Mutation 2018
Västerås, Sweden
April 9, 2018

Mutation is acknowledged as an important way to assess the fault-finding effectiveness of test sets. Mutation testing has mostly been applied at the source code level, but more recently, related ideas have also been used to test artefacts described in a considerable variety of notations and at different levels of abstraction. Mutation ideas are used with requirements, formal specifications, architectural design notations, informal descriptions (e.g. use cases) and hardware. Mutation is now established as a major concept in software and systems V&V and uses of mutation are increasing. The goal of the Mutation workshop is to provide a forum for researchers and practitioners to discuss new and emerging trends in mutation analysis. We invite submissions of both full-length and short-length research papers as well as industry practice papers.

Topics of Interest

- Mutation-based test adequacy criteria (theory or practical application).
- Mutation-based test data generation.
- Higher order mutation testing.
- Novel mutation testing paradigms and applications.
- Empirical studies of mutation testing.
- Formal theoretical analysis of mutation testing.
- Comparative studies (i.e., studies that compare mutation with other techniques).
- Mutation testing tools.
- Industrial experience with mutation testing.
- New mutation systems for programming languages and for higher-level descriptive.
- Increasing the efficiency of mutation.
- Mutation for mobile, internet and cloud based systems.
- Mutation for security and reliability.

Submissions & Publication

Three types of papers can be submitted to the workshop:

- **Full papers (10 pages):** Research, case studies.
- **Short papers (6 pages):** Research in progress, tools, experience reports, new ideas.
- **Industrial papers (6 pages)**. Applications developed and lessons learned in industry.

Each paper must conform to the two-column IEEE conference publication format (https://www.ieee.org/conferences_events/conferences/publishing/templates.html) and must be submitted in PDF format via EasyChair (https://easychair.org/conferences/?conf=mutation2018). Submissions will be evaluated according to the relevance and originality of the work and to their ability to generate discussions between the participants of the workshop. Three reviewers will review each paper and all accepted papers will be published as part of the ICST proceedings.

Important Dates

- **Submission of abstracts**: January 12, 2018
- **Submission of full papers:** January 19, 2018
- **Notification of acceptance:** February 19, 2018
- **Camera Ready:** February 28, 2018
- **Workshop date:** April 9, 2018

Special Issue on Mutation Testing (TBD)

Following the workshop, authors of selected papers will be invited to submit extended versions of their papers to a Special Issue on mutation testing (pending approval by Journal editors).

Website

For more information, see: **http://mutation-workshop.github.io**

Organizers

Marinos Kintis, University of Luxembourg, Luxembourg

Nan Li, Medidata Solutions, USA

José Miguel Rojas, University of Leicester, UK

Program Committee

Paul Ammann, George Mason University, USA

Lin Deng, Towson University, USA

Vinicius Durelli, University of São Paulo, Brazil

Gordon Fraser, University of Passau, Germany

Sudipto Ghosh, Colorado State University, USA

Milos Gligoric, University of Texas at Austin, USA

Rahul Gopinath, Saarland University, Germany

Yue Jia, University College London & Facebook, UK

Rene Just, University of Massachusetts Amherst, USA

Gregory Kapfhammer, Allegheny College, USA

Jens Krinke, Unversity College London, UK

Yves Le Traon, University of Luxembourg, Luxembourg

Birgitta Lindström, University of Skövde, Sweden

Lech Madeyski, Wroclaw University of Technology, Poland

Nicos Malevris, Athens University of Economics and Business, Greece

Mike Papadakis, University of Luxembourg, Luxembourg

Goran Petrovic, Google, Switzerland

Sina Shamshiri, University of Sheffield, UK

Jie Zhang, Peking University, China