## Approximation Algorithms

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## 1. Semidefinite programming fundamentals

- (a) Linear programming fundamentals.
- (b) Quadratic programming and hardness.
- (c) Quadratically constrained programming.
- (d) Vector programs as relaxations of strict quadratically constrained programs.
- (e) Semidefinite matrices.
- (f) Cholesky factorization and LDL decomposition.
- (g) Semidefniite programming.
- (h) Separating hyperplanes and semidefinite programs.
- (i) Equivalence of semidefinite programs and vector programs.