Wire-based 2027

18 September 2027 - 22 September 2027

Scientific Programme

All sessions are plenary and each will be dedicated to one of the topics listed below. The participants will be requested to select the topic of their contributions which will define the session to which their works are aimed. The description of each topic is not exhaustive and is intended to guide the authors on their selection.

Invited speakers

Eight invited speakers will enrich our conference with review talks focusing on special aspects of our detectors or giving us an outlook to other types of detectors and approaches to the scientific problems we are also trying to solve:

Stanislav Pospišil (CTU) - 25-Year Scientific Journey: IEAP's Contributions to the ATLAS, and MoEDAL Experiments, CERN Detector R&D and the Medipix2/3/4 Collaborations
Jerry Va'vra (SLAC, ret.) - Development of high-resolution timing technique in the past 25 years
Michael Campbell (CERN) - The Timepix ASIC family and gas detector readout
Rui de Oliveira (CERN) - MPGD production techniques
Jochen Kaminski (Uni. Bonn) - the GridPix
Paolo Soffitta (INAF-IAPS) - Astronomical X-ray and Gamma-ray Polarimetry: From IXPE to Future Opportunities
Gregor Kramberger (Jožef Stefan Institute) - Silicon detectors with gain
Oliver Kortner (MPP Munich) - Gaseous Ionization Detectors in the FCC-ee Era

Simulation and software

Simulations of physical processes in MPGD, development of simulation tools and techniques. Development of software for simulation, reconstruction or analysis. Development of new software tools for the operation of MPGD-related instrumentation.

Detector Physics

Description of the physical processes in MPGD and their influence on different properties of the detectors, such as their gain in charge, charge mobility, spacial charge distribution, ion backflow, discharge probability, etc.

MPGD technologies

Characterisation of the performance of specific MPGD technologies. Experimental results dedicated to the study of specific features of MPGD technologies. Comparison of the performance of different technologies. Presentation of new technologies.

Applications

Implementation of MPGD in larger detector systems. Performance of MPGD in the context of experiments. Description of the detector performance aiming at specific applications. Applications of MPGD to fields beyond Fundamental Physics, such as material science, biomedical sciences, study of cultural heritage or their use in industry.

Electronics

Development of readout electronics for MPGD. ASICs for signal readout, data acquisition systems, electronics for control and monitoring of MPGD, such as high voltage, current measurement or signal processing. Description of new implementations of existing electronics. Introduction of new devices.

Production techniques

Techniques for the production of MPGD. Improvements in the quality of MPGDs. New facilities and developments and their influence in the performance of the detectors. Knowledge transfer to the industry.