Motion Planning | **Introduction to Optimization Techniques**
Autonomous Mobile Robots

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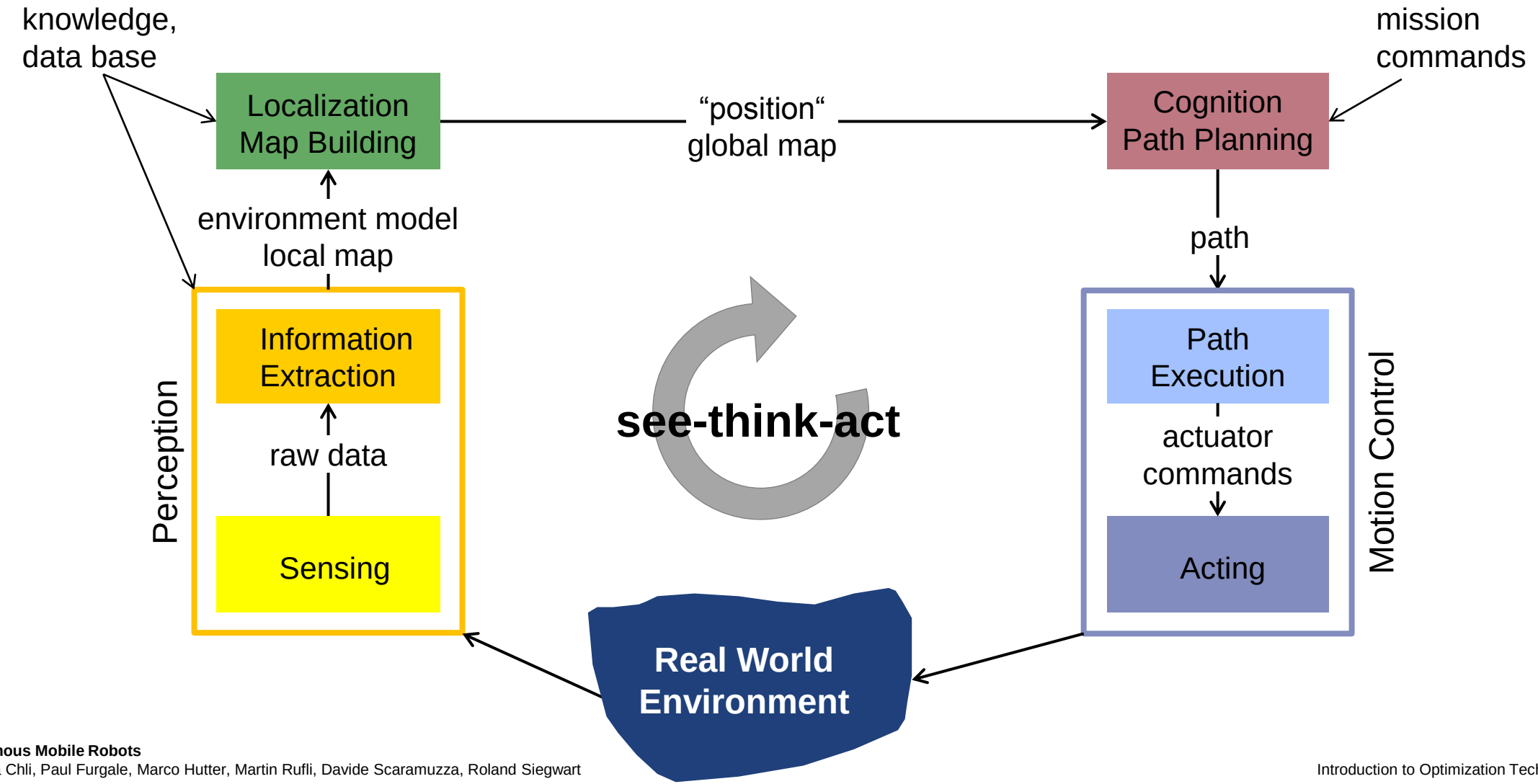
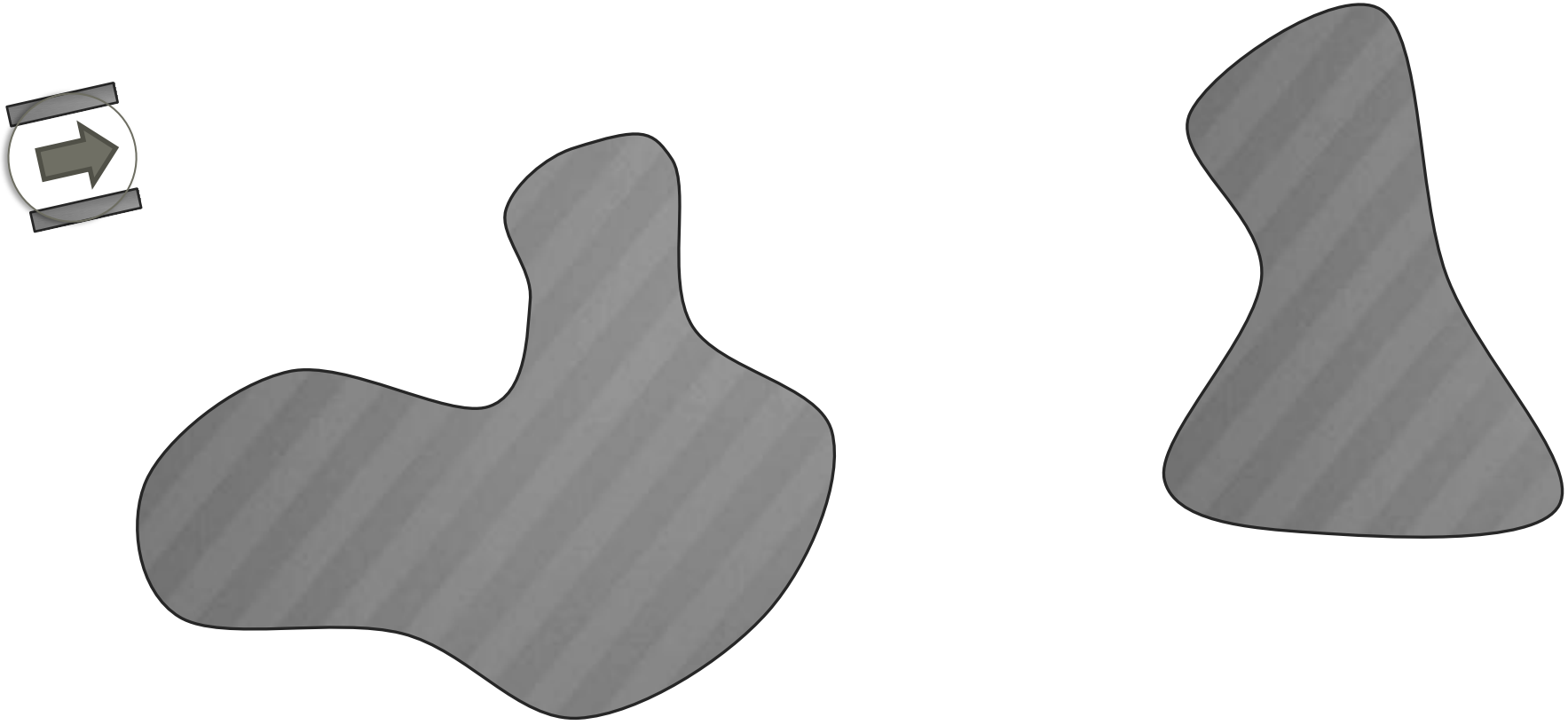
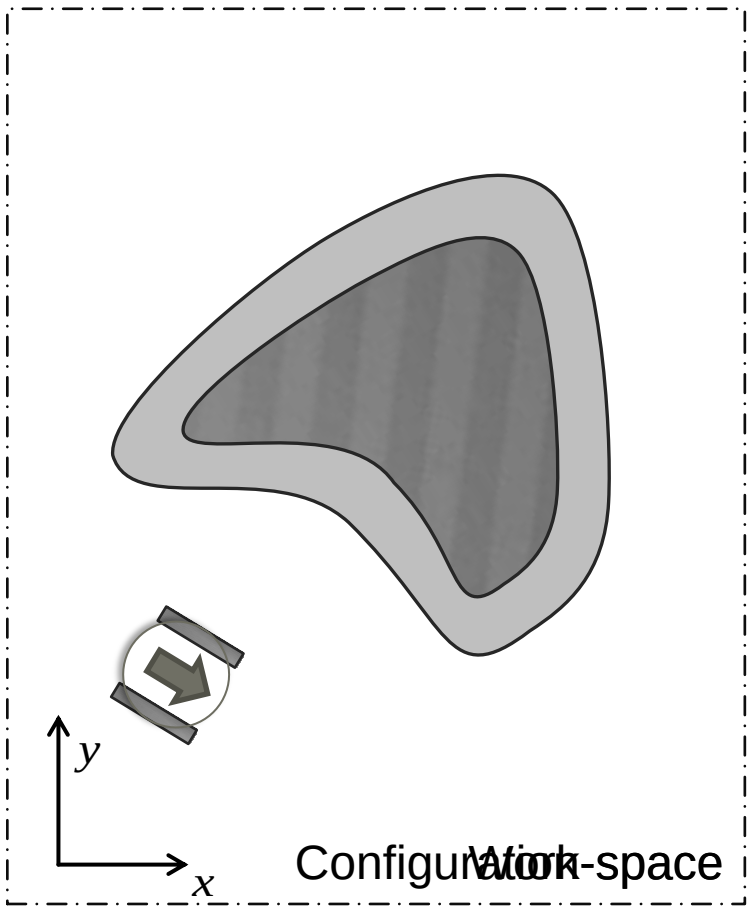
Introduction | the see – think – act cycle

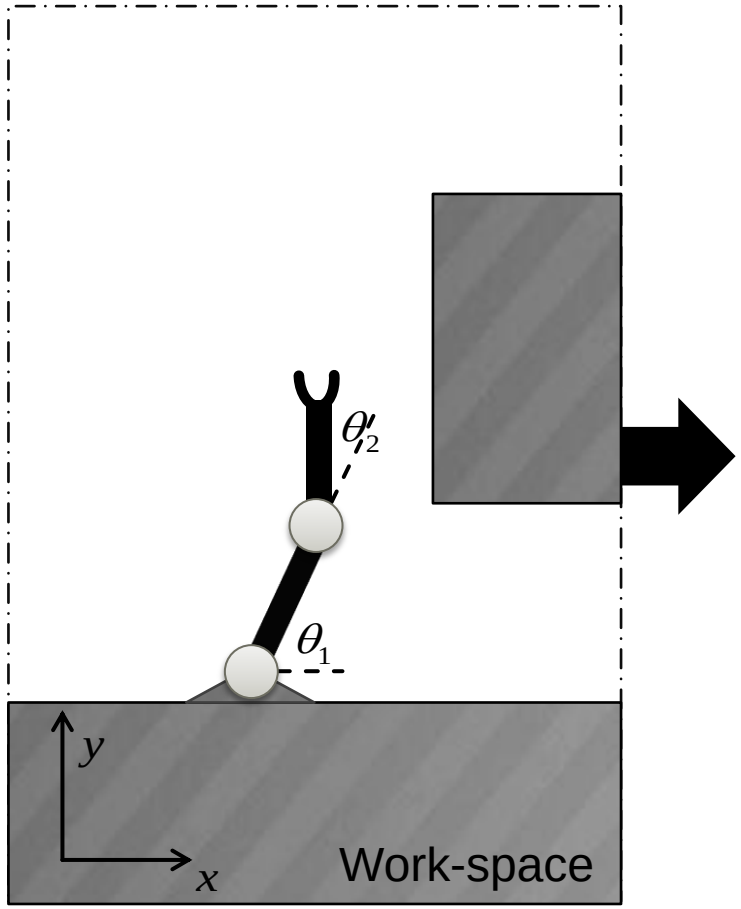


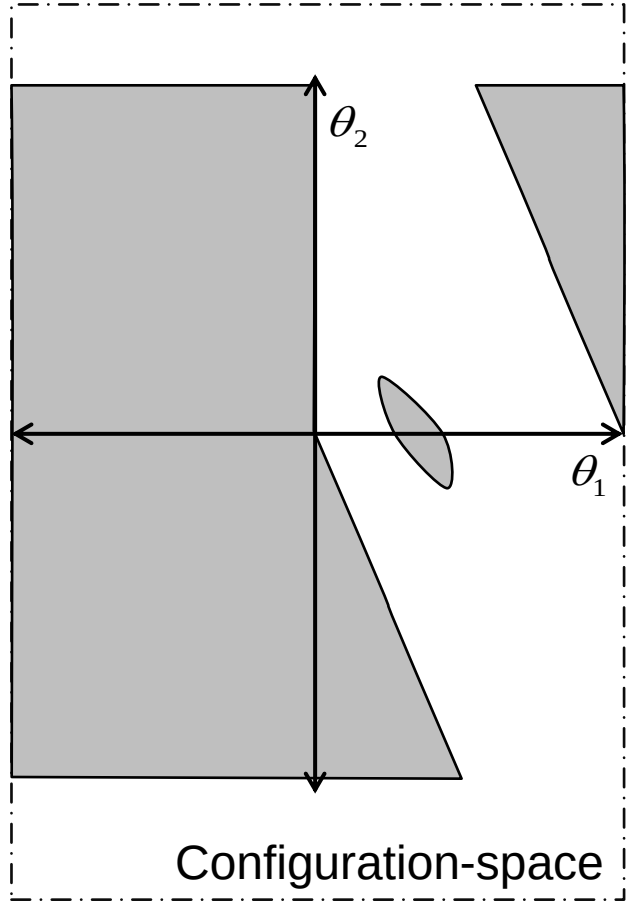
Introduction | the motion planning problem



Introduction | work-space versus configuration-space







Introduction | hierarchical decomposition

1. Motion control
2. Local collision avoidance
3. Global search-based planning

Introduction | further reading

- Control theory
  - D. P. Bertsekas. “Nonlinear Programming *(2nd Ed)”*. Athena Scientific, Belmont, MA, 1999.

- Motion planning for robotics
  - S. M. LaValle. “Planning Algorithms*”. Cambridge University Press,* Cambridge, UK, 2004.