



MAX PLANCK INSTITUTE
FOR SOFTWARE SYSTEMS

Reliable Control Software for Cyber-Physical Systems

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CPS - Cyber-Physical Systems

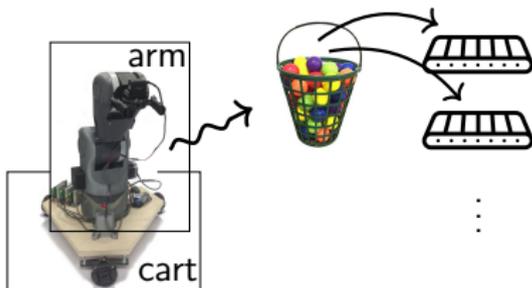


CPS - Cyber-Physical Systems

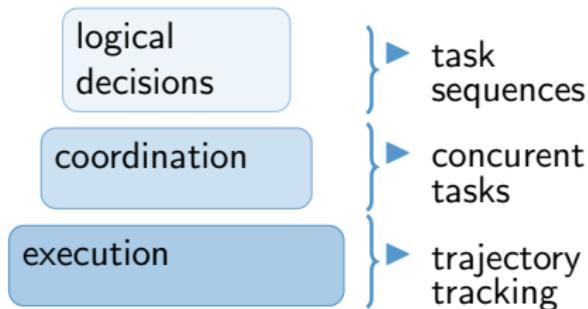


**Can we automatically & efficiently synthesize
“correct-by-construction” control software for CPS?**

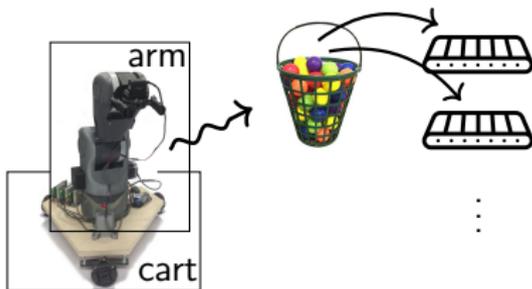
Example: Sorting



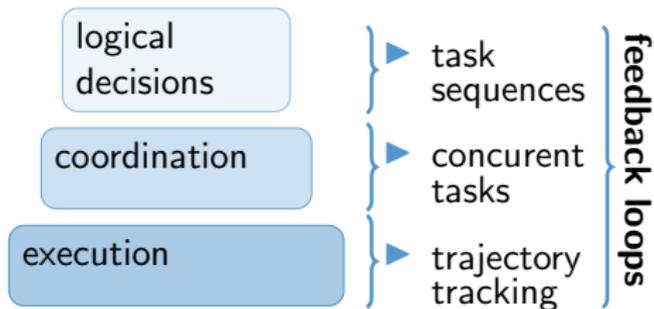
Hierarchical architecture:



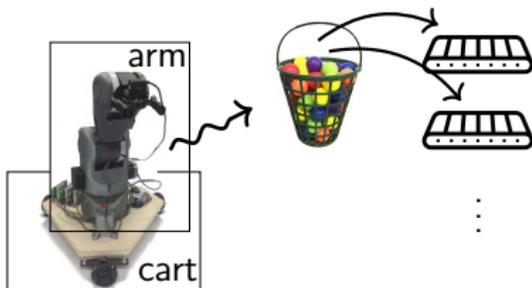
Example: Sorting



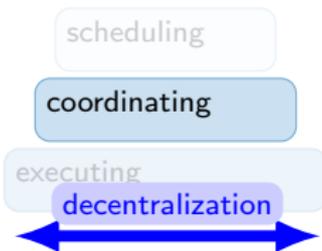
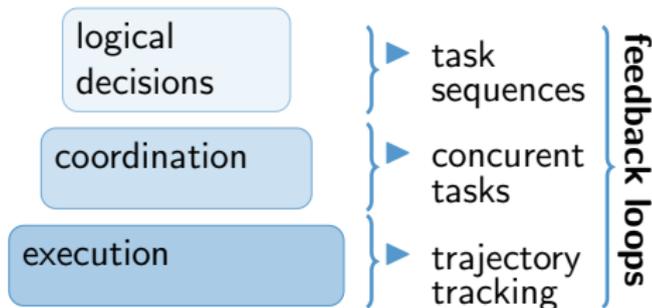
Hierarchical architecture:



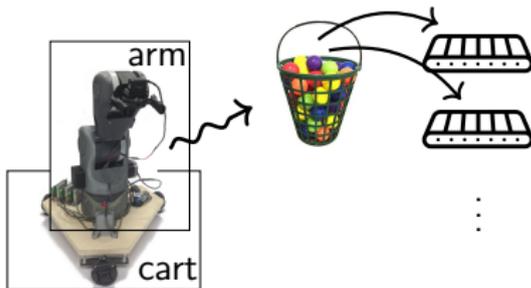
Example: Sorting



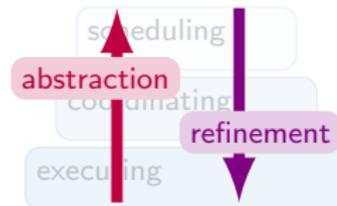
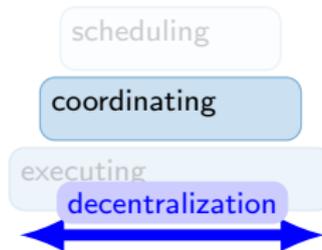
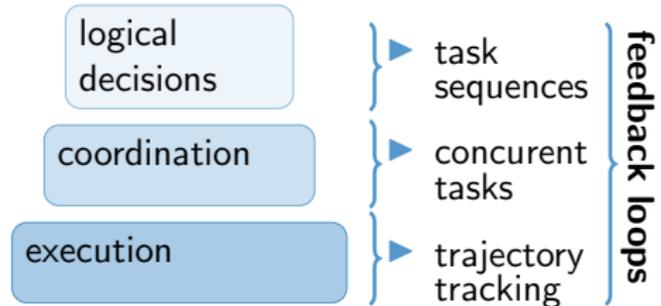
Hierarchical architecture:



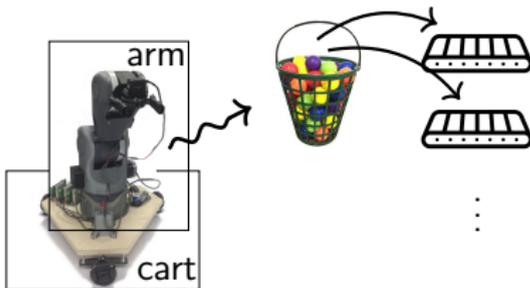
Example: Sorting



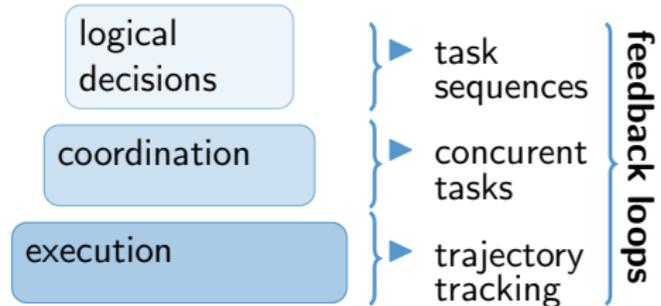
Hierarchical architecture:



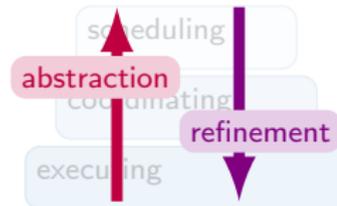
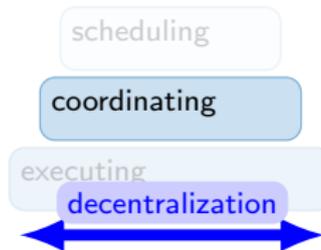
Example: Sorting



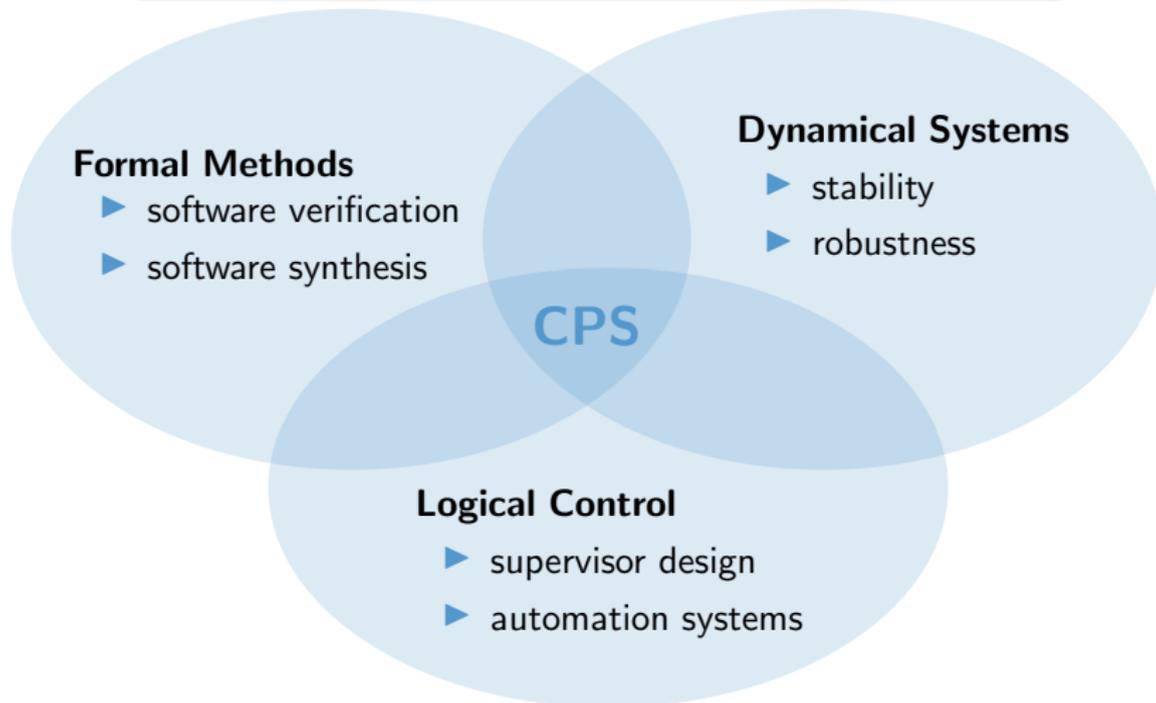
Hierarchical architecture:



Challenge: **Automatic** design of vertical & horizontal interfaces!



truly **interdisciplinary research** at the intersection of
control engineering and **computer science**



Want to know more?



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