

## Patrick Brosnan: Nilpotent orbits in Hodge Theory

Nilpotent orbits are linear algebraic objects which approximate degenerations of Hodge structure. They are very important for understanding the limits and asymptotics of variations of mixed Hodge structures. However, although nilpotent orbits are rather simple to define, it is not clear how to classify them, and it is somewhat challenging to write down several variable nilpotent orbits with given properties. I will discuss joint work with Colleen Robles and Gregory Pearlstein whose aim is to give an algorithm for classifying several variable nilpotent orbits.