

## **Seong Chan Park - Festina-Lente bound, Higgs vacuum structure and more**

*Friday, 7 April 2023 14:00 (30 minutes)*

Title: Festina-Lente bound, Higgs vacuum structure and more

Abstract: The recently suggested Festina-Lente (FL) bound provides a lower bound on the masses of  $U(1)$  charged particles in terms of the positive vacuum energy. Since the charged particle masses in the Standard Model (SM) are generated by the Higgs mechanism, the FL bound provides a testbed of consistent Higgs potentials in the current dark energy-dominated universe as well as during inflation. We study the implications of the FL bound on the UV behavior of the Higgs potential for a miniscule vacuum energy, as in the current universe.

**Session Classification:** session 2