

## Fwd: DKE journal - Decision notification

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Mon 10/24/2016 9:19 PM

To: Metta Santiputri <ms804@uowmail.edu.au>; Hoa Dam <Hoa@uow.edu.au>

📎 2 attachments (70 KB)

PostCondition-Reviewer1.pdf; PostCondition-Reviewer2.pdf;

Metta should be proud of having a paper in the top journal in this space.

----- Forwarded message -----

From: **Lee Mong Li** <[leeml@comp.nus.edu.sg](mailto:leeml@comp.nus.edu.sg)>

Date: Monday, October 24, 2016

Subject: DKE journal - Decision notification

To: [aditya.ghose@gmail.com](mailto:aditya.ghose@gmail.com)

Cc: Paul Johannesson <[pajo@dsv.su.se](mailto:pajo@dsv.su.se)>, Stephen Liddle <[drliddle@gmail.com](mailto:drliddle@gmail.com)>, Oscar Pastor <[opastor@dsic.upv.es](mailto:opastor@dsic.upv.es)>, "Andreas L. Opdahl" <[Andreas.Opdahl@uib.no](mailto:Andreas.Opdahl@uib.no)>, Lee Mong Li <[leeml@comp.nus.edu.sg](mailto:leeml@comp.nus.edu.sg)>

Dear Authors,

We are pleased to inform you that your manuscript entitled "Mining task post-conditions: Automating the acquisition of process semantics" is considered acceptable for publication in the journal Data and Knowledge Engineering. Congratulations!

The comments of the reviewers are attached. Please study these reviews carefully and make the necessary changes to the paper as you prepare the final camera-ready copy. Please send to us by 30 October 2016, the camera-ready version of the paper along with a cover note indicating how you have addressed these concerns.

Best Regards,

Mong Li, Oscar, Paul, Stephen and Andreas

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Best regards  
Aditya Ghose

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Professor Aditya Ghose FIEAust  
Director, Decision Systems Lab  
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My webpage: [www.uow.edu.au/~aditya](http://www.uow.edu.au/~aditya)

**Review of**  
**"Mining task post-conditions:**  
**Automating the acquisition of process semantics"**  
**by Santiputri, Ghose and Dam**

I think the paper is acceptable, despite a few weaknesses. It will need some fixing before final publishing (see below).

The delta over the ER-paper is ok, but not massive: There is a new section on abductive repair (1.5 pages, but the content is thin on the solution side, see below). The section on validation is significantly extended by more than a page. A paragraph is added to the evaluation, along with two new figures. There is a new motivating example in section 2 and a new section 3 (4 pages in total). This example is returned to a few times later in the paper. The old example (old fig 1 from the ER paper) is still there, but is now presented in the evaluation. A few sections have been rewritten, but large parts remain as is, including most of the introduction section.

The phrase "semantic annotation" is used in the paper to mean post conditions in conjunctive normal form. This may be misleading to some readers because there is no connection to semantic annotation in the semantic web/web of data/linked open data/RDF/OWL sense, and no references to central works in that tradition or mentioning of it in the related work.

Your new section 7 on abductive repair contains interesting ideas, but I think it is not fully done. Most of it is spent on defining two rather straightforward problems (augmentation to amend incompleteness and restriction/contraction to amend unsoundness) in a formal but complicated way. There is little on how to use the formal apparatus to solve the problems, and the formal treatment ends up hanging a bit in the air.

The old table 1 (from the ER paper) is missing from the revised paper, so your claim that Figure 4 (the old fig 1) is semantically annotated is not backed up, it seems. This must be remedied before final publication.

Bottom of page 10: is the  $E_i$  in  $\langle T_i, E_i \rangle$  really a set of literals, or is it a set of conjunctions of literals?

Bottom part of 11 repeats earlier stuff: the explanation of the cumulative joined PE-STE table, and maybe more.

On page 12, you use the tau function on the result of a state update operation. The tau function works on a sentence (a conjunction), but the tau function returns a set of sentences. This must be clarified or remedied.

Page 17: "in about 1 in 17 activities" is too unspecific. You have the space to elaborate this.

Spelling (must be fixed):

"upto" -> "up to" (I think)

"a sequence databases", "transitions cause by", "ceratain", "activities", "first-oder"

On page 9, the long equation shown object transition events is unbalanced: extra left "<" and missing right ">". Missing comma before "<Tp"

Formatting (must be fixed):

"wedge" occurs as a word in the middle of some equations.

"minSeqConf" (and perhaps similar functions) is formatted in plain maths, with space before the trailing "functional f"

Bottom page 19: space after "(1)" etc.

Review for

Mining task post-conditions: Automating the acquisition of process semantics

This paper investigates mining of business process annotations. The paper is well-written and technically sound. And the paper includes more than 30% new material from the ER2015 paper. Some suggestions for clarification and improvement:

- The approach seems to require that there exist event logs that describe relevant features of the objects participating in the processes. Is this a strong assumption? Are there many situations in which this assumption is not fulfilled? This might be an issue, because the relevant features may not be expressed in the vocabulary of the process models.
- Section 2 introduces four patients, but only two are described.
- The evaluation is well carried out, but the presentation could be improved by including conclusions that assess how useful the approach is likely to be in practice.
- Section 10 could be extended with a discussion on limitations of the approach, and how these could be addressed in future work.