

Tits buildings and fixed points of decomposition spaces

Kathryn Lesh

The space of decompositions of complex n -space into proper orthogonal decompositions has a natural action of the unitary group $U(n)$, and makes an appearance in M. Weiss's orthogonal calculus, among other places. Until recently, relatively little has been known about its equivariant homotopy type. I will describe how the Tits buildings for the general linear group and the symplectic group make an important appearance in the fixed point sets of certain p -toral subgroups of $U(n)$.