Summary and Open Discussion

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Summary

- The impact of various kinds of systematical and stochastic variations on sub-10nm devices and circuits is important and needs to be assessed and minimized

- A hierarchical simulation approach is necessary and presented in this workshop to deal with the impact of variations, ranging from equipment simulation to statistical device simulation and compact model extraction

- Accurate <u>and</u> efficient process and device models are needed for variability studies

- The most relevant sources of variations must be identified and used in a DoE to minimize the complexity of simulation

Summary (II)

- Systematic variations may influence several quantities in parallel, and partly cause correlations between these quantities. Such correlations must be considered in circuit simulation

- The importance of process variations and of the simulation and minimization of their impact will be further growing

- The approach presented in this workshop needs to be customized to the industrial process flow in question, especially regarding the large variety of systematic process variations which depend on details of the technology used.

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