First Workshop on Software Architecture Erosion and Architectural Consistency (SAEroCon)

at the Working IEEE/IFIP Conference on Software Architecture 2014 (WICSA 2014) in Sydney, Australia, April 7-11, 2014

Draft Call for Papers

Overview

The intended software architecture of a software system manifests the most-fundamental and most far-reaching design decisions made during the development of the system, influencing very strongly the system’s quality attributes such as maintainability, adaptability, etc.

However, the more complex a software system is and the longer a software system evolves, the more difficult it is to avoid effects like software architecture erosion or architectural drifts. These effects can lead to systems where the realization of the system diverges from the intended architecture with resultant negative impacts on quality attributes associated with the intended architecture. As studies have shown, untreated divergence can lead to systems which are impossible to maintain in the long run. Expensive redevelopments and replacements are the consequences.

In recent researchers from different communities like software maintenance, model-driven development, and software architecture have investigated many aspects of software architecture erosion from different perspective. SAEroCon targets these researchers and software engineering practitioners interested in the current state-of-the-art/the state-of-the-practice and future directions regarding architecture consistency, architecture recovery and restoration and ways to prevent and mitigate against architecture erosion.

Topics and Themes

Topics of SAEroCon include but are not limited to

- Methods and techniques to ensure architecture consistency
- Methods and techniques to detect and prevent architectural inconsistencies or software architecture erosion
- Models and theories of architecture erosion and inconsistencies
- Artificial intelligence techniques to help architects improving software architecture and implementation
- Simulation and mining approaches to model architecture inconsistency and erosion
- Model-driven development and software architecture
- Software architecture recovery techniques and reverse engineering
- Reversing software architecture erosion
- Maintenance and repairing of software architectures
- Architectural refactoring and reengineering
- Metrics of architectural consistency
- Empirical studies of software architecture erosion, restoration and evaluation
- Case studies of detecting and controlling software architecture erosion
Goals
The goal of this workshop is to bring together both academics and practitioners that deal with the aforementioned topics related to software architecture erosion, architecture consistency, and architecture restoration. It aims at fostering a lively discussion about future directions both between researchers and practitioners but also between participants of the different software engineering communities mentioned above.

Workshop Format
The workshop will be highly interactive and focus on the sharing of thought and ideas with regard to research goals in the aforementioned topics. To foster interaction and discussion the workshop does not consist of author-based presentation; authors of accepted papers will be asked to sum up the paper of another participant (pre-prints of the papers will be available). The original author will then correct misunderstandings and emphasize issues that he feels need elaboration after the summary. This approach means that participants will be familiar with other participants work before the workshop, providing a strong foundation for collaboration in the workshop itself and beyond. An industrial key note and breakout sessions will complement the program to foster discussion and connectivity among the participants.

Submission Guidelines
Prospective participants are invited to submit a 6-8 page position or technical paper. Workshop papers must follow the WICSA 2014 format and submission guidelines. All submissions will be reviewed by members of the program committee and the organizing committee for quality and relevance. Accepted papers will become part of the workshop proceedings and will be entered into IEEE Digital Libraries.