The spectrum of Simplicial Volume

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Abstract: Simplicial volume was first introduced by Gromov to study the minimal volume of manifolds. Since then it has emerged as an active research field with a wide range of applications.

In dimensions two and three, the set of possible values of simplicial volume may be fully computed using geometrization, but is hardly understood in higher dimensions. In joint work with Clara Löh (University of Regensburg), we show that the set of simplicial volumes in higher dimensions is dense in the non-negative reals. I will also discuss how the exact set of simplicial volumes in dimension four or higher may look like.