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Borsuk's partition conjecture

Chuanming Zong

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Abstract. In 1933, Borsuk proposed the following problem: Can every bounded set in $\mathbb{E}^n$ be divided into $n+1$ subsets of smaller diameter? This problem has been studied by many authors, and a lot of partial results have been discovered. In particular, Kahn and Kalai's counterexamples surprised the mathematical community in 1993. Nevertheless, the problem is still far away from being completely resolved. This paper presents a broad review on related subjects and, based on a novel reformulation, introduces a computer proof program to deal with this challenging problem.

C. Zong
Center for Applied Mathematics, Tianjin University, Tianjin, China.
(e-mail: cmzong@math.pku.edu.cn)