Provably Correct Shared Control for Human-Embedded Autonomous Systems

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Challenge:

Develop languages, algorithms and demonstrations for the formal specification and automated synthesis of shared control protocols.

Solution:

Convergence between learning, formal methods and behavioral modeling:

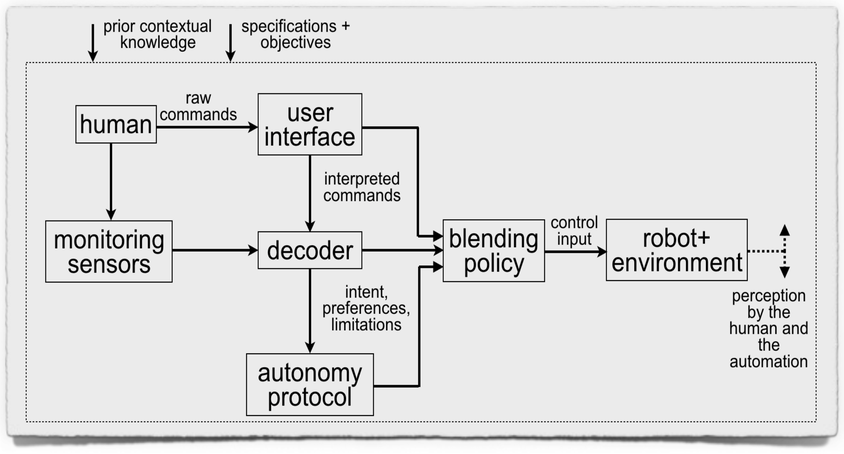
- Provably correct?
- Specifications → shared control protocols?
- Effects of the limitations in the interfaces?

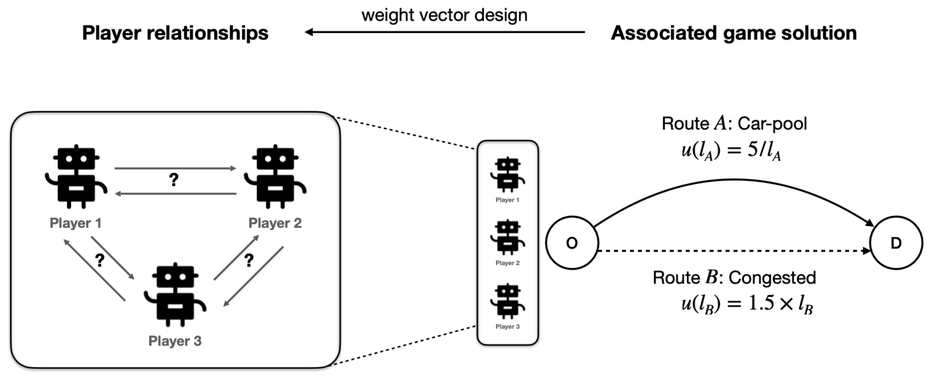
Scientific Impact:

- Human-embedded autonomy widely appliable in CPS.

Human-embedded autonomous systems

Humans and autonomy are responsible for collective information acquisition, perception, cognition, and decision-making





Broader Impact:

Outreach to elementary and high school students and outreach through institutional programs and local community engagement.