

# From Resource-Bounded Agents towards a General Framework for Quantitative and Qualitative Strategic Reasoning

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*Alternating-time temporal* logic is a strategic logic which allows to reason about and to verify abilities of agents in game-like scenarios [2]. It is evident that these (strategic) abilities crucially depend on many factors, for example knowledge, collaborators, memory, and resource constraints in general. Especially, the verification of resource-constrained systems is often computationally very expensive: decidability is the exception rather than the rule. In my talk, I shall give an overview of results on the verification of resource agent logics and present a recent result on a logical fragment for which model checking is decidable. I shall also briefly touch upon a general framework for reasoning about quantitative and qualitative aspects in multi-agent systems, which may be seen as a generalization of resource-constrained multi-agent settings.

(The talk is based on joint work reported in [3, 4, 1].)

## References

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