

Breakthrough of strongly correlated materials science enabled by “Fugaku”

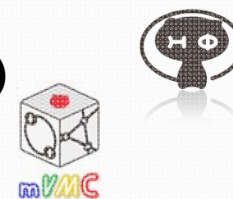
High-Tc SC

Novel quantum fluids

Unification of apparently different two streams
Universal concepts generated by common methods

Emergent particles and “quantum soup” generating
“breakthrough of novel concept in basic science” and
“Exploration of functionality”
with dreams towards room temp. SC &
next generation devices

- ◆ Improved multiscale *ab initio* scheme for correlated electrons (MACE)
- ◆ Available highly-accurate open source software (mVMC, HΦ,RESPACK)
- ◆ Achievement in nonequilibrium and interface research
- ◆ Insights from typical SC and quantum fluids



full use of machine learning &
data science

International collaboration:
critical accuracy cross check

tight collaboration with
cutting-edge experiments

Unified basic science
for superconductivity and quantum fluids