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**Nina Amenta\*** ([amenta@cs.ucdavis.edu](mailto:amenta@cs.ucdavis.edu)), Department of Computer Science, Univeristy of California, One Sheilds Ave., Davis, CA 95616. *Computational applications of Helly-type Theorems.*

Helly's theorem states that a finite family  $F$  of convex sets in  $\mathbb{R}^d$  shares a common point if and only if every  $G \subseteq F$  of size  $|G| \leq d+1$  shares a common point. Analogous Helly-type theorems might concern other sets  $F$  and other properties. In many cases, combinatorial algorithms for linear programming can be used to efficiently determine whether  $F$  has the property by testing only some of the small subsets  $G$ . We will give a several examples, both old and new. (Received September 15, 2014)