

Suppose a convex quadratic inequality description of a compact convex set C_0 containing F is available (e.g. convex functions in \mathcal{P}_F).

We want to generate a convex set C_{i+1} from C_i such that

$$C_0 \supseteq C_1 \supseteq C_2 \supseteq \dots = \text{conv.}(F)$$

(if $C_i \neq \text{conv.}(F)$ then we want $C_i \supset C_{i+1}$).