

DOTTORATO DI RICERCA IN FISICA, UNIVERSITÀ DI MESSINA

14 Novembre 2014, ore 15.00

Aula E. Majorana, Dip.to di Fisica e Scienze della Terra,
V.le F. Stagno d'Alcontres 31, S. Agata (ME)

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Study and Simulation of a Nanoscale a Structure of MOS Transistor Multi-Gate

Abstract: The increasing miniaturization of electronic components and transistors in integrated circuits has been increasing over the past thirty years. The goal is to integrate more components per unit area and thus improve circuit performance while lowering their manufacturing cost. Nowadays the problem is miniaturization of devices which causes many parasitic effects which modify the performance and energy consumption of systems.

The multi-gate transistors (MUGFETs) are widely recognized as promising candidates to fulfill the requirements of the ITRS, thanks to good control of the channel by the gate.

We will study the structural simulation, electronic and electrical properties of 2D and 3D n-FinFET transistor taking into account the adverse effects (corner SCE and DIBL) and quantum effects.