

# **[KEYNOTE] Toward Understanding Dense QCD Matter**

*Wednesday, April 2, 2025 9:30 AM (30 minutes)*

I will overview the role of symmetries and vacuum structure of QCD in understanding strongly interacting matter. I will focus on the phenomenon of spontaneous chiral symmetry breaking and examine how it affects hadron properties. After discussing insights from finite-temperature QCD, I will address the current theoretical challenges in the dense regime, including the sign problem, and introduce recent developments such as tensor network methods and quantum computing as novel approaches to dense QCD.

**Presenter:** HIDAKA, Yoshimasa (YITP)

**Session Classification:** Plenary Session