

## PREFACE

Our conferences have been organized since 1975 by the Department of Theoretical Physics of the University of Silesia in Katowice (Poland). Formerly they had the form of schools yet since 2003 their character has become that of a conference or even workshop. Previous conferences took place in Szczyrk, Żywiec, Ustroń — places in the Beskidy Mountains in the South of Poland; in Podlesice, some 80 km north of Katowice — a picturesque village situated in the Eagles' Nests Landscape Park and the Jurassic Cycling Eagle's Trail, and recently in Chorzów and Katowice.

This year the conference has been organized on-line from the 15<sup>th</sup> to 17<sup>th</sup> September 2021 by the Institute of Physics, University of Silesia, in cooperation with the ParticleFace COST EU action, <https://particleface.eu/> and the Physics of Fundamental Interactions Section of the Polish Physical Society.

We were glad to host many prominent physicists, specialists both in theoretical and experimental particle physics, who presented the most recent development in their fields. Altogether, we had 72 registrants, 32 talks were presented, some of them delivered by Ph.D. students and postdocs.

The talks covered a broad spectrum of physical problems. All subjects could be divided into the following subjects:

1. Precision tests of the Standard Model.
2. Low-energy physics.
3. Methods in multi-loop calculations.
4. Extensions of the Standard Model.
5. Neutrinos, astrophysics, and cosmology.

Such a broad spectrum of subjects is one of the characteristic features of this conference. We have a feeling that it was an interesting mixture, where many different views on frontiers in Particle Physics and Astrophysics have been presented and discussed. We hope that it was also the overall impression of the majority of the participants. We also enjoyed an outreach talk by prof. German Rodrigo 'The future of particle physics'.

Even though we had excellent presentations, what we were missing was personal contacts. We hope that in two years, in 2023, we will be able to meet in person again, and the Covid-19 pandemic will be over.

Due to the variety of topics presented at the conference, we thank the speakers for their effort to prepare talks interesting to all audiences. Especially, we are grateful to those who found time to prepare their contributions for publishing in these proceedings. We thank also chairpersons of the sessions: Sven-Olaf Moch, Henryk Czyż, Stanisław Jadach, Małgorzata Worek, Mikołaj Misiak, Zoltán Trócsányi, Michał Praszałowicz, Bohdan Grządkowski.

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