

Abstracts Status Talks of 3 PhDs of the Research Training Group “Role-based Software Infrastructures (RoSI)”

Monday, 26.09.2022, 11:30

Status-Talk by Tarek Skouti

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Title:

“The value of roles for unifying structural and behavioral modeling”

Abstract:

Structure, behavior, goals - many perspectives describe a system but only together do they provide a holistic view. However, combining them is not a trivial task as each perspective developed its modeling methods for (domain-) specific needs. There are different approaches to combining modeling methods of different perspectives. Those approaches range from one modeling method for all perspectives to a federation of models combining different perspectives. This Ph.D. project investigates roles, a concept found in multiple perspectives, and the value it provides for unifying them. The focus is on unifying the structural and behavioral modeling perspectives. While a modern understanding of roles is represented in structural modeling through the modeling language BROS, it was missing in behavior modeling. Therefore, a role-based behavior modeling language was developed as a counterpart to BROS. Because of the power of roles, it can solve modern behavior modeling challenges.

This status talk presents the current progress of the Ph.D. project. Therefore, the background of the three topics (unifying structural and behavioral modeling, role-based behavior modeling, and context in behavior models) is introduced alongside related work for the evaluation. The talk concludes with preliminary evaluation results and remaining open points of the Ph.D. project
