Sébastien Boucksom: **K-stability, growth of functionals and singularities of pairs**

K-stability is an algebro-geometric property of a polarized variety, which can be viewed as a limit version of the more classical Geometric Invariant Theory notions. In this talk, I will review the relation of K-stability to Kähler geometry, where algebro-geometric invariants are interpreted as slopes at infinity of certain natural functionals, and to singularities of pairs, in the sense of the Minimal Model Program.