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## The domain of thermal dark matter, and a hot, dark history of the Universe

*Thursday 1 December 2022 10:45 (25 minutes)*

Thermal dark matter (DM) covers a well-motivated class of candidates. In this talk, I will firstly consider DM in a hidden sector with temperature  $T'$ , and find the allowed, model-independent parameter space in terms of the DM mass and the ratio  $T'/T$ . Then I will look specifically at the  $T'/T \gg 1$  case, taking dark QED as a representative example, and show how large entropy production allows the model to go beyond the generic domain.

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**Session Classification:** DM pheno theory