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**UNIVERSITÄT
BERN**

Seminar über Ultrafast Science and Technology

Referent: Dr. Leonardo Gasparini, Fondazione Bruno Kessler (FBK), Trento (IT)

Titel: Digital Silicon Photo-Multipliers for biomedical, particle physics and quantum physics applications

Digital Silicon Photo-Multipliers (DSiPM) in Complimentary Metal-Oxide Semiconductor (CMOS) technology represent a relatively recent innovation in time-resolved single-photon detection for scientific applications. Arrays of Single-Photon Avalanche Diodes (SPAD) can be combined with custom-designed electronics implemented on the same substrate to create 100k-channel detectors with timestamping circuits having less than 100ps timing resolution. High efficiency is achieved using on-chip smart mechanisms to discriminate the signal to monitor from noise, minimizing dead times. The seminar will give the attendees an overview of the technology and provide few examples of sensors applied to different fields of application.

Zeit: Donnerstag, 26.10.2017, 11:15 Uhr

Ort: **Hörsaal B116**, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz