Boundary Rigidity, Volume Minimality, and Minimal Surfaces in L^\infinity

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ABSTRACT

It turned out that boundary rigidity is closely related to filling volume minimality, asymptotic volume growth and ellipticity of surface area functionals. It is often the case that boundary rigidity can be treated as the equality case of certain distance-volume inequalities. One of the examples is Gromov's observation that Besicovich Inequality can be used to prove boundary rigidity of regions in Euclidean spaces. The main purpose of this series of lectures is to give an introduction into this circle of ideas.