi, and of other key protagonists of the so called “November Revolution”, the readers will get important insights on the complex, sometime chaotic process that shaped a major milestone in establishing the Standard Model, one of the most successful theories ever. Going through memories and considerations of the heated discussions of the period preceding the discovery of the J/ψ it is inevitable to acknowledge the many similarities with the present situation. Today, as in the period 1970–1974, both experimentalists and theorists are struggling to identify the right direction where to focus their attention, with the aim of producing new ideas leading to breakthrough measurements or novel theories. I really hope that the reading of this first issue of HiHEP will be inspirational for many of them.

Conflicts of Interest

The author declares no conflict of interest.