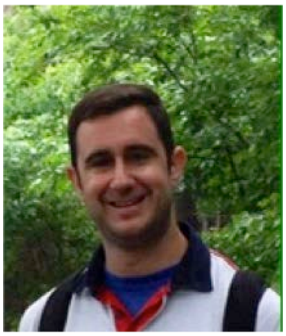
WWU MÜNSTER

Gast-Vortrag

Donnerstag, 23.11.2017 um 12:00 Uhr
Ort: Seminarraum 87, Wilhelm Klemm-Straße 10

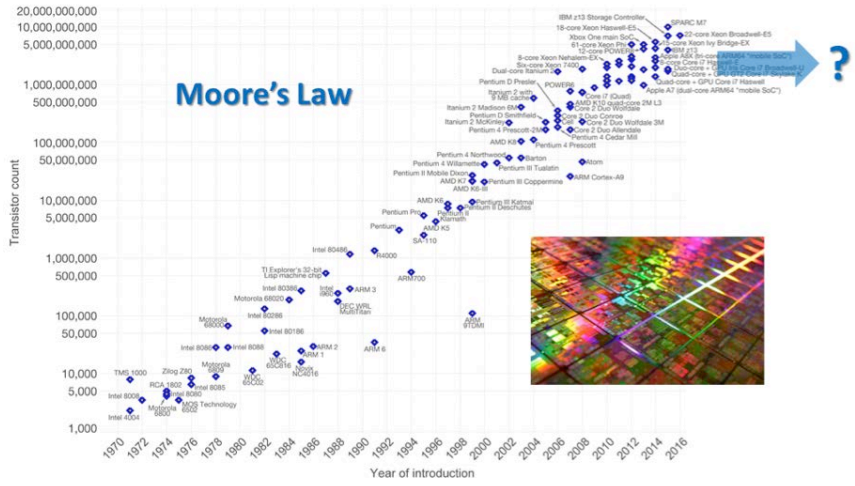
Micro/Nano-Electronics: a Story of Extraordinary Success… How much longer?



Prof. Jorge Fernández-Berni

Instituto de Microelectrónica de Sevilla (IMSE-CNM)
Universität Sevilla

For more than 50 years, the semiconductor industry has steadily increased the number of transistors integrated in chips according to the well-known Moore's Law. This is the fundamental reason behind the exponential technological development that we have enjoyed over the same period, supported by the ability to keep adding more information processing capacity per unit area of silicon. However, the end of this golden age of integration technologies seems to be right ahead of us. We are getting very close to fundamental physical limits that impact, in an interrelated way, transistor density, heat dissipation, processing speed and reliability of components. These limits appear as a barrier that could first lead to the economic unfeasibility of transistor scaling and, eventually, being unsurmountable without a technological paradigm shift. In this talk, we will analyze this challenging scenario where every aspect of information processing hardware is being revisited in the quest of the new switching mechanism capable of maintaining the current pace of development and technological innovation.



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