The 13th Workshop on Testing: Academia-Industry Collaboration, Practice and Research Techniques (TAIC PART 2018)

Industrial workshop contribution guideline

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1. INTRODUCTION

This document provides guidance for industrial practitioners that seek to submit a research paper or experience report to TAIC PART 2018. The guidelines aim to help the practitioner to write their manuscript such that it contains all, by the reviewers, expected contents. Note that these guidelines are **not** absolute and that changes to the order and contents of each suggested heading may be done on the author's own discretion. However, we recommend that the following contents, at least, are made available in the manuscript.

2. FORMATTING

The paper needs to be written in the IEEE double-column format. Templates can be found on:

Word Template:

https://www.ieee.org/publications_standards/publications/conferences/2014_04_msw_a4_format.doc

LaTeX **Template:**

https://www.ieee.org/documents/ieee-latex-conference-template.zip

The manuscripts for TAIC PART can be submitted as maximum 2 (Short paper) or 6 (Full paper) page papers.

3. FORMATTING

The research manuscript should be divided into a series of headings (With roughly state number of columns per heading for a 6 page paper) that can be summarized as:

- **Abstract (⅓ column)** - A short summary of the entire report that explains the challenge that was identified, how the challenge was studied, how a solutions was identified, how the solution was applied and what the outcome of the solution was (e.g. did it address the challenge?). The abstract should give indication to the success of the result but not the result itself as the abstract is a teaser for the continuation of the manuscript.
- **Introduction (1 and ⅔ columns)** - An introductory section that describes the general context where the topic of the paper can be found (e.g. Software industry at large, in the author's own company, in only a specific project), why the topic is interesting and to whom it is interesting (e.g. automated testing is of general interest to Software Engineers, Project management is a general challenge in practice, a specific solution was of interest to development team X and could therefore be more generally interesting), and finally what the paper aims to contribute to the topic (e.g. a new automated test approach, a new development process with focus on project management, a transcript of the positive and negative experiences of a new method for development).
- **Related work (1 column)** - A section that summarizes important related articles and materials that explain the relevance, methodology, approach, analysis or other interesting materials.
- **Methodology (2 columns)** - The process or steps that were taken to find the contribution to the chosen topic. For instance, if a new software tool is suggested, what were the steps to identify the challenge, turn the challenge into requirements for the tool, develop the tool and verify that the tool solved the challenge? This process should be written in enough detail that another practitioner could replicate the procedure. The author should also try to explain what academic research methods that were used. Some common methods are:
  - **Questionnaires -** A set of questions asked in person or through paper or online media. The author should try to explain the parts of the survey and highlight important questions that were

used, in particular, to reach the study's results. Quantitative information such as the number of posed questions, number of people the questionnaire was sent to, how many respondents there were, etc., should be reported.

- ○ **Interviews -** A series of questions posed in person to another person. The author should present key questions posed as well as quantitative information regarding number of interviews, time spent per interview, number of questions, etc.
- ○ **Observations -** Observation of a phenomenon or individuals. The author should present what was observed, why this observation was interesting, how the observations were recorded as well as quantitative information such as number of observations, frequency, etc.

In addition the author should present how the results of the used process were analyzed to reach the conclusions presented in the manuscript. This could include methods ranging from visual inspection and critical reasoning to formal statistical analysis. Regardless the author should explain the analysis method to a level that it could be replicated by another practitioner.

- **Results (2 columns)** - In this section the author should present the results of the study that have contributed to the suggested topic (e.g. the new approach found 3 previously unknown defects, the new models were perceived much easier to understand by the developers, the new development process was efficient but not liked by the developers, etc). **Note,** this section should only present the results that you could clearly see as an effect of applying your solution, no discussion of the implications or value of the solution itself.
- **Discussion (3 columns)** - A discussion of the results, more particular what they mean and what implications they may have at your company or other companies. Examples could be that the studied requirements approach makes the requirements process more exact, which raises overall quality and trust in the product, that the studied test procedure finds significantly more defects than previously, which could be beneficial for all software systems of a certain type, etc. This section should also contain a subsection called "Threats to validity" that describes what assumptions have been made during the study that could imply that the presented results are not generally true or could be explained in another way. For instance, a threat to the validity of a new test approach is that when it was run there were significantly more defects in the system than general, which could explain why the new approach was found to be better. Another threat could be that the methodology that was used was not systematic enough that the results should only be interpreted as indications rather than absolute truths of how the topic of the paper looks like in practice.
- **Conclusions (1 column)** - A summary of the paper and the main conclusions that were found and what they mean. Here, the author could also state future work that builds on the presented results.
- **References (1 column) -** A list of references that support or further explain the topics, suggestions, methods used, etc., in the manuscript. The author should strive to use peer-reviewed references (i.e. references from conference or journal publications). Google Scholar (Scholar.Google.com) could be used to acquire quick access to published articles.

4. FURTHER INFORMATION

TAIC PART is primarily focused on industry-academia collaboration and all submitted research papers should therefore include topics with some industrial part where academic tools, processes or methods were used. For more detailed support and/or questions about the relevance or interest in a specific topic for the TAIC PART workshop, please contact the organizing committee. Contact information listed below, and we hope to see your contribution at the venue.

Contact:
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