

Using PLASMA in the NAG library

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Abstract

Modern processor architecture requires linear algebra software to have a new algorithmic and software engineering approach to better exploit the ever increasing parallelism. One library taking a novel approach is PLASMA, which implements the functionality of LAPACK using task based parallelism. This talk looks at how we are embedding PLASMA inside the NAG library, a numerical library containing 1700 routines heavily reliant heavily on linear algebra. We will consider the issues that have arisen such as interoperability with other parallel code as well as discussing potential performance gains.