

Small subset sums

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Let B be the unit ball of a norm in d -dimensional space and assume that V is a finite subset of B , and the sum of the vectors in V is the zero vector. A theorem of Steinitz from 1914 says that there is an ordering v_1, \dots, v_n of the vectors in V such that every partial sum along this ordering has norm at most $2d$. In the lecture several versions and various extensions of this theorem will be explained. Joint work with Gergely Ambrus and Victor Grinberg.