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*On the Circuit Diameter Conjecture*

A key concept in optimization is the diameter of a polyhedron. From the point of view of optimization, we would like to relate it to the number of facets  $f$  and dimension  $d$  of the polyhedron. Following Klee and Walkup (1967), we consider analogous questions for a variant of the combinatorial diameter called the circuit diameter. Here paths are built from the circuit directions of the polyhedron, and can travel through the interior. We show that many of the Klee-Walkup results and techniques translate to the circuit setting.

Joint work with Steffen Borgwardt and Timothy Yusun.