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Conjugacy classes in the Weyl group and nilpotent orbits

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Abstract. The Weyl group and the nilpotent orbits are two basic objects attached to a semi simple Lie group. The interplay between the two is a key ingredient in the classification of irreducible representations in various contexts. In this talk, I will describe two very different geometric constructions to relate these two objects, due to Kazhdan-Lusztig, Lusztig, and myself. The main result is that these two constructions give the same maps between conjugacy classes in the Weyl group and the set of nilpotent orbits.