

Topology and Geometry Seminar

Dr. Eduardo Martinez-Pedroza
Memorial University

Monday, January 19, 2015
1:00pm - 2:00pm, SN 4040

Homological Isoperimetric Inequalities

Abstract:

For a nice metric space, the isoperimetric inequality is a geometric inequality that bounds the area of the minimal disk enclosed by a closed curve in terms of the length of the curve. There are homological versions of these inequalities for topological complexes. In this talk, I will define this type of inequalities and report on recent work answering a question posed by Groves and Manning. The results relate the homological isoperimetric inequality of a complex with graph theoretic properties of its one-skeleton.