

CIVIL-COMP-OPTI 2023
The Seventh International Conference on
Parallel, Distributed, GPU and Cloud Computing for Engineering²⁸⁻
31 August 2023
Pécs, Hungary

Special Session: PAR-S1

Asynchronous iterative methods

Organisers:

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Summary:

Asynchronous iterative methods are a class of parallel iterative methods that are capable of relaxing data dependencies, hence not requiring the latest updates when they are not ready, while still ensuring convergence. Such relaxation result in the use of inconsistent data which leads to an increased iteration count and hence increased computational operations, but the time spent on waiting for the latest updates performed on remote processors may be reduced. If waiting time dominates the computation, asynchronous algorithm outperform its synchronous counterparts. This session gathers recent contributions on asynchronous iterative methods including but not limited to asynchronous domain decomposition methods, synchronous coarse space preconditioning techniques, asynchronous global local, etc.