Short Course:

Semiconductor Device Modeling and Simulation

Instructor:
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Prerequisites: *Basic knowledge of semiconductor device physics.*

Simulation Software: *Educational Silvaco Victory Device software version installed on NanoHub (**free of charge**).*

The course is ***self-paced*** and will be available online starting ***October 15th, 2024***.

Course Outline:

- **Computational Electronics**
- **Semiconductor Transport Models**
    - Drift-Diffusion Model
    - Hydrodynamic Model
- **Introduction to Silvaco TCAD Tool**
- **Modeling of Silicon-Based Devices with Silvaco's Victory Device**
    - Introduction to MOS Capacitors
    - MOSFET Modeling
    - SOI Devices Modeling
    - Modeling Quantum Effects in Nanoscale Devices with Victory Device

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