

Compositional Safety Synthesis For Interconnected System Based On Set-Invariance

Description

- **Hot topic:** Correct-by-construction controller synthesis techniques for large-scale interconnected systems, e.g. autonomous vehicular platoon, flight formation, etc.
- **Challenge:** Treating such a system in a monolithic and centralized manner is impractical due to its inherent complexity.
- Compositional controller synthesis methods are able to solve the problem by a “divide-and-conquer” strategy.
- To satisfy safety properties, set-invariance approaches have great potential in term of computation complexity.
- To investigate:
 - ☐ Study and compare existing techniques for compositional synthesis.
 - ☐ Study toolboxes and techniques available for controller synthesis based on the computation of controlled invariant sets.



Advisor

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