

RD51 Micro Pattern Gaseous Detectors School

Monday 27 November 2023 - Friday 1 December 2023

CERN

Scientific Programme

The school focuses on state-of-the-art MPGD technologies. The programme of the school comprises morning lectures by world experts in the field offering an overview on gas detectors physics, MPGD technologies, simulation techniques, manufacturing approaches as well as applications, and hands-on exercises on various technologies in the afternoons, with an emphasis on methodologies.

Lecture program

Gas detectors physics

- Primary ionisation
- Charge transport
- Avalanche multiplication
- Gas properties

MPGD technologies

- Detector geometries
- Resistive elements
- Stability and ageing

Readout technologies

- Electronic readout
- Optical & hybrid readout

Simulation and modelling

Manufacturing techniques

Applications

- High Energy Physics
- Applications beyond HEP
- Beyond fundamental research

Laboratory Exercises

Detector assembly

Instrumentation and detector operation

Characterisation

Readout techniques

Simulation