

$= PV$. Moreover, any self-adjoint linear operator E such that $E^2 = E$ is of the form PV , where V is the range of E . For every x in H , $PV(x)$ is the unique element v of V , which minimizes the distance $\|x - v\|$.

This provides the geometrical interpretation of $PV(x)$: it is the best approximation to x by elements of V .