Software Engineering Seminar

Evaluation of Property Specification Patterns

Description

Model checking is a computer-assisted verification method. Inorder to perform verification, the system specification is translated to a temporal-logic formula and the system description is translated to a system model. Formalizing the specification to a temporal-logic formula is hectic for non-experts. To overcome this challenge, pattern-based languages [2, 5, 4] are introduced and successfully applied to the industrial use-cases [6, 3].

The student should provide an overview of the specification patterns (see [1, Section II]), investigate their evaluation aspects and discuss the inferences.

References

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[3] Predrag Filipovikj, Mattias Nyberg, and Guillermo Rodríguez-Navas. Reassessing the pattern-based approach for formalizing requirements in the automotive domain. In *IEEE 22nd International Requirements Engineering Conference, RE 2014, Karlskrona, Sweden, August 25-29, 2014*, pages 444–450, 2014.

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[6] Amalinda Post, Igor Menzel, Jochen Hoenicke, and Andreas Podelski. Automotive behavioral requirements expressed in a specification pattern system: a case study at BOSCH. *Requir. Eng.*, 17(1):19–33, 2012.

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