

$$V(x) = V_2$$

$$V(x) = V_1 < V_2$$

• x_0



The diagram illustrates the concept of level sets for a function $V(x)$. It features three concentric ellipses centered at a point x_0 . The innermost ellipse represents the level set $V(x) = V_1$, and the outermost ellipse represents the level set $V(x) = V_2$. The region between these two ellipses is labeled $V(x) = V_1 < V_2$. Three arrows originate from the region between the ellipses and point outwards, indicating the direction of increasing $V(x)$.