A geometric approach to simultaneous approximation

In this talk I want to introduce a method based on the geometry of numbers and in particular on the study of the successive minima functions with respect to a certain lattice and a suitable one-parameter family of convex bodies. This approach leads to the definition of some new approximation constants and in turn to some new transference inequalities. We will also compare these results to some recent advances in the case of simultaneous approximation of three resp. four real numbers.