Comparing the Laplace Transform and the Parareal Algorithms

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Abstract

Both the Laplace Transform and the Parareal family of algorithms promise to provide completely parallel in time and space computational results. Given a random problem it is unclear which algorithm will run faster.

In this talk, we will provide the following:

- Define the algorithms in question, including more specific details than usual.

- Define interesting parallel environments, some of which do not exist yet.

- Demonstrate several computational environments in which one of the algorithms can be expected to be faster than the other algorithm.