S.Selberherr, W.Jüngling   (20min. talk)

Device Simulation
Present Situation and Future Trend

A survey of the activities at the Technical University of Vienna will be presented. Recent developments of the programs MINIMOS, BAMBI and ANICA will be discussed and demonstrated by examples.

In MINIMOS, our two-dimensional simulator for planar MOS devices, a new hot-electron transport model has been implemented. It is possible to account for local carrier energy variations which seems to be a necessity for the presently evolving VLSI devices with submicron feature size.

BAMBI, our universal two-dimensional transient device simulator, is presently tuned to be particularly feasible for trench cells.

ANICA, our two dimensional interconnect capacitance analysis program will be demonstrated to be suitable for tackling the analysis of the parasitic effects regarding capacitances in VLSI structures. As particular example a DRAM cell analysis will be presented.