

# Basic Models for Robot Motion and Perception

Observations

# Observations

Observations model the robot's sensors.

## Definition

The **observation** is information supplied to the robot at a particular time.

Notation:

- observation:  $y$
- observation space:  $Y$

# Observation function

The **observation function** tells how observation are related to states.

Discrete time, deterministic:

$$y_k = h(x_k)$$

Continuous time, deterministic:

$$y(t) = h(x(t))$$

# Observation function

The **observation function** tells how observation are related to states.

Discrete time, with errors:

$$y_k = h(x_k, \psi_k)$$

Continuous time, with errors:

$$y(t) = h(x(t), \psi(t))$$