CSRSQ: Conflicts and Synergies among Reliability, Security and other Qualities

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I. DESCRIPTION
The mastering of software quality is recognized as a key issue in software engineering. Further, it is becoming increasingly important as software currently provides the software qualities of systems that people rely on. To this aim, myriads of proposals on software quality models and metrics have been promoted both by researchers and practitioners. In this context, one of the main issues is to manage the great of deal of interactions of any kind that emerge between software qualities.

Analyses of the interactions among software qualities have often found that optimizing on one quality will cause serious problems with others. As just one relevant example, one large project had an Integrated Product Team that optimized the system for Security. In doing so, it reduced its vulnerability profile by having a single-agent key distribution system and a single copy of the data base – only to have the Reliability engineers point on that these were system-critical single points of failure. The project’s Security-optimized architecture also created conflicts with the system’s Performance, Usability, and Modifiability. Of course, optimizing the system for Security had synergies with Reliability in having high levels of Confidentiality, Integrity, and Availability. All in all, development teams have to face such wicked situations and make critical solutions with limited schedule and budget.

The CSRSQ workshop has the goal of exploring the conflicts and synergies among Reliability, Security and other Qualities. As part of this general goal, the nature of software qualities themselves is also of interest. Last advancements in research and current state of the practice will be put together in order to better comprehend the forces behind these interactions.

II. TOPICS
The list of topics includes, but is not limited to:
- Classification of software qualities: quality models and quality ontologies
- Types of interactions among software qualities
- Languages and models to represent software qualities and their interactions
- Techniques to understand the effect of software quality interactions in the satisfaction of quality requirements
- Empirical studies on software qualities and their conflicts and synergies
- Experience reports on software qualities and their conflicts and synergies
- Data-driven discovery of software quality interactions
- Managing software qualities and their interactions in different software development methods, e.g. agile and rapid software development
- Impact of software qualities and their trade-off analysis on strategic decision-making processes
- Visualization of software quality interactions

III. SUBMISSION
Authors are invited to submit original, unpublished research papers as well as industrial practice papers. Simultaneous submissions to other publications and conferences are not permitted. Detailed instructions for electronic paper submission, panel proposals and review process can be found at http://paris.utdallas.edu/csrsq18/.

The length of a camera ready paper will be limited to eight pages, including the title of the paper, the name and affiliation of each author, a 150-word abstract, and up to 6 keywords. Shorter vision or position papers (up to four pages) are also allowed.

Authors must follow the IEEE Computer Society Press Proceedings Author Guidelines to prepare papers. At least one of the authors of each accepted paper is required to pay full registration fee and present the paper at the workshop. The submissions must be in PDF and uploaded to the conference submission site.

IV. PROGRAM COMMITTEE MEMBERS
TBD