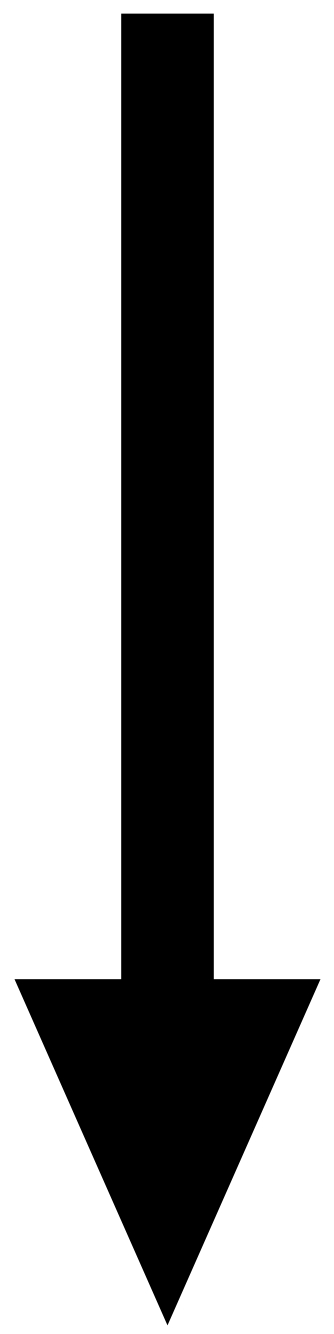
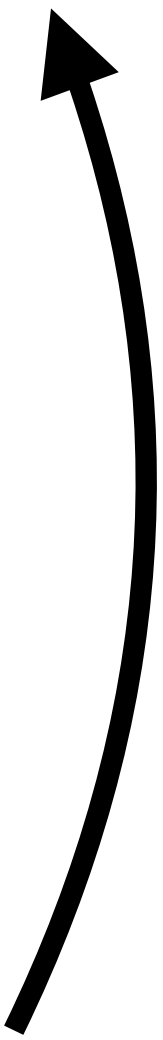
Integrating Logical & Physical Control

Permissive strategy templates

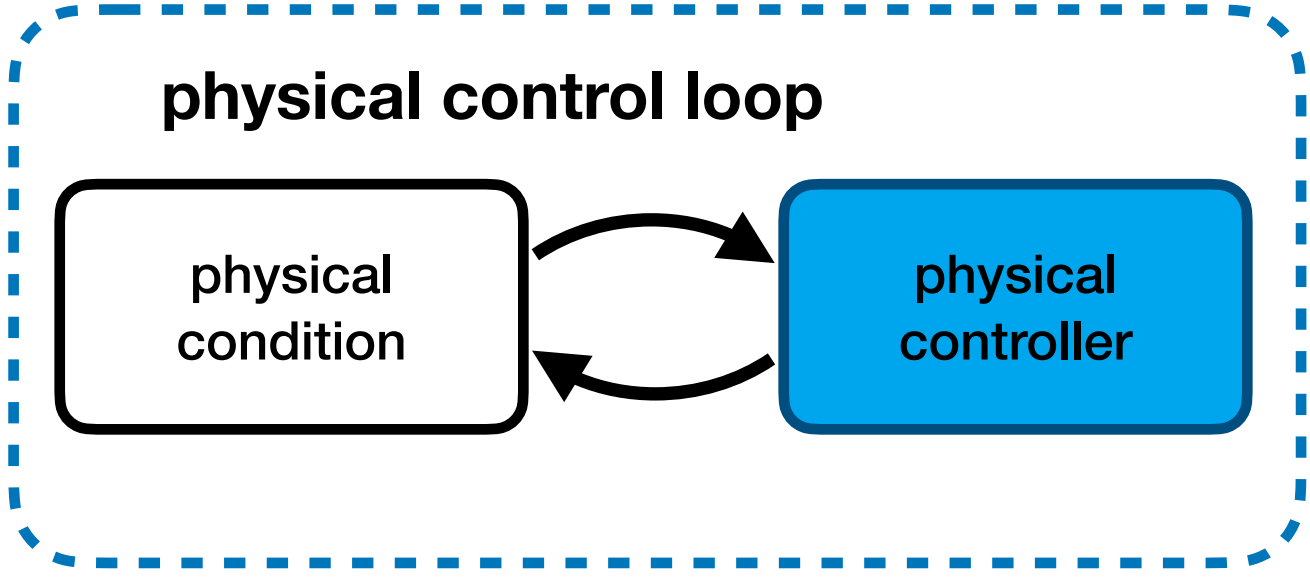
- adaptable strategy
- fault-tolerant
- robust



context-dependent
reach-while-avoid objectives

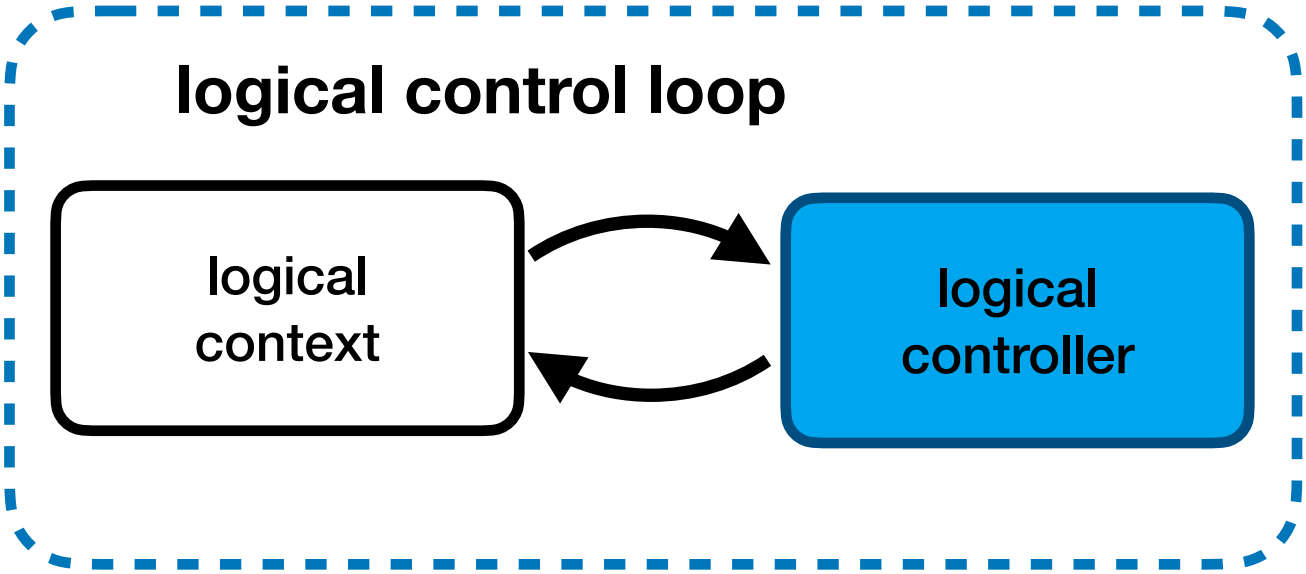


Games with
Progress assumptions/ Fairness



Lower Physical Layer

Higher Logical Layer



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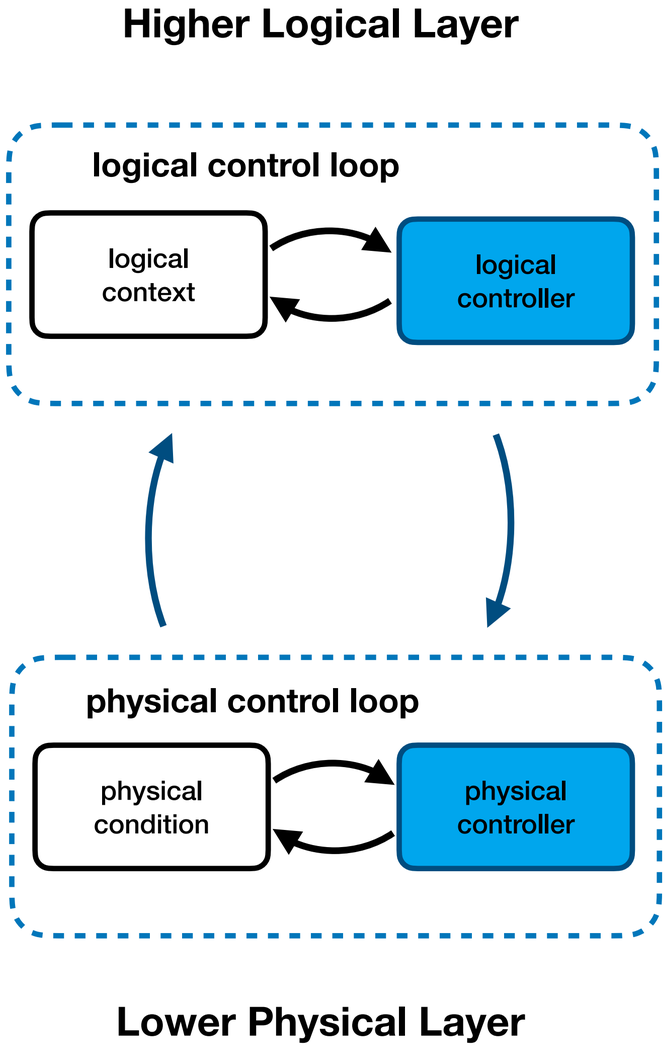
1. A. Anand, S.P. Nayak, I. Saglam, **R. Raha**, A-K Schmuck (FoSSaCS'25): Fair Quantitative Games

Integrating Logical & Physical Control



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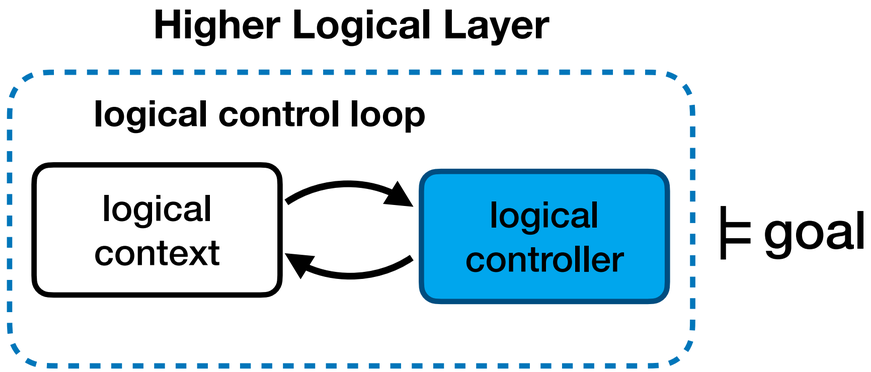
Formal Methods



Specification (Inference)

- (TACAS'22) LTL Learning
- (JOSS'24) SCARLET
- (VMCAI'24) MTL Learning

Verification

- (CSL'22) Synthesis for One-Counter Automata
- (MFCS'23) Parikh One-Counter Automata
- (RP'23) Competitive Analysis of MPC

(Adaptive) Reactive Synthesis

- (Under review) Quantitative Strategy Templates
- (FoSSaCS'25) Fair Quantitative Games
- (GandALF'19) Energy Reachability Games