IAS Seminar

**Topic:** Parallelizing the Critical Path

**Speaker:** Angelika Schwarz, Department of Computing Science, University Umea, Sweden

**Contents:** Task-based implementations of dense linear algebra routines, modeled by a directed acyclic graph and scheduled dynamically, often make excellent use of the available compute resources. The underlying tile size is a crucial tuning parameter. Small tile sizes yield a greater degree of concurrency; larger tile sizes reduce the scheduling overhead and increase the efficiency at which single tasks can be executed. In practice, this trade-off often results in relatively large tile sizes – tile sizes that turn the critical path into the limiting factor of the overall execution time. Any acceleration of the critical path then promises faster execution times. We demonstrate how parallelizing the critical path reduces the length of the critical path and, in turn, improves the overall execution time.

**Time:** Wednesday, 6 December 2017, 14:00

**Venue:** Jülich Supercomputing Centre, Rotunda, building 16.4, room 301

sgd Prof. Dr. Stefan Blügel