

**Jean-Pierre Demailly: Hyperbolic algebraic varieties and
holomorphic Morse inequalities**

Abstract: I will explain how holomorphic Morse inequalities can be used to prove new results on the hyperbolicity properties of certain varieties of general type, e.g. hypersurfaces of high degree in projective space, in which case my PhD student Simone has obtained good bounds by using explicit techniques. A more general strategy to investigate the Lang-Green-Griffiths conjecture will also be presented.