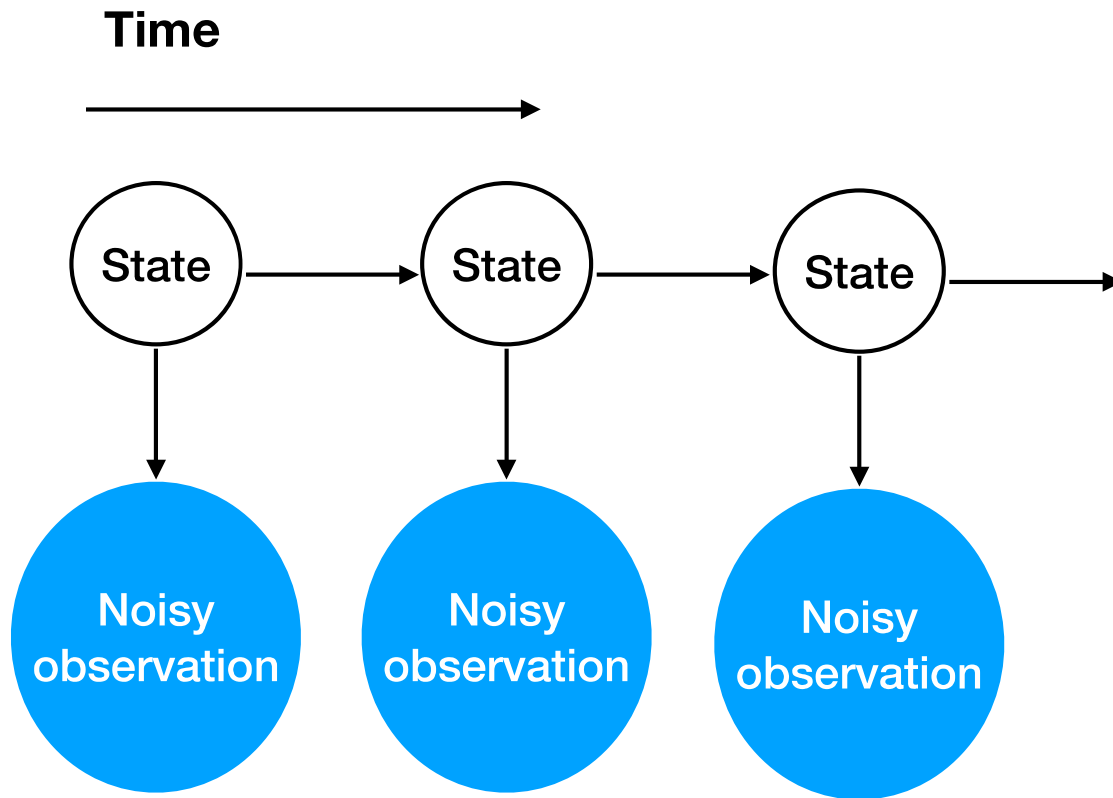


Lecture 19: State-space models - Filtering

Professor Ilias Bilonis

What is filtering?

What is filtering?

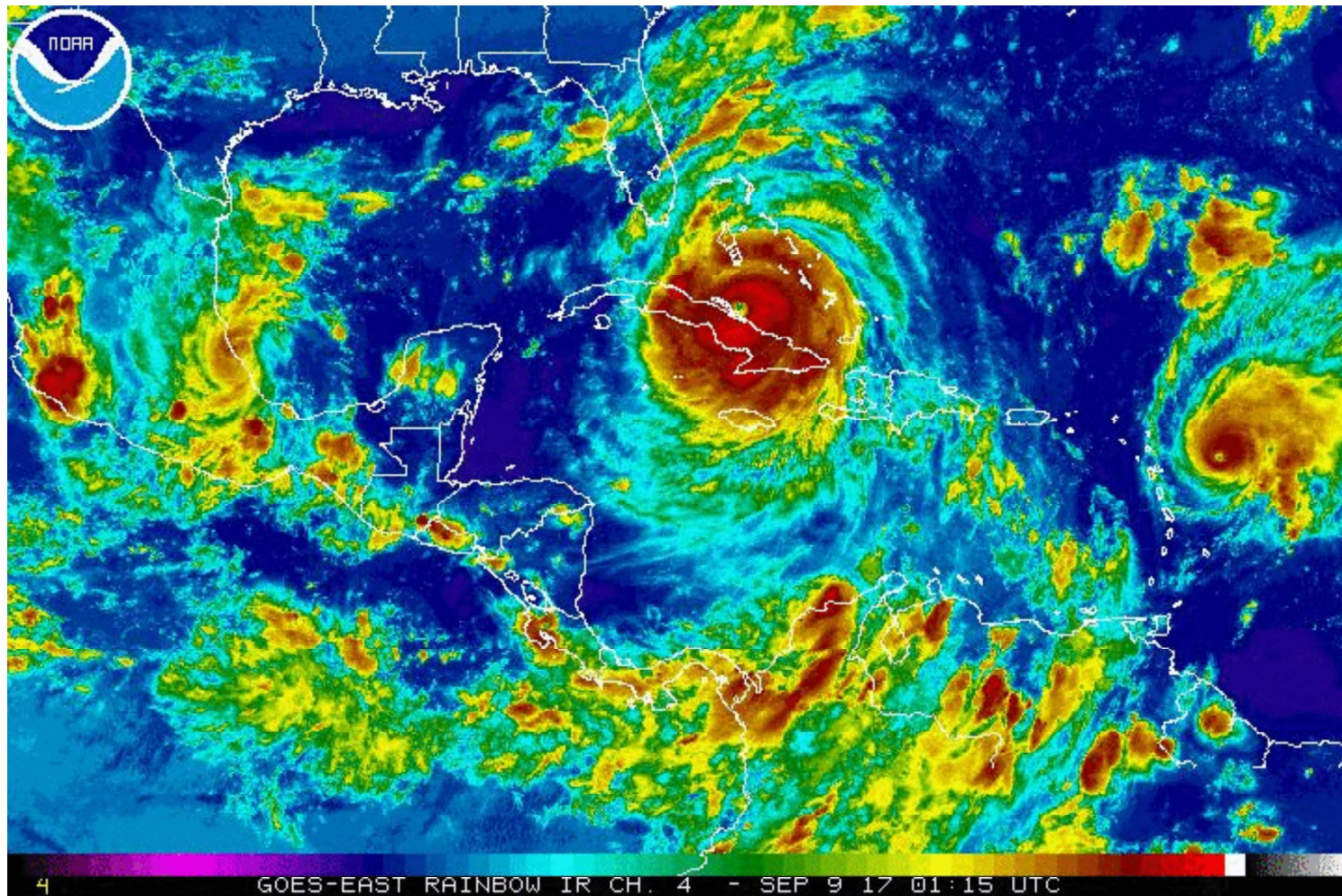


- What is the best you can say about the hidden system state given the observations?
- Can you predict the future state?
- What is the best control to apply?

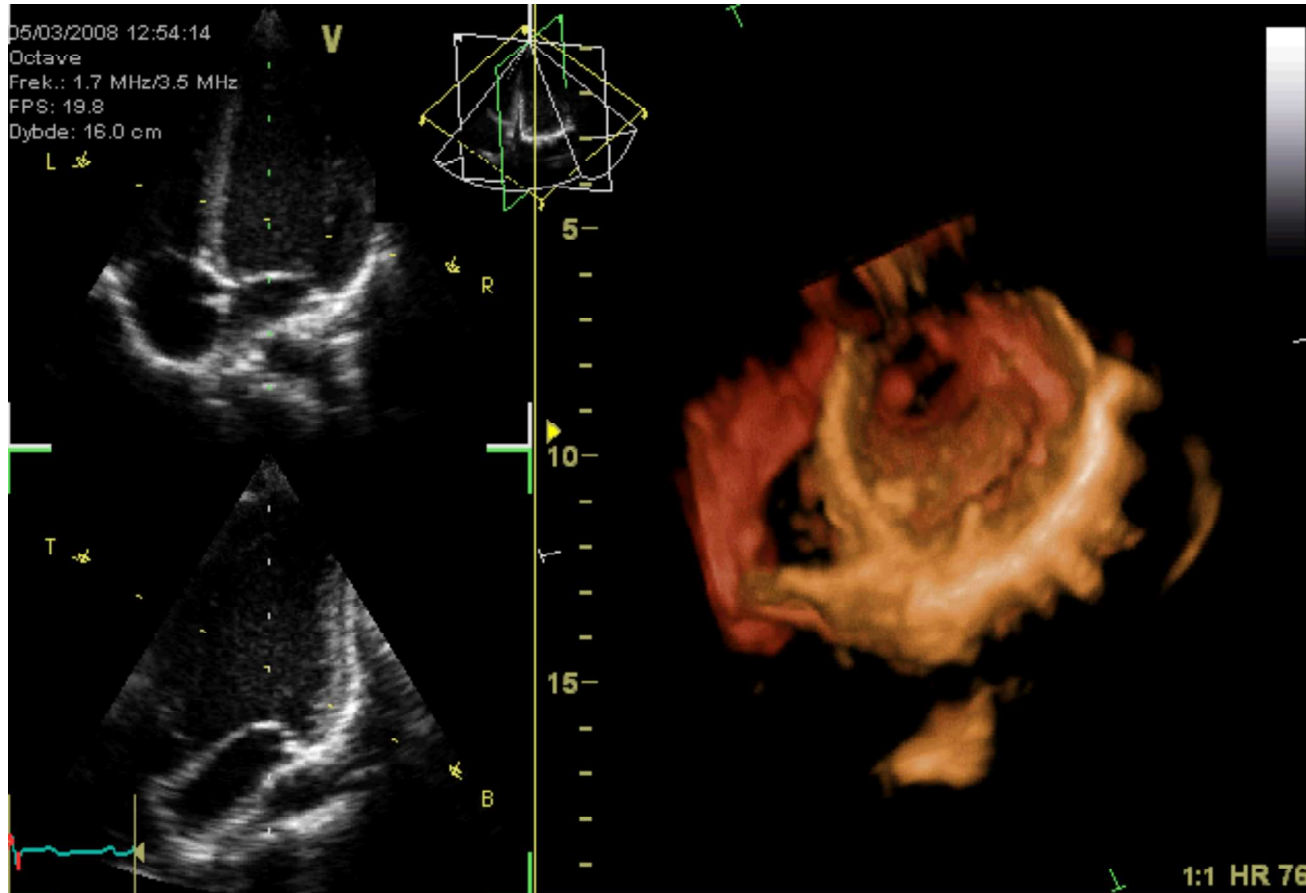
Applications of the filtering problem

- Object tracking
- Control of X
- Fault detection
- ...

Numerical weather prediction



Biomedical



Kjetil Lenes <https://commons.wikimedia.org/wiki/File:Apikal4D.gif>