Mission of CCS

The CCS promotes "multidisciplinary computational science" on the basis of the fusion between computational science and computer science. For the purpose, the CCS develops high-performance computing systems by the "co-design". The scientific research areas cover particle physics, astrophysics, nuclear physics, nano-science, life science, environmental science, and information science.

The CCS was reorganized in April, 2004, from the preceding center, Center for Computational Physics that was established in 1992. The CCS is the institute for the above-mentioned research fields and also the joint-use facility for outside researchers. Since 2010, the CCS has been approved as a national core-center, Advanced Interdisciplinary Computational Science Collaboration Initiative (AISCI), by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The CCS aims at playing a significant role for the development of the Multidisciplinary Computational Science.

Chronology and Major Events

1992   Foundation of the Center for Computational Physics (CCP)

1996   Completion of CP-PACS, a 0.6 TFLOPS MPP ranked No. 1 on the Top 500 in Nov. 1996

2002   Completion of HMCS (Heterogeneous Multi-Computer System), an 8.6 TFLOPS coupled CP-PACS/GRAPE-6 system

2004   Reorganization and expansion of CCP, renamed Center for Computational Sciences (CCS)

2006   Two major new computing facilities start operation.
  PACS-CS   a general-purpose 14.3 TFLOPS MPP cluster for computational sciences
  FIRST   an HMCS-E for astrophysical simulations General-purpose 3.5 TFLOPS + gravity 35 TFLOPS

2008   Completion of T2K-Tsukuba system, a 95.4 TFLOPS cluster ranked No. 20 on the Top 500 in Jun. 2008

2012   HA-PACS Base Cluster is delivered with 802 TFLOPS of peak performance, ranked No. 41 on the Top 500 in Jun. 2012.

2013   HA-PACS/TCA is added to HA-PACS system with 364 TFLOPS of peak performance in Oct. 2013, and total peak performance of HA-PACS system is expanded to over 1.1 PFLOPS. Joint Center for Advanced HPC(JCAHPC) established in alliance with the University of Tokyo

2014   COMA(PACS IX) is delivered with 1.001PFLOPS of peak performance, ranked No.51 on the Top 500 in Jun. 2014.

2016   Oakforest-PACS installed and started operation in JCAHPC

CP-PACS
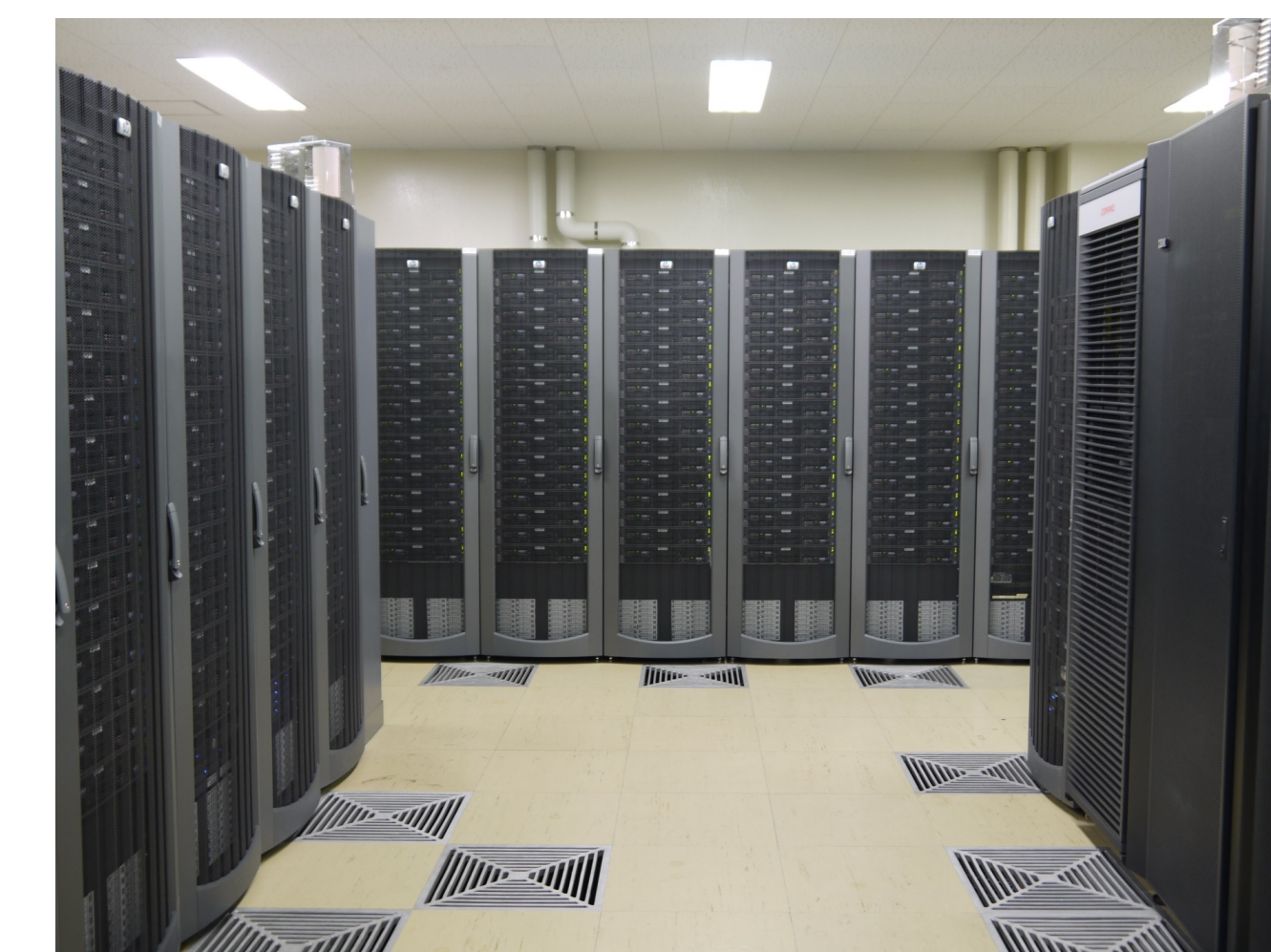
FIRST-Cluster

PACS-CS

T2K-Tsukuba

Current Supercomputers

HA-PACS

COMA

Oakforest-PACS