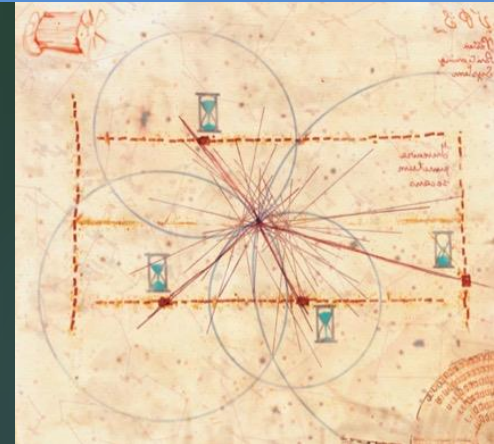


Tracking particles in space and time

Prof. Nicolo Cartiglia



Abstract:

The possibility of tracking particles in space and time has attracted a lot of attention in the last few years: it is now part of the CMS and ATLAS upgrades for HL-LHC and it is considered the baseline tracking system at FCC and at the next muon collider.

In this talk, Professor Nicolo Cartiglia will review the progress towards the development of silicon sensors able to track particles in 4D with a precision of $\sim 10 \mu\text{m}$ and $\sim 10 \text{ps}$. He will show why thin silicon sensors with moderate internal gain are a very promising technology to achieve this goal, and how we can make this technology radiation-tolerant so that sensors can work after being exposed to fluences well above $1\text{E}15 \text{ n/cm}^2$.

Career:

1989: Master at the University of Torino, Italy

1994: Ph.D. at the University of California, Santa Cruz, working at HERA (Hamburg)

1995-2000: Post-Doc at Columbia University, NY, working on ATLAS

2000-Present INFN, Italy, working on NA48 (precision Kaon physics) and CMS.

Contact: K. Hara
hara@hep.px.tsukubai.ac.jp



筑波大学

宇宙史研究センター

Tomonaga Center for the History of the Universe