

Welcome

Ulrich Nierste*

*Institute for Theoretical Particle Physics (TTP), Karlsruhe Institute of Technology
Wolfgang-Gaede-Straße 1, 76131 Karlsruhe, Germany*

E-mail: ulrich.nierste@kit.edu

Welcome to DISCRETE 2022 in Baden-Baden! The conference addresses discrete symmetries in astroparticle physics and cosmology, BSM collider physics, quark flavour physics, physics of atoms, nuclei and molecules, physics at the high-intensity frontier, as well as in the interactions of neutrinos and light new particles. Baden-Baden is a 19th century spa town famous for its *Belle Époque* architecture.

*8th Symposium on Prospects in the Physics of Discrete Symmetries (DISCRETE 2022)
7-11 November, 2022
Baden-Baden, Germany*

*Speaker

Welcome to DISCRETE 2022 in Baden-Baden! All scientific and organisational information is collected in the Indico page of the conference [1]. This is the 8th symposium of the DISCRETE conference series [2].

Combinations of the discrete symmetries C,P, and T are probed in electroweak processes, Higgs physics, and low-energy precision experiments. New discrete symmetries are postulated to ensure the stability of Dark Matter or to predict the patterns of quark and lepton flavour mixing. The conference covers the fields

- *Astroparticle physics and cosmology,*
- *BSM collider physics,*
- *Quark flavour physics,*
- *Atoms, nuclei, molecules, and spectroscopy,*
- *Physics at the high-intensity frontier,*
- *Light new particles,* as well as
- *Neutrinos*

in plenary talks and dedicated parallel sessions. In our 8th symposium discrete symmetries meet the *Belle Époque*: The conference venue Baden-Baden is a 19th century spa town which has become a site of the *UNESCO World Heritage* in 2021 as one out of eleven *Great Spa Towns of Europe*. Baden-Baden was founded as a Roman spa around the year 75 and was the capital of the region *Respublica Aquensis* (later: *Civitas Aurelia Aquensis*). The city's architecture conveys the spirit of the summer retreat of Europe's 19th-century upper class. Johannes Brahms completed his second symphony here and Dostoyevski gambled in the Casino. Attractions include the spa gardens with Kurhaus and Casino, the Caracalla and Friedrichsbad thermal baths, archeological excavations of the Roman time, the byzantine-style Russian church, and several museums. In reach of a longer walk (or public transportation) are the 800-year-old Lichtenthal monastery, which still hosts nuns and offers an inexpensive hostel service, and the ruins of Hohenbaden Castle. A panoramic hiking trail connects the city with this castle ruin, the Merkur hill (with excavated reliefs depicting the Roman god Mercurius), and a waterfall.

References

- [1] DISCRETE 2022 Indico: <https://indico.scc.kit.edu/e/discrete2022> .
- [2] Previous conferences: Valencia 2008, <http://ific.uv.es/discrete08>, Rome 2010, <https://agenda.infn.it/event/2763>, Lisbon 2012, <https://indico.cern.ch/event/202057>, London 2014, <https://indico.cern.ch/event/328215>, Warsaw 2016, <http://indico.fuw.edu.pl/conferenceDisplay.py?confId=46>, Vienna 2018, <https://www.discrete2018.at>, and Bergen 2020/21, <https://indico.cern.ch/event/868021> .



Figure 1: Up: Conference site *Kongresshaus*, *Friedrichsbad* spa. Down: *Trinkhalle* pump room (for thermal water to drink), *Hohenbaden* castle ruin, *Geroldsauer Wasserfall*.