

Day 2 (Poster C)

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Title: Software Platform Development Using Quantum and Classical Computing as Accelerators

Abstract:

Hardware development of accelerators such as quantum computers and classical computers has been progressing. These accelerators have different interfaces and different computational strengths, which can be effectively used by understanding the characteristics of each accelerator. In order to fully utilize these accelerators, programming costs may become very high. By providing a software platform that hides the hardware-dependent interface stage from users, the programming cost can be much reduced. In this study, we propose a software platform where various accelerators can cooperate with each other according to their characteristics. Given a program code, the proposed platform assigns the best suitable accelerator to every partial process in it. Experimental evaluations demonstrate the effectiveness of the proposed platform.

This work was done in collaboration with Masashi Tawada and Nozomu Togawa.