APCTP SEMINAR

A holographic description of colour superconductivity

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Apr. 29 (Thu.) 11:00 AM (KST)

ZOOM Webinar

In this seminar I will talk about our computation of the gauge dependent quark condensate in the colour superconducting phase. We construct a holographic dual of the condensate by arguing that near the chiral restoration transition, the strongly coupled gluons are gapped so that the colour quantum numbers of the quarks can be thought of below that gap as global indices. An AdS/superconductor model is then used to analyze the fermionic gap formation. We relate the interaction of the holographic superconductor to the strength of the gapped gluons. The result is a holographic description of the QCD colour superconducting phase diagram. Finally we discuss how this model can be applied in the modelling of neutron stars with stable quark cores.

■ **ZOOM Webinar**

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