Arakelov Class Groups

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In this talk, we will see the analogy between function fields of curves and number fields from the point of view of Arakelov theory. We will introduce Arakelov class groups and discuss the relations between Arakelov divisors and ideal lattices. We will mainly be interested in certain particular Arakelov divisors, called reduced Arakelov divisors. This extends Shanks's definition of the infrastructure of real quadratic fields to general number fields. We will show that the finite set of reduced Arakelov divisors is, in a precise sense, regularly distributed in the compact Arakelov class group.