

第 713 回 化学・物質工学セミナー開催のお知らせ

この化学・物質工学セミナーは、5年一貫制博士課程グリーンシステム創成科学専攻の英語による国際セミナーと共催します。万障お繰り合わせの上、ご参加下さい。

日 時：令和元年 12月 18日（水）13:10～14:40

場 所：総合教育研究棟3F 大講義室

講演題目：From K to Post K (Fugaku) --- Great Challenge in High Performance Computing

講演者：平尾公彦 博士

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講演概要：スパコンとは何か、「京」による成果とポスト「京」(富岳)が拓く可能性について解説します。

The supercomputer “K” retired in August 2019 to give way to a cutting-edge successor. The K computer was the most powerful supercomputer in the world in 2010s, achieving a LINPACK benchmark performance of 10 petaflops in 2011. The architecture of the K computer balances processing speed with data storage, memory, and communication. The K computer was used in a broad range of fields including drug discovery, disaster mitigation, weather forecasting, cosmology, life science, physics, chemistry, manufacturing, material development, etc. In many areas we see many great results. Many projects that use K would be difficult or impossible to do elsewhere. The K computer extended the boundaries of computational science. Some highlights obtained by using the K computer will be given.

Computer simulation is becoming more and more important for contemporary science. Simulations performed on the supercomputer will drive progress in science and engineering and play an important role in solving difficult problems that we face as a society. Japan’s new supercomputer, the successor of K, Fugaku, is set to begin operations in 2021. Fugaku is capable of achieving speeds up to hundred times faster in real applications than the K computer.

Big computing and big data will revolutionize science, whether physical or social, by making possible the formerly impossible. The new supercomputer will dramatically increase our ability to understand the world around us through simulation. With Fugaku, we are reaching a tipping point in “predictive science”. Its success will have lasting impact on the planet and people all around the world and for generations into the future.

The overview of the K and post-K supercomputer projects and the challenge and possibility of high performance computing will be given.

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