Anna Wienhard: Cross ratios, boundaries and geometric structures

It is well known that the hyperbolic metric on the Poincare disc can be recovered from the cross ratio function on four tuples on S^1. Furthermore given a closed Riemann surface of genus $g \geq 2$ the length of closed geodesics are related to so called periods of the cross ratio function. First I will explain some of the relations between cross ratio, metric and geodesic flow for hyperbolic surfaces. Then I will discuss a generalization of this to the Siegel upper half plane.