Disjunctive Normal Form for Event-Recording Logic

Omer Landry Nguena Timo

Université Bordeaux 1

Laboratoire Bordelais de Recherche en Informatique

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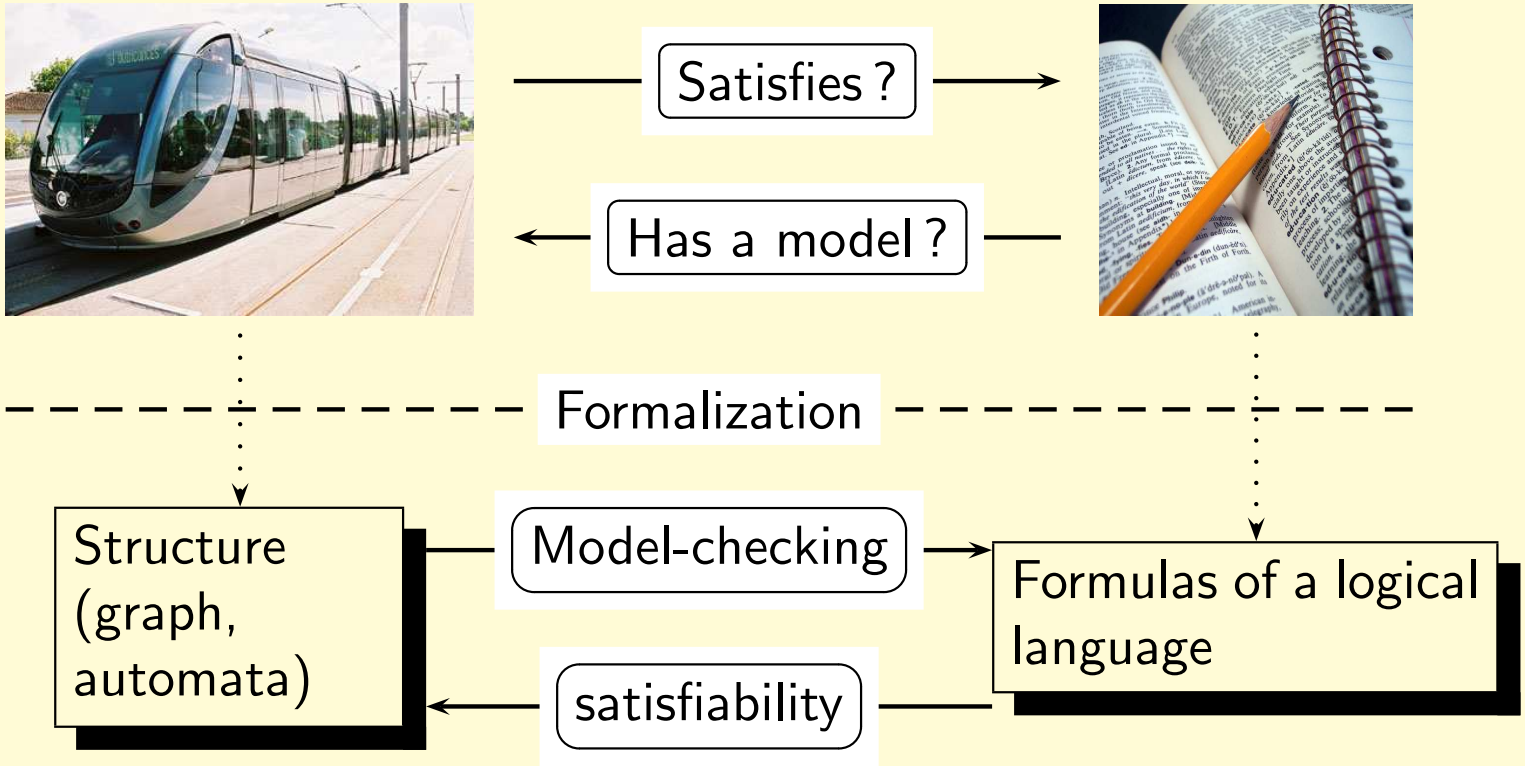
System Engineering and Formal Methods



1. Model-Checking : does a system satisfies a specification ?
2. Satisfiability : does a specification has a model ?
3. Disjunctive normal Form : does there exist a "digest" and "brief" syntax for specification ?

Contributions

	Kripke Structure $p \xrightarrow{a} p'$	**Event-Record. Automata** [AFH99] $p \xrightarrow{g,a} p'$	**Timed Automata** [AD94] $p \xrightarrow{g,a,H} p'$
	+μ-calculus [Koz82] $\langle a \rangle$, $[a]$	**Event-Record. Logic** [Sor02] $\langle g, a \rangle$, $[g, a]$	**$\mathbf{L}_\nu$** [LLW95] $\langle g \rangle$, $[g]$, $\langle a \rangle$, $[a]$, h $\underline{in}$
Model-Checking	EXPTIME Complete[EJ91]	EXPTIME Complete[Sor01] New Proof	EXPTIME Complete[LLW95]
Satisfiability	EXPTIME Complete[EJ91]	EXPTIME Complete[Sor02] New Proof	Open[BCL05]
Disjunctive Normal Form	YES [JW95]	YES	Open[BCL05]