

SEMINARIO DI GEOMETRIA

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Politecnico di Torino,
Dipartimento di Scienze Matematiche,
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Birational geometry of complete collineations

The moduli space of complete collineations is roughly speaking a compactification of the space of linear maps between two fixed vector spaces, in which the boundary divisor is simple normal crossing. The space of complete collineations is a spherical wonderful variety.

Exploiting its spherical nature we will investigate its birational geometry. More precisely we will compute the effective and nef cones, the Mori and moving cones of curves and the generators of the Cox ring. Finally, we will determine the Mori chamber decomposition of the space of complete collineations of the 3-dimensional projective space, and as a consequence we will recover a description of the Mori chamber decomposition of the space of complete quadric surfaces due to C. L. Huerta.