

First International Workshop on Establishing the Community-Wide Infrastructure for Architecture-Based Software Engineering

In conjunction with the 39th International Conference on Software Engineering (ICSE 2017), Xth May 2017 Buenos Aires, Argentina

Workshop Theme

Software architecture plays an important role in facilitating the maintenance of a software system. Over the past two decades, software architecture research has yielded many different tools and techniques for understanding and maintaining the architectures of large software systems. However, empirical research and technology transfer are impeded by myriad disjoint research and development environments, lack of a shared infrastructure, high initial costs associated with developing robust tools, and a lack of datasets needed to conduct empirical research in this domain.

This workshop brings together researchers and practitioners from two areas of software architecture and empirical software engineering to explore the issues and identify plausible solutions to move the field forward. The objective of this workshop is to collaboratively develop the requirements, design, and construction of potential infrastructures and instruments that could support empirical research in the domain of architecture-based software maintenance.

Workshop Goals

The general goal of the workshop is to provide a venue for researchers, practitioners, and educators from different areas of software engineering to discuss their experiences, forge new collaborations, and explore innovative solutions that address the challenges of empirical research in the area of software architecture, and the means through which a shared community-wide infrastructure can address those challenges. Participants will obtain an understanding of issues preventing empirical research in software architecture, strategies for addressing those issues through a community-wide infrastructure, and the construction of a community involving researchers, educators, and practitioners that aim to follow through with those strategies.

Call for Papers

The workshop will address a variety of topics at the intersection of requirements and software architecture including, but not limited to, the following:

- Positions on the requirements, design, construction, and maintenance of a community-wide infrastructure for empirical research in architecture-based maintenance.
- Designs and approaches that directly support interoperability, replicability, and reusability of architecture-based tools.
- Experiences, case studies, or empirical studies of software architectures that result in artifacts in the form of baselines, datasets, and benchmarks that can be included in a community-owned repository or infrastructure.
- Experiences or evaluations of existing software-architecture tools and how they can enable empirical research in the area of software architecture.
- Replication studies describing results, challenges faced as part of the studies, and lessons learned.
- Assessment techniques and metrics for evaluating empirical research in software architecture
- Development and sharing of tools that support various informational and processing needs (e.g., visualization of interactions among architectural and requirements knowledge).

Full papers (7 pages): Describing original research.

Experience Reports (5-7 pages): Presenting case studies empirical experiences with a particular RE or SA practice, pattern or technique on a large scale system or agile project.

Industrial papers (5-7 pages): Describing industrial challenges and experiences of applying architecture related techniques and tools

Position papers (4 pages): Emerging trends, inspiring new ideas, and early research.

Artifact papers (5-7 pages): can describe any artifacts that could be included in the infrastructure's repository of baselines, benchmarks, or datasets—or tools that can serve as an initial set of tools incorporated into the infrastructure.

Organizing Committee

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Important Dates

- Fri, Jan 20 - Paper submission

- Fri, Feb 17 - Notifications sent

- Mon, Feb 27 - Deadline for paper camera ready.

- Mon, May 22 - The date ECASE will be held