## KEK Theory Meeting on Particle Physics Phenomenology (KEK-PH2018 winter) and 3rd KIAS-NCTS-KEK workshop on Particle Physics Phenomenology

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## Sneutrino Dark Matter meets EW SUSY inverse seesaw

Tuesday, 4 December 2018 17:15 (15 minutes)

In this paper we study sneutrino dark matter in a recently proposed supersymmetric electroweak-scale inverse seesaw model, in which the majority of the sneutrino dark matter particle is a mixture of the right-handed sneutrino and the singlet field. The scalar field X responsible for the generation of neutrino masses can simultaneously play a crucial role for sneutrino annihilation in the early Universe via the pseudoscalar mediator into neutrinos. We focus here on the dominant annihilation channels and provide all the formulas together with analytic estimates in order to identify the relevant parameters.

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