# K3 surfaces: old and new

K3 surfaces are classical objects in algebraic geometry. In many respects they behave like elliptic curves (just without the group structure). Their theory has been developed in the eighties, but recently interest in them has been revived for various reasons.

I will explain a few open problems to illustrate the rich geometry one encounters. In particular, Chow groups, derived categories, rational curves, etc. will make an appearance.