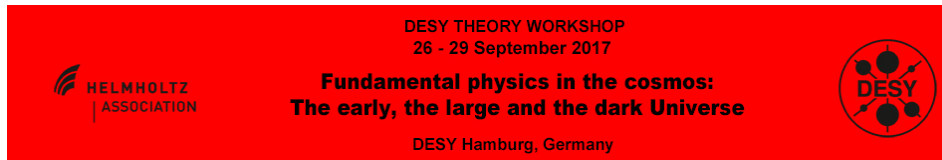


# Fundamental physics in the cosmos: The early, the large and the dark Universe



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## The dark side of neutrinos

*Wednesday 27 September 2017 14:34 (17 minutes)*

The  $O(1)$  relationship between the standard model and dark matter relic abundances suggests a connection that is more than just gravitational. If the main portal between the dark and visible sectors is not via charged particles, but rather via neutrinos, then both cosmological phenomenology and search methods here on Earth must be modified. I will discuss the impact of DM-neutrino interactions in the early universe including BBN, CMB and structure formation, as well as on the newly-discovered astrophysical neutrinos seen by the IceCube Neutrino Observatory, and show the great complementarity that exists between these two probes.

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