Contribution ID : **86** Type : **not specified**

Eigenstructure of Hi-C contact matrices: a spectral network approach to generate synthetic data

Hi-C contact matrices capture the three-dimensional organization of chromatin by quantifying physical proximities between genomic loci. Interpreting these matrices as adjacency representations of complex networks opens interesting perspectives on their structural analysis using tools such as spectral graph theory. In this talk, we will investigate the spectral properties — particularly eigenvalues and eigenvectors — of Hi-C derived contact networks to generate synthetic data and assess significant differences between the observed contact patterns.

Role

Professor/PI

Primary author(s) : Dr. MERLOTTI, Alessandra (Department of Physics and Astronomy "Augusto Righi"); Prof. REMONDINI, Daniel (Dipartimento di Fisica e Astronomia "Augusto Righi")

Presenter(s) : Dr. MERLOTTI, Alessandra (Department of Physics and Astronomy "Augusto Righi")