

Job offer

INTERNSHIP

Comparative Study of FinFET and FDSOI Technology Nodes for FPGA Development

This internship focuses on a **comparative analysis of FinFET and FDSOI technology nodes** applied to **FPGA development**, a critical area in advanced semiconductor design. The intern will explore how these two leading transistor architectures influence FPGA performance, power efficiency, and scalability at advanced nodes (e.g., 14nm, 7nm).

Your missions

- Literature review of FinFET and FDSOI technologies, including their physical principles, design constraints, and industry adoption trends.
- FPGA architecture study, identifying how technology choices impact logic density, routing complexity, and timing closure.
- Simulation and benchmarking, using EDA tools to model FPGA implementations on both technology nodes and evaluate key metrics such as power, performance, and area (PPA).
- Trade-off analysis, considering leakage, variability, cost, and manufacturability aspects.
- Final report and presentation, summarizing findings and providing recommendations for FPGA design strategies in future technology nodes.

Profile

- Currently enrolled in a Master's program in Electrical Engineering, Microelectronics, or related field.
- Strong knowledge of CMOS technology, digital design, and FPGA architecture.
- Familiarity with EDA tools (Cadence, Synopsys, Mentor) and hardware description languages (VHDL/Verilog).
- Analytical mindset and ability to work independently.

Duration & Location

- Internship
- Location : Sèvres (92)
- Start Date : 2026 (Q1 or Q2)

Excited by this role ? We'd happy to hear from you !

Send your CV at : careers@nanoxplore.com