



# Particle Filters for Robot Navigation

*Cyrill Stachniss , Wolfram Burgard*

[Download now](#)

[Read Online](#) 

# Particle Filters for Robot Navigation

*Cyrill Stachniss , Wolfram Burgard*

## **Particle Filters for Robot Navigation** Cyrill Stachniss , Wolfram Burgard

Autonomous navigation is an essential capability for mobile robots. In order to operate robustly, a robot needs to know what the environment looks like, where it is in its environment, and how to navigate within it. Particle Filters for Robot Navigation summarizes approaches that address these three problems and that use particle filters as their main underlying model for representing beliefs. It illustrates that these filters are powerful tools that can robustly estimate the state of the robot and its environment and that they are also well-suited to making decisions about how to navigate in order to minimize a robot's uncertainty about its own position and the state of the environment. They offer a series of attractive capabilities, including the ability to deal with non-Gaussian distributions and nonlinear sensor and motion models. Particle filters have been used for almost twenty years in robotics and have become a standard means for a series of tasks. Particle Filters for Robot Navigation is an ideal primer for anyone interested in the research and application of these filters in robotics.

## **Particle Filters for Robot Navigation Details**

Date : Published December 31st 2013 by Now Publishers

ISBN : 9781601987587

Author : Cyrill Stachniss , Wolfram Burgard

Format : Paperback 84 pages

Genre :

 [Download Particle Filters for Robot Navigation ...pdf](#)

 [Read Online Particle Filters for Robot Navigation ...pdf](#)

**Download and Read Free Online Particle Filters for Robot Navigation Cyrill Stachniss , Wolfram Burgard**

---

## **From Reader Review Particle Filters for Robot Navigation for online ebook**

Particle Filters for Robot Navigation Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Particle Filters for Robot Navigation Cyrill Stachniss , Wolfram Burgard books to read online.