

## Call for Papers

### SAEroCon - The Fourth Workshop on Software Architecture Erosion and Architectural Consistency

Co-located with the 11<sup>th</sup> European Conference on Software Architecture  
(ECSA 2017).  
Canterbury, UK, September 11-12, 2017

#### Motivation

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 drift. These effects lead to a situation where the realization of the system diverges from the intended architecture with resultant negative impacts on the 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.

Studies also suggest that software architecture erosion and architectural drift, and the inconsistencies resulting from these effects, are prevalent, yet under-researched problems in industrial practice. Technical challenges related to these problems are the subject matter of this conference:

- Recovery of intended architectures, particularly for legacy systems without documented intended architecture;
- Detection of erosion, drift, and inconsistencies;
- Avoiding or resolving the results of these effects efficiently;
- Organizational challenges like estimating the benefit of putting effort into pro-actively avoiding erosion.

The goal of the “Fourth Workshop on **Software Architecture Erosion** and Architectural **Consistency** (SAEroCon)” is to report on advances of work in these areas and thus intensify the exchange of ideas regarding the current state-of-the-art/practice. In addition, it aims to chart future research directions regarding architecture consistency, architecture recovery and architecture restoration. The workshop targets all software engineering researchers and practitioners interested in discussing ideas regarding these topics and shaping future research related to them.

#### Topics

Topics of SAEroCon include but are not limited to

- Methods and techniques to ensure architecture consistency
- Methods and techniques to detect and prevent software architecture erosion
- Models and theories of architecture erosion and inconsistencies
- AI 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
- Quantification of erosion and drift, technical debt
- Empirical studies of software architecture erosion, restoration and evaluation
- Case studies of detecting and controlling software architecture erosion

## Paper Submission and Workshop Format

Prospective participants are invited to submit a position paper (3-4 pages) or full paper (max. 7 pages) in these or other relevant areas.

Workshop papers must follow the ACM format. All submissions will be reviewed by members of the program committee and the organizing committee for quality and relevance. Submissions must be original work, i.e., unpublished and not submitted anywhere else for publication. Papers must be submitted as PDF documents via EasyChair. Accepted papers will become part of the workshop proceedings and will be entered into ACM Digital Libraries. At least one author is required to register for the workshop and to present the paper.

Like in the previous year, the workshop will again host “hands-on” architecting session in which architects of open source system will interact with researchers and tools to derive/recover architectural views of their systems. Attendees wishing to partake in these sessions will be asked to submit an agenda to the workshop organizers in advance.

## Important Dates

- Submission of Abstracts (mandatory): June 13, 2017
- Submission of Papers: June 20, 2017
- Notification of Acceptance: July 19, 2017
- Camera-Ready Papers: July 28, 2017
- Workshop: September 11-12, 2017

Please visit the workshop webpage at <http://saerocon.wordpress.com> for further information and updates.

## Workshop Organization

Workshop Chairs:

- Sebastian Herold, Karlstad University, Sweden  
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- Jim Buckley, University of Limerick/Lero – The Irish Software Research Centre, Ireland  
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- Leo Pruijt, HU University of Applied Sciences Utrecht, The Netherlands  
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Programme Committee

To be confirmed