

SEMINARIO DI GEOMETRIA E ALGEBRA

UNIBA - POLIBA

Giovedì 28 Settembre 2023 - Ore 14:30
Dipartimento di Matematica UniBa, Aula IV, piano terra

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Linear Degenerations of Flag Variety: a Tale of Geometry and Combinatorics

Abstract. Linear Degenerations of the Flag Variety arise as very natural generalizations of the Complete Flag Variety and their geometrical properties very often appear to be linked with interesting combinatorial patterns.

In the first part of the talk I am going to introduce these objects, discuss their remarkable properties and state the main problems in this interesting research area.

In the second part of the talk I will focus on a special class of linear degenerations, the Flat Degenerations, that have the remarkable property of being equidimensional algebraic varieties of the same dimension as the Complete Flag Variety.

Finally, if there is enough time, I will show how suitable torus actions and quiver representation theory can be used in this setting to prove some new results about the smooth locus in Flat Linear Degenerations.



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