

TH Colloquium: Dark Matter in Disequilibrium

Wednesday 1 August 2018 14:00 (1 hour)

The Gaia mission is in the process of mapping nearly 1% of the Milky Way's stars. This data set is unprecedented and provides a unique view into the formation history of our Galaxy and its associated dark matter halo. I will review results based on the most recent Gaia data release, which demonstrate that the inner Galaxy is dominated by the stellar remnants of a single massive satellite galaxy that merged with the Milky Way early on. These results suggest that the component of dark matter that is sourced from luminous satellites may not be in equilibrium, with a non-trivial fraction in substructure. I will explain the ramifications of these findings for direct detection experiments.

Presenter: LISANTI, Mariangela (Stanford University)