Seminar description „Emerging Architectures"

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This seminar examines new and emerging circuit and system architectures. Some of these architectures aim to improve one or more design parameters in comparison to conventional approaches, e.g. improve computation speed or reduce power consumption. Others have been proposed for the implementation of certain new application classes such as neuromorphic approaches to deep learning. Again other architectures have been designed specifically for certain manufacturing technologies with their special properties (e.g. inherent unreliability). Current scientific publications from the following fields are intended as topics:

- Stochastic circuits and architectures
- Approximative architectures
- Neuromorphic architectures
- Memristive architectures
- Memory architectures and In-Memory computing

The following requirements are planned for the seminar:

- A 30-minute oral presentation in German or English (student's choice).
- One set of presentation slides (PowerPoint, Latex, Open Office…).
- An 8-page written summary of the topic in Latex, LNCS-style is obligatory. The summary can be in German or English (student's choice).
- Attendance at presentations of other participants and active participation in the discussion.

A detailed seminar description will be distributed in the first meeting (preliminary discussion), which contains the exact requirements for the presentation and the written summary. This description will also contain a list of available topics, furthermore the deadlines will be discussed and decided in this preliminary meeting.