



University of Crete
Department of Physics



FORTH
INSTITUTE OF ASTROPHYSICS



Joint Physics & IA/FORTH Colloquium

Thursday, 27 February 2020 | 17:00 – 18:00, Seminar Room, 3rd floor

The Dark Matter Puzzle

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ABSTRACT

The problem of missing mass in the Universe, at the scale of galaxies, large-scale structures, and especially its global content, is a multi-faceted enigma. Since 1985, we know that this dark matter is made of non-baryonic particles, which do not exist in the standard model of particles. The main candidate is the neutralino, the most stable neutral particle of the hierarchy of super-symmetric particles. However, supersymmetry does not appear as expected in the LHC experiments at CERN. Many other models have blossomed in recent years, we will describe some of the main ones, from axions, superfluid matter, or Bose-Einstein condensate, to sterile neutrinos, or modified gravity.