

## **Convex sets without representation as spectrahedral shadow**

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Spectrahedral shadows, alias linear projections of spectrahedra, are the feasible sets of semidefinite programming. Linear functions can be optimized over such sets in a very effective way, at least in principle. Therefore it is interesting to better understand this class of sets. Recently it has been shown that there exist closed convex sets that cannot be expressed as spectrahedral shadows. We explain the known obstructions, and we present new constructions of counter-examples.