

Parton Distribution Functions at a crossroad

Trento, 18- 22 September 2023

Parton distribution functions (DFs) are a preeminent source of hadron structure information; and experiments interpretable in terms of hadron DFs have long been a priority. For much of this time, DFs were inferred from global fits to data and viewed as benchmarks. Such fitting remains crucial, providing input for the conduct of numerous experiments worldwide. But the past decade has seen the dawn of a new theory era, with continuum and lattice studies of quantum chromodynamics beginning to yield robust predictions for the pointwise behaviour of DFs. These developments are exposing potential conflicts with the fitting results. This workshop will provide an important opportunity to identify key experiments and new ways to advance in phenomenology and theory, in order to overcome the emerging controversies and proceed to a coherent description of hadron structure.

Organizers

Minghui Ding (Hemholtz Zentrum Dresden Rosendorf), Joannis Papavassillou (University of Valencia), Catarina Quintans (LIP-Lisbon), Craig Roberts (Nanjing University)

Keynote Speakers

Constantia Alexandrou (University of Cyprus), Vincent Andrieux (Paris-Saclay & CERN), Daniele Binosi (ECT*), Lei Chang (Nankai University), Xurong Chen (IMP-Lanzhou), Aurore Courtoy (UNAM, Mexico), Tom Cridge (University College London), Guy de Teramond (University of Costa Rica), Tanja Horn (Catholic University Washington), Huey-Wen Lin (Michigan State University), Pavel Nadolsky (SMU), Gerassimos Petratos (Kent State University), Jianwei Qiu (JLab), Paul Reimer (Argonne National Laboratory), David Richards (JLab), José Rodríguez-Quintero (University of Huelva), Juan Rojo (Vrije Universiteit), Nobuo Sato (JLab), Giovanni Salme (INFN-Roma), Jian-Hui Zhang (Beijing Normal University)

Director of ECT*: Professor Gert Aarts

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