LEZIONE LAGRANGIANA
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A theory of spectral clustering

28 settembre 2021 alle 16.30
Aula Magna - Dipartimento di Matematica "G. Peano"
Via Carlo Alberto 10, Torino

Abstract: Spectral graph theory deals with the use of linear-algebraic techniques to study properties of graphs and to develop graph algorithms. Spectral graph algorithms are particularly effective, in practice, at discovering "clusters" in graphs.

In this talk we will present rigorous evidence for the good performance of such algorithms, and our results will take the form of refined and generalized "Cheeger inequalities", relating the value of Laplacian eigenvalues to combinatorial properties of the graph.

The techniques that we developed to prove our results have been used to resolve a nearly 40+ year old conjecture on infinite-dimensional Markov processes. A number of interesting problems remains open.

La Lezione sarà fruibile anche in streaming in Aula 2 o collegandosi al link:

Marino Badiale
Direttore del Dipartimento