L^2-Betti numbers and computability of reals

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Abstract: L^2-Betti numbers can be seen as an equivariant sibling of ordinary Betti numbers. They share many properties. However, L^2-Betti are a priori only non-negative real numbers.
In this talk, I will report on recent work on compatibility aspects of these numbers, thus giving a characterisation of which numbers actually occur (given some hypotheses). This is joint work with Clara Löh.
We will also discuss some known results and conjectures about the relation between L^2-Betti numbers and simplicial volume.