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# Large Convex Cones in Hypercubes<sup>★</sup>

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*Dedicated to the memory of our good friend and colleague Levon Khachatrian.*

A family of subsets of  $[n]$  is *positive linear combination free* if the characteristic vector of neither member is the positive linear combination of the characteristic vectors of some other ones. We construct a positive linear combination free family which contains  $(1 - o(1))2^n$  subsets of  $[n]$  and we give tight bounds on the  $o(1)2^n$  term. The problem was posed by Ahlswede and Khachatrian [1] and the result has geometric consequences.

## References

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