



KCETA Colloquium

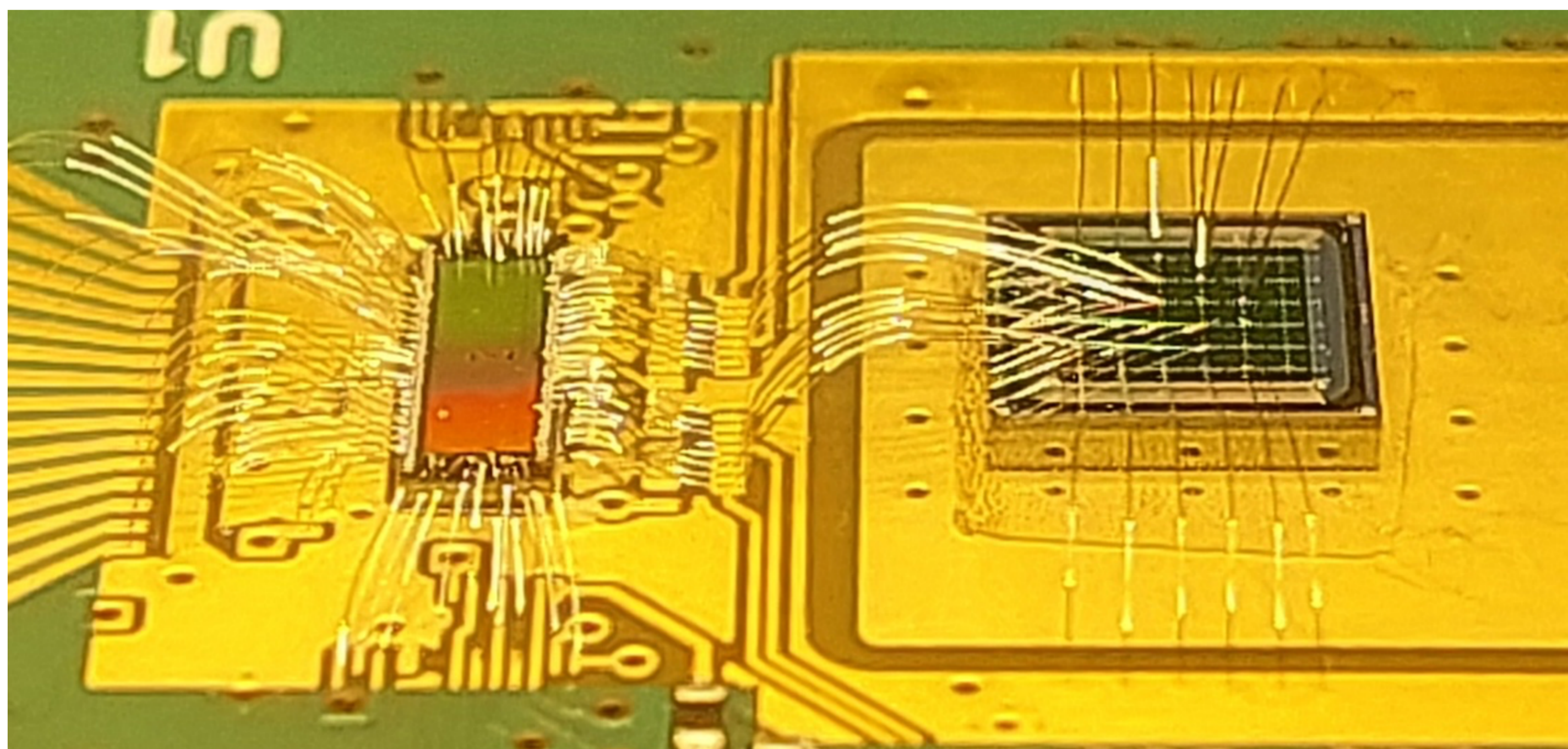
4D tracking: an enabling technology for future experiments

Thursday, May 16, 2024

Kleiner Hörsaal A (CS) 15:45 - 17:00

Prof. Nicolo Cartiglia
(INFN Torino)

In the past 10 years, two design innovations have radically changed the performance of silicon detectors and turned silicon sensors into high-resolution timing detectors, fit to meet the very demanding requirements of future 4D trackers. In this presentation, I will review the performance improvements that these two design innovations, low-gain (LGAD) and resistive read-out (RSD), have brought to silicon sensors. Due to the LGAD mechanism, large signals lead to improved temporal precision, while charge sharing, due to the RSD design, has removed the need for very small pixels to achieve excellent spatial precision. LGAD- and RSD-based silicon sensors are now adopted or considered in several future experiments and are the basis for almost every next 4D-trackers.



Please note:

The colloquium will also be live-streamed to Seminarraum 224 in Bld. 402 (CN).