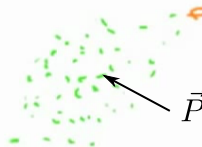
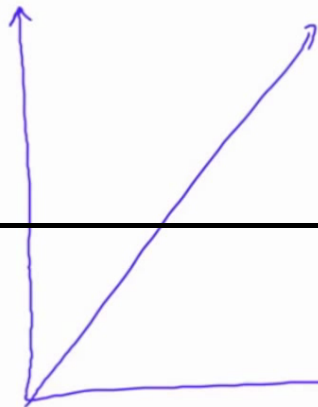


ELKF SLAM \rightarrow PF SLAM



$\vec{P}_{kt} =$

$k = 1, \dots, M$
(# of particles)

$$\begin{pmatrix} x_{kt} \\ y_{kt} \\ \theta_{kt} \\ \mu_{x_{W1}} \\ \mu_{y_{W1}} \\ \vdots \\ \mu_{x_{Wj}} \\ \mu_{y_{Wj}} \\ \vdots \\ \mu_{x_{WN}} \\ \mu_{y_{WN}} \end{pmatrix}$$

3

2N

of landmarks stored
in the particle k.

- curse of dimensionality
- particle filters scale exponentially with the number of dimensions

\rightarrow simple approach
not feasible!

Estimated coordinates of the registered world landmark number j in the particle k .

This is the j -th pair of world landmark estimated coordinates stored in the particle \vec{P}_{kt}