



**Speaker:** Anne-Sophie Kaloghiros  
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Wednesday, November 2, 2011  
3:00 PM  
258 Hurley Hall

**Title:** The Sarkisov Program

**Abstract:**

The goal of the Minimal Model Program is to produce "good" representatives of birational equivalence classes of varieties. If  $X$  is a smooth projective variety, the MMP (conjecturally) produces in a finite number of elementary steps either a minimal model, or, if  $X$  is uniruled, a Mori fibre space. However, this good representative is not unique. It is natural to ask when two minimal models or when two Mori fibre spaces are birational.

In the case of Mori fibre spaces, Hacon and McKernan recently proved that any birational map between Mori fibre spaces may be decomposed into a finite number of "elementary Sarkisov links". This decomposition is not unique. Their proof is based on recent advances in Mori Theory. I will present their argument, and show how to understand/describe relations in the Sarkisov program. If time permits, I will show more concrete applications of this approach to the case of 3-folds.