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# Smoothed Aggregation Multigrid on Multicore Architectures

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Multicore computer architectures present new challenges to linear solvers, including algebraic multigrid multigrid. The advent of many cores has effectively increased the imbalance between node compute power and off-node communication throughput. In this talk we report on our experiences using nonstandard smoothed aggregation multigrid on multicore architectures to address the computation/communication imbalance. Specifically, we consider the case of multigrid with domain decomposition smoothing, where the domains are allowed to cover more than one core in a compute node. We'll present numerical results on thousands of processors.