

Invitation for status talk within the PhD examination

of Lars Schütze

Title: “Interpretation and Compilation Techniques for Role-based Programming Languages”

Role-oriented programming, as an extension of object-oriented programming, allows context-dependent, behavioural adaptations of objects allowing to implement crosscutting concerns without preventing further variability and extensibility as with object-oriented designs. By playing roles objects can be empowered with different behaviour while the respective contexts are active.

Existing approaches provide libraries or employ source-to-source transformation to object-oriented programming languages using different mapping schemes while neglecting the runtime impact incurred by bridging the gap between the role-oriented and the object-oriented object model. As a result, the role dispatch is the dominating slowdown factor. In this talk, we will present current results on how compiler techniques can be used to lower the performance gap and provide an outlook towards a runtime that compiles into an efficient representation using runtime information that would be hard or impossible to gather at compile time.

Advisor: Prof. Dr.-Ing. Jerónimo Castrillón-Mazo

Co-advisor: Prof. Dr. rer. nat. habil. Uwe Aßmann

Date/Place: Thursday, 29.11.2018, 14:00
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