



A diagram illustrating a point x and a curve defined by the equation $x^T A x = 1$. A horizontal line segment with an arrow points from the point x to the curve. The label $d \in_{\text{u.a.r.}} \{e_i, -e_i \mid i \in [n]\}$ is placed above the arrow, indicating a direction vector. The curve is a downward-opening parabola, and the point x is located on the horizontal axis to the left of the curve.

$$x^T A x = 1$$

$$d \in_{\text{u.a.r.}} \{e_i, -e_i \mid i \in [n]\}$$

x