Research Insider: 'Scaling Challenges of Multi-Gate Transistors'

Data: venres, 1 xuño, 2018 - 10:00 - 11:30

Lugar: CiTIUS Assembly Hall

Poñente(s): Daniel Nagy (Postdoctoral researcher)

Idioma: Inglés

Streaming: Segue este evento en directo

In this presentation we delve into the world of transistors that became a part of our everyday life. These are at the core of all electronics; from the most simple/primitive to the most advanced gadgets. A rapid advance in technology started when the first successful working bipolar point-contact transistor device was presented on the evening of Christmas in 1947 at the Bell Telephone Laboratories. However, as devices are miniaturized to create smaller, more efficient and faster devices we had to come across many difficult challenges. One massive aid along this road was provided by device simulation softwares that were able to allow us a deeper physical insight into these miniature devices as well as gave us the power to predict future advances.

Therefore, in this presentation we will look through the history of transistors and their role in our lives. Furthermore we introduce the audience to our simulation softwares which can aid the research and design of future devices. The focus on the later is related to our latest publications on variability studies that can affect yield and reliability of the current architecture, FinFET (Fin Field Effect Transistor), fabricated on industry scale by Intel and Samsung, and also on future future GAA (Gate-All-Around) NW (Nanowire) technology.