- **Beyrer, Jonas: Cross ratios and marked length spectrum rigidity for cube complexes (SR 0)**
  In recent years, CAT(0) cube complexes have become an important tool to address problems in group theory, low dimensional topology and related areas; e.g. in Agol and Wises proof of the virtual Haken conjecture. Often it is the combinatorial structure of those complexes that allows for better „accessibility“ of many problems.
  In this talk we want to show that marked length spectrum rigidity holds for many group actions on CAT(0) cube complexes - while in the case of universal covers of negatively curved manifolds this is a long standing problem.
  More precisely, we want to show that if a group G acts properly discontinuously and cocompactly on two CAT(0) cube complexes X,Y without free faces, then X and Y are equivariantly isomorphic if and only if the translation lengths in X and Y (w.r.t. the l^1 metric) coincide for all g in G. Note that the assumptions on the spaces or the group actions can even be weakened.
  For the proof we develop a cross ratio on a boundary of the cube complex and work out some of its properties. Such a cross ratio is a standard tool in negative curvature and should be of independent interest.