



Software Engineering Seminar (WiSe 2017/2018)

Selected Topics in Software Engineering: Software Quality Verification and Forecasting

Description

Software quality is a term which describes how well a software conforms to its requirements and users' expectation, such as, performance, safety, security, reliability, availability, and usability. With the increasing pervasiveness of software in business- and safety-critical applications, ensuring the quality of a software is gaining considerable importance. Examples of its applications are online banking, e-commerce, online booking and reservation, car and airplane control systems, remote surgery, high availability systems, such as e-mail servers, or adaptive systems, such as cloud computing controllers.

Software quality verification and forecasting are branches of software engineering concerned with the assurance of requirements satisfaction during both development and operation stages. A broad range of techniques is involved in verification and forecasting, including measurements, modeling, simulation, and formal methods.

In the last decade, cloud technologies (e.g., Amazon Web Services, Google Compute Engine, Microsoft Azure) have emerged as an established platform for operating scalable, elastic, and reliable services. **The theme of the seminar in this semester is simulation tools for quality evaluation of cloud-based systems.** Each participant will investigate one specific quality attribute of cloud systems using one or more simulation tools. In addition to studying and summarizing the research literature, it is a mandatory part of this seminar to gather and share hands-on experience with the available simulation tools.

Requirements

Bachelor students who would like to attend this seminar should be interested in model-based software engineering, distributed systems, software quality, probability theory, and simulation techniques.

Please check the list of topics **before registration** to be sure that the seminar is interesting for you:
<http://www.iste.uni-stuttgart.de/rss/teaching/courses-rss/ws-20172018/s-sqvf.html>

Contacts

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