

## Parareal for hyperbolic problems just does not work, or does it?

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The parareal algorithm is a simple, non-intrusive way to obtain parallelism in time. It is very easy to use if one has a solver available, one just has to use it with a fine discretization and a coarse discretization and then take suitable combinations and iterate to obtain an approximate solution parallel in time. The convergence of parareal is well understood, both for parabolic problems where it converges very well, and for hyperbolic problems where it struggles. Recently, the role of boundary conditions imposed on the problem to be solved was understood, and boundary conditions play a key role for the convergence of parareal. It was shown that parareal even without coarse solver can converge very well, sometimes even better than with the coarse solver, when applied to parabolic problems. I will explain in my talk what happens in the case of hyperbolic problems.