

# Adaptive algorithms for target tracking.

**L.DRIS, D.BERKANI, R.Drai, a.benammar**

**Abstract :** The quality of the tracking is greatly enhanced by a robust motion estimation. The objective is to develop a target tracking algorithm of a moving object, especially motion estimation of these. To realize the estimate, we chose stochastic filtering techniques. We concern the Kalman filter in the linear Gaussian, and sequential Monte Carlo methods in the nonlinear. Representation of state is permanently adapted according to concurrent observations, to best represent the system dynamics. A comparison of the results given by the extended Kalman filter and particle filter is realized into simulation of the nonlinear systems target tracking.

**Keywords :** stochastic filtering, Kalman filter, Extended Kalman Filter, Monte Carlo Method, Particle filter, Target tracking