

# On the properties of signal formation in LGAD sensors

*Monday 2 December 2024 10:55 (20 minutes)*

In this contribution, I will review the mechanisms that govern signal formation in LGAD.

In particular, the contribution investigates how the interplay among the initial energy deposition, space charge effects, and gain saturation determine several LGAD properties, such as the shape of the Landau distribution as a function of gain and the temporal resolution.

## Type of presentation (in-person/online)

in-person presentation

## Type of presentation (I. scientific results or II. project proposal)

I. Presentation on scientific results

**Authors:** ALTAMURA, Anna Rita (Universita e INFN Torino (IT)); SIVIERO, Federico (INFN - National Institute for Nuclear Physics); LANTERI, Leonardo (Universita e INFN Torino (IT)); MENZIO, Luca (Universita e INFN Torino (IT)); FERRERO, Marco (Universita e INFN Torino (IT)); CARTIGLIA, Nicolo (INFN Torino (IT)); WHITE, Robert Stephen (Universita e INFN Torino (IT)); ARCIDIACONO, Roberta (Universita e INFN Torino (IT)); SOLA, Valentina (Universita e INFN Torino (IT))

**Presenter:** CARTIGLIA, Nicolo (INFN Torino (IT))

**Session Classification:** WG2 - Hybrid silicon technologies