Arakelov motivic cohomology

Abstract: In this talk, I shall present a cohomology theory called Arakelov motivic cohomology. It is an amalgamation of motivic cohomology (or K-theory) with Deligne cohomology. We show that Arakelov motivic cohomology is a variant (and generalization) of arithmetic K- and arithmetic Chow groups. If time permits, we shall briefly discuss its properties, such as the Riemann-Roch theorem for this cohomology theory. This is partly joint work with Andreas Holmstrom.