## Positive Basis: Usage, Analysis, and Construction

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A positive basis is a set that non-negatively spans  $\mathbb{R}^n$  and contains no proper subsets with the same property. These attributes make postive-bases a useful tool in derivative-free optimization (DFO) and an interesting concept in mathematics. In this talk, we examine some properties of positive bases, including how to check if something is a positive basis and how to construct positive bases with nice structures.