Fifth International Workshop on Software Quality and Maintainability

**Bridging the gap between end-user expectations, vendors' business prospects,
and software engineers' requirements on the ground.**

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Preface

The fifth international workshop on Software Quality and Maintainability (SQM 2011) offered a forum to researchers to present their original work and to practitioners to relate their experiences on issues pertaining to software quality and maintainability. Moreover, the theme of the workshop invited discussion on how to bridge the gap between end user expectations, business requirements, vendor performance, and engineering constraints regarding software quality.

SQM 2011 was held as a satellite event of the 15th European Conference on Software Maintenance and Reengineering (CSMR 2011). In 2010, the fourth SQM workshop was held as a satellite event of CSMR 2010.

Carl Worms of Credit Suisse kicked-off the workshop with an invited talk titled "Software Quality Management - Quo Vadis?" A short paper describing his current work is included in these proceedings.

In this volume, you will further find the papers accepted for presentation at the workshop. Out of 8 full-paper submissions, 6 papers were selected. The accepted papers were published at CEUR-WS[1].

Theme & Goals

Software is playing a crucial role in modern societies. Not only do people rely on it for their daily operations or business, but for their lives as well. For this reason, correct and consistent behaviour of software systems is a fundamental part of end user expectations. Additionally, businesses require cost-effective production, maintenance, and operation of their systems. Thus, the demand for good quality software is increasing and is setting it as a differentiator for the success or failure of a software product. In fact, high quality software is becoming not just a competitive advantage but a necessary factor for companies to be successful.

The main question that arises now is how quality is measured. What, where and when we assess and assure quality, are still open issues. Many views have been expressed about software quality attributes, including maintainability, evolvability, portability, robustness, reliability, usability, and efficiency. These have been formulated in standards such as ISO/IEC-9126 and CMMI. However, the debate about quality and maintainability between software producers, vendors and users is ongoing, while organizations need the ability to evaluate the software systems that they use or develop from multiple angles.

So, is "Software quality in the eye of the beholder"? This workshop session aims at feeding into this debate by establishing what the state of the practice and the way forward is.

Accepted papers

- *Automated Quality Defect Detection in Software Development Documents*, Andreas Dautovic, Reinhold Ploesch and Matthias Saft.

- *Design Pattern Detection using Software Metrics and Machine Learning*, Satoru Uchiyama, Atsuto Kubo, Hironori Washizaki and Yoshiaki Fukazawa.

- *Using the Tropos Methodology to Increase the Quality of Software Design*, Andrea Capiluppi and Cornelia Boldyreff.

- *Tool-Supported Estimation of Software Evolution Effort in Service-Oriented Systems*, Johannes Stammel and Mircea Trifu.

- *Preparing for a Literature Survey of Software Architecture using Formal Concept Analysis*, Luís Couto,

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[1] http://ceur-ws.org

Miguel Alexandre Ferreira, Eric Bouwers and José Nuno Oliveira.

- *Evidence for the Pareto principle in Open Source Software Activity*, Mathieu Goeminne and Tom Mens.

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