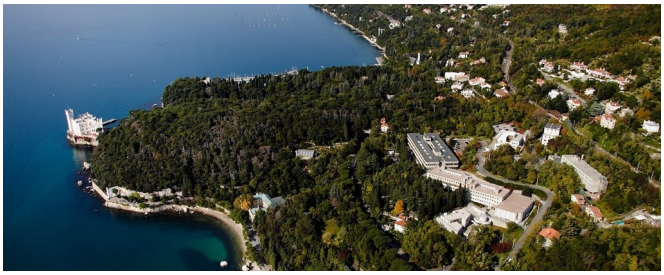

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A new Paradigm for understanding the Dark Matter phenomenon

Wednesday 30 August 2023 10:10 (30 minutes)

While observational evidence of the so-called Dark Matter anomaly is growing up with more and more sophisticated measurements, we observe that a pure non-collisional fluid in the central regions of the galactic halos, baryonic matter dominated, cannot explain naturally the observed dynamical features. it was observed surprisingly that the DM cores have substantial correlations with the Baryonic Matter distribution on every scale mass from Dwarfs to giant Elliptic galaxies. More general correlations between the distribution of BM and DM will be shown, indicating that some direct interaction, not only gravitational, should happen between the two sectors. We encourage a change in the Paradigm from a pure theoretical approach to one where observational evidence should drive any possible explanation of the phenomenon. We encourage also a more direct link between the astrophysics and particle physics communities to converge in a more efficient collaboration to constrain the relative searches and measurements.

Presenter: TURINI, Nicola (INFN Sezione di Pisa, Universita' di Siena)

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