

How can Moore's Law help making better detectors?

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A prophetic and risky prediction made more than half a century ago in the then obscure field of “integrated electronics” has changed profoundly every manufacturing, computing and communication technology that we can imagine.

Also in experimental physics, microelectronics has changed not only the speed at which we can read and manipulate data from detectors, but has also allowed designers to sense smaller signals, measure shorter time intervals, improve spatial resolution of detectors, and all this at much lower power consumption than ever before.

Commercial applications of this technology continue to push the performance of innumerable devices that are built based on it. The latest innovations offered by this technology are likely to have an impact on the design of future detectors and experiments that will be as dramatic as those of the last 20 years. This presentation will give a glimpse on what these coming technologies might be and hint at how they could be adapted beneficially to instrumentation for particle and nuclear detectors.

Primary author: MARCHIORO, Alessandro (CERN)

Presenter: MARCHIORO, Alessandro (CERN)

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