Abstract

Parallel computing with OpenMP platform in numerical simulation of underwater sediment movement is elaborated. The result shown computer I with processor type Intel® Core™ i7-7500U has better speedup performance (3.291493 times of serial computing) than Computer II with processor type Intel® Core™ i3-6006U. Meanwhile, using computer II, the speedup of parallel computing is obtained 2.4646 times of serial computing. Indeed this discrepancy occurs because of the processor type of Computer I is higher than Computer II. Moreover, the efficiency of Computer I is 20\% higher than computer II which is conducted 82.28\% efficiency. This means using Computer I the ability of parallel codes to achieve best performance proportional to the number of processor is obtained. Furthermore, the numerical simulation using UDCHR is shown in a good agreement with the staggered grid scheme of two-layer SWE and SWE-Exner model.