DSS Statistics Seminar
May 14, 2021, 12:00
https://uniroma1.zoom.us/j/86881977368?pwd=SWRFcVFjMDZTa0lXZk05TE1zNm5adz09
Passcode: 432940

Directional data depth with applications

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Directional data arise when observations are recorded as directions, rotations, clock, axes, and are represented as angles relative to a fixed reference point. Alternatively, any recording or data transformation which yields unit vectors produces directional data. That is, data lying on the surface of the unit hypersphere. The interest in directional data and especially in developing methodologies suitable for their analysis is growing: given that they lie on a non-linear manifold, they require specific statistical methods to be properly analyzed. This talk will focus on the analysis of directional data through data depth functions. A field rapidly attracting the interest of different authors and which see many potential applications. The talk will be organized in three parts: a simple introduction to the directional data domain; a description of the main directional depth functions available in the literature (depth functions provides center-outward ordering of points in any dimension); some applications of depth functions to directional data (data visualization tools and supervised classification techniques).