

## Method Description:

This function initializes the Kalman filter for per particle motion modeling.  
All parameters are optional.

## Parameter Descriptions:

### *For the initial velocity ...*

The two options below are mutually exclusive. If neither is entered, the initial guess of the velocity is zero for all particles.

**Initial velocity estimate:** Initial guess of particle velocities (same for all particles) for linear motion modeling.

**Reference point for initial velocity estimate:** If particles move in a radial fashion relative to a reference point, specify that point in order to calculate an initial estimate of particle velocities.

### *For the initial search radius ...*

The default initial search radius is the average of the search radius lower and upper bounds, defined in the cost function. If another value is desired, enter that value in the “**Search Radius for First Iteration.**”