

A fast higher order Poisson solver

ABSTRACT

In this paper, we introduce a rotated fourth order approximation with the halfsweep approach for solving the two dimensional Poisson equation known as a faster higher order Poisson solver. The solver has been shown to be very much faster as compared to the standard fourth order Poisson solver due to Gupta (1984). The experimental results of the test problem were included to support our assertion.

Keyword: Faster higher order Poisson solver; Two dimensional Poisson equation