Michelle Bucher-Karlsson: Volume of ideal simplices and simplicial volume

The simplicial volume of a compact oriented manifold was introduced by Gromov in his seminal paper "Volume and bounded cohomology" and is a topological invariant which, loosely speaking, measures the complexity of representations of the fundamental cycle of a manifold. Its strict positivity has many interesting geometric implications, among others the strict positivity of the minimal volume. We will discuss the first non trivial examples and properties, and a conjecture of Gromov, which has just recently found a positive answer: Every compact locally symmetric space with universal cover G/K, where G is a semisimple Lie group of noncompact type and K a maximal compact subgroup, has strictly positive simplicial volume (Lafont-Schmidt, G different from $SL(3, R)$; B-K, $G = SL(3, R)$).