Prof. Dr. Torben FERBER (he/him)

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Short biography (last updated 04/2024)

Ferber did his PhD work on the OPERA neutrino oscillation experiment (Italy) at the University of Hamburg (title: "Limits on neutrino oscillations in the CNGS neutrino beam and event classification with the OPERA detector,", supervisors Prof. Schmidt-Parzefall/ Prof. Caren Hagner). He moved to a postdoctoral position at DESY (with Carsten Niebuhr) working on the Belle and Belle II experiments (Japan). Ferber continued to work on Belle II at his second postdoctoral position at the University of British Columbia in Canada (with Prof. Chris Hearty). In 2018 he become the leader of a Helmholtz Young Investigators group at DESY and the University of Hamburg. Since August 2021 Ferber is full professor for experimental particle physics at KIT.

Ferber's group works on searches for light Dark Matter, long-lived particles (LLPs), dark sector particles, and on flavour physics. They are developing new methods of calorimeter and track reconstruction, including real-time algorithms for FPGAs. He is member of Belle II, LUXE, SHiP and the DELight collaborations. Ferber is also active in various theory projects to improve our understanding of light Dark Matter and BSM searches at colliders and future facilities.

Engagement in the Research System (selected):
- since 2023: Member of the CERN LHC Experiments Committee (LHCC)
- since 2021: Member of the Feebly Interacting Particles (FIPs) Physics Center (FPC) at the CERN Physics Beyond Collider (PBC)

  Members of the FPC contribute to the research efforts of the center and work with other members of the FPC to advance the understanding of FIPs by defining benchmark models, and by organizing workshops and schools
- 2019 - 2021: Physics performance coordinator at Belle II

  A physics performance coordinator is responsible for overseeing the reconstruction inputs (e.g. efficiencies, systematic uncertainties, or correction factors for high-level reconstruction objects)
- 2016-2020: Dark sector physics group convenor at Belle II
- 2015-2019: Calorimeter software convenor at Belle II