

Towards the New Era based on Ultra-scale Supercomputer System

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TOP500^[1] ranked the “K-computer^[2]” No.1 twice last year, which achieved over 10 PFLOPS and was jointly developed by RIKEN and FUJITSU. Besides the utilization of such ultra high performance computer for pure scientific researches, the importance in use for resolving problems in our daily life is significantly increasing.

In this regard, we have been developing applications in order to contribute to such social requirements.

In my presentation here, after briefing the outline of K-computer, I introduce two major applications for, firstly the heart simulator UT-Heart^[3] being developed in cooperation with the University of Tokyo, and secondly the animated tsunami simulator based on the smoothed particle hydrodynamics method. Then I will conclude my presentation on the topics why we have to develop much higher performance computer by ourselves in Japan.

Ref.

[1] TOP500: <http://www.top500.org/>

[2] K-computer: <http://www.aics.riken.jp/en/>

[3] UT-Heart: <http://www.sml.k.u-tokyo.ac.jp/index.html>