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IOT driven innovation in imec's nanoelectronics platform: ABSTRACT

The next new big thing is the 'internet of everything', with soon a huge amount of small and smart devices connected, building on a cloud based infrastructure. The internet of everything will drive innovation in every industry: agriculture, logistics, food, industrial monitoring, healthcare, automotive, energy...

Today's trends in technology put more focus than ever on e.g. bandwidth, connectivity, sensing, and power-efficiency. After more than 50 years of scaling transistor density and performance, we are entering a new era.

Next to further transistor scaling, this will also require to add functionality: integration of memory and processing, sensors, better context awareness and security, advanced communication with smart antennas and improved analog performance, or co-integration of heterogeneous systems.

In this talk, we will give an overview of the material, process and device scaling work done at imec, as well as share views on new building blocks for IOT applications in wireless technology, medical & life science, energy, etc...