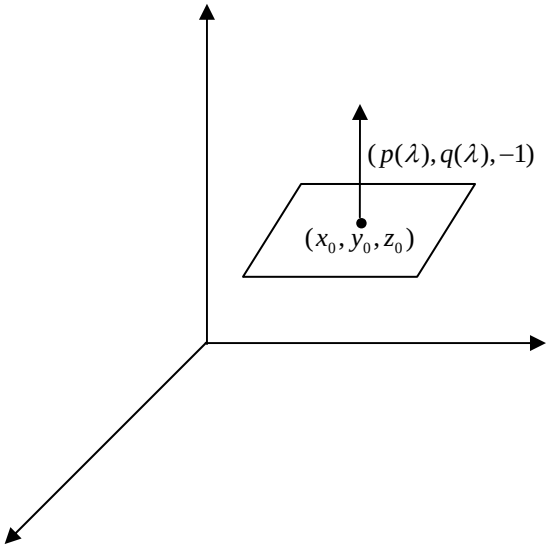
Monge cone

Given $F(x, y, z, p, q) = 0$

For a point (x_0, y_0, z_0) in the space then $F(x_0, y_0, z_0, p_0, q_0) = 0$



Define a 1- parameter family of solution for (p, q), i.e. $p(\lambda)$, $q(\lambda)$

$(z - z_0) = p(\lambda)(x - x_0) + q(\lambda)(y - y_0)$ is a family of plane.

$0 = p'(\lambda)(x - x_0) + q'(\lambda)(y - y_0)$

The envelope is called Monge cone by eliminating λ.