Call for Contributions
1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ADAPTIVE+2019+Special
Please select Track Preference as **DaMAD**

Special track

DaMAD: Data-driven Methods for Architecture Adaptation and Design

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along with
ADAPTIVE 2019: The Eleventh International Conference on Adaptive and Self-Adaptive Systems and Applications
http://www.iaria.org/conferences2019/CfPADAPTIVE19.html

Many experts from research and industry consider data nowadays as the most valuable resource available. Novel data collection and analysis techniques and innovative applications of such approaches are key factors in the progressing digitalization of all areas of society. Keywords like Big-Data, Internet-of-Things (IoT), Data-analytics, Machine Learning, Artificial Intelligence (AI), Data Warehouses, Data-centric Systems and many more are on everyone's lips. Every day more and more data are collected, data-analytic methods and artificial intelligence become more popular and used in industry, social and private life. Ultimately, this also affects the evolution of existing systems, both at runtime and in the context of classical development cycles; the architecture of the systems will be influenced, triggered by the new requirements coming up by analyzing the available data.

The goal of DaMAD, a special track at ADAPTIVE 2019, is to bring together researchers and practitioners interested in data-driven methods for architecture adaptation and design. Adaptability is a key feature of software architecture not only during runtime for a dynamic adaptive system but also for the long-term evolution of any software system. How these evolution and decision making processes can be improved by data gathered and analyzed today, how evolution processes can be made more efficient through machine-learning techniques, and how to effectively communicate decisions and conclusions based on such automated techniques to the user are some of the challenges in this context.

We solicit both academic, research, and industrial contributions. We welcome technical papers presenting research and practical results, position papers, survey papers addressing the key problems and solutions on any of the above topics, and short papers on work in progress.

Topics include, but not limited to:

- Architectures for adaptive applications and systems including reconfigurable and self-adaptive systems
- Learning-based and feedback-based adaptive strategies and systems
- Design and implementation of adaptive components
- Aspects of Context-aware and User-aware adaptation of software architectures
- Content analysis for architecture adaptation: Structured data, natural language, deep learning, meta-heuristics, intelligent data fusion
- Semantic Analysis - semantic description language like ontology formalisms and models, ontology-based query answering, reasoning and integration
- Aspects of knowledge representation, discovery, acquisition, extraction and reasoning in the context of software architecture
- Aspects of learning models, like hierarchical, relational, and graph models for data and meta-data in the context of software architecture
- Requirements made for training and test data
- Management of architectural knowledge and data, decision making, decision support, and tracing
- Incremental development and engineering of software architecture including architecture conformance
- Case studies and other empirical studies as well as benchmark examples related to all of the above topics
- Experience reports related to all of the above topics
- Tools and methods supporting all of the above topics

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Datelines

- Inform the Chair: As soon as you decided to contribute
- Submission: March 10, 2019
- Notification: March 30, 2019
- Registration: April 8, 2019
- Camera-ready: April 8, 2019

Paper Format

- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications

- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html

- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission

https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ADAPTIVE+2019+Special
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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