FLAGSHIP2020 Project "Fugaku"

☐ Missions
- Building the Japanese national flagship supercomputer Fugaku (a.k. a post K), and
- Developing wide range of HPC applications, running on Fugaku, in order to solve social and science issues in Japan (application development proj will be over at the end of march)

☐ Overview of Fugaku architecture

Node: Manycore architecture
- Armv8-A + SVE (Scalable Vector Extension)
- SIMD Length: 512 bits
- # of Cores: 48 + (2/4 for OS) (> 2.7 TF / 48 core)
- Co-design with application developers and high memory bandwidth utilizing on-package stacked memory (HBM2) 1 TB/s B/W
- Low power : 15GF/W (dgemm)

Network: TofuD
- Chip-Integrated NIC, 6D mesh/torus Interconnect

☐ Status and Update
- March 2019: The official contract with Fujitsu to manufacture, ship, and install hardware for Fugaku is done
- RIKEN revealed #nodes > 150K
- March 2019: The Name of the system was decided as "Fugaku"
- Aug. 2019: The K computer stopped the services and shutdown (removed from the computer room)
- Oct 2019: access to the test chips was started.
- Nov. 2019: Fujitsu announce FX1000 and FX700, and business with Cray.
- Nov 2019: Fugaku clock frequency will be 2.0GHz and boost to 2.2 GHz.
- Mov 2019: Green 500 1st position!
- Oct-Nov 2019: MEXT announced the Fugaku "early access program" to begin around Q2/CY2020
- Around Jan 2020: Installation of "Fugaku" will be started.

CY	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4

Basic Design | Design and Implementation | Manufacturing, installation, and Tuning | Operation