



UNIVERSITÀ  
degli STUDI  
di CATANIA

DIPARTIMENTO  
di ECONOMIA  
e IMPRESA

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## SEMINARIO

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## Probabilistic distance clustering: insights and recent advances

**Abstract:** Probabilistic distance (PD) clustering is a powerful soft clustering technique based on the assumption that the probability of any point belonging to a cluster is inversely proportional to the distance from the center of that cluster. For each point, the product of the probability to belong to a cluster multiplied by the distance from that cluster is a measure of the classifiability of that point. The sum of those products is a measure of overall classifiability and the goal of PD clustering is to find the cluster centers that optimize this criterion. The resulting algorithm is robust and gives good clustering performance. This talk will give an overview of PD clustering and show some recent extensions to account for clusters with different within cluster variability, correlation among variables, big data sets, and non-continuous data.

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**Giovedì 29 Settembre 2022, ore 16.30**  
**Aula 5 - Palazzo delle Scienze, Corso Italia n°55, Catania**

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