



65th RAP Seminar

The 65th Seminar on RIKEN Center for Advanced Photonics

Language: Japanese

Date: **September 13(Fri) 16:00 - 17:00, 2019**

Location: **W319, 3F, Cooperation Center, Wako Campus, RIKEN**

(理研 和光キャンパス 研究交流棟 3階会議室 W319)

Title: **Science of Computing for Fugaku
and its Future Successors**

富岳から未来につながる「計算の科学」

Speaker: **Dr. Satoshi MATSUOKA**
Director, RIKEN Center for Computational Science (R-CCS)

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Fugaku is the flagship next generation national supercomputer being developed by Riken R-CCS, with well more than 150,000 nodes of server-class A64fx many-core Arm CPUs with the new SVE (Scalable Vector Extension) instructions, augmented with HBM2 memory paired with each CPU, exhibiting nearly a Terabyte/s memory bandwidth. Fugaku's target performance is 100 times speedup on some key applications c.f. its predecessor, the K-Computer, realized through extensive co-design process involving the entire Japanese HPC community. However just putting together a machine is only the beginning; there is a continuous research being done at R-CCS in "Science of Computing" with its domestic and international partners to utilize Fugaku effectively in new domains such as Big Data and AI, as well as investigation of fundamental concepts for successor of Fugaku and future, challenging the most difficult problem in computing that we will face in the next decade, that of Post-Moore computing. The talk will give an overview of Fugaku as well as ongoing advanced research on "Science of Computing" as described.