

عنوان مقاله:

Acceleration of Bluff Body Calculation Using Mdgrape-۲

محل انتشار:

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خلاصه مقاله:

Bluff body calculation was accelerated by using a special-purpose computer, MDGRAPE-۲, that was exclusively designed for molecular dynamics simulations. The three main issues were solved regarding the implementation of the MDGRAPE-۲ on vortex methods. These issues were the efficient calculation of the Biot-Savart and stretching equation, the optimization of the table domain, and the round-off error caused by the partially single precision calculation in the MDGRAPE-۲. Finally this technique was applied to calculation of flow around a circular cylinder. The drag and lift coefficient was investigated to check the validity of the proposed method.

کلمات کلیدی:

Vortex Method, MDGRAPE, ۲, Bluff Body, Drag and lift coefficient

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