
13 February 2019

Mr Zhang Shuhao
(A0120258N)
c/o School of Computing
NUS

Dear Mr Zhang

PHD THESIS PROPOSAL (CP6010)

I am pleased to inform you that you have successfully passed your PhD Thesis Proposal review.

The examiners have provided some comments for you to improve on your research work. Please consult your supervisor on the necessary areas of improvement for your PhD research.

Yours sincerely



Agnes Ang (Ms)
Associate Director
Graduate Office

cc A/P He Bingsheng, Supervisor, Dept. of Computer Science
 - examiners' comments are attached for your reference

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EXAMINERS' COMMENTS PHD THESIS PROPOSAL – MR ZHANG SHUHAO

Reviewer 1:

[Depth of proposal (adequate scope for PhD?)]

The student is close to submitting his thesis and has already completed substantial work for the proposal. The two presented has already been published and the third piece of work is undergoing review for publication. The completed work has sufficient depth.

[Originality]

The proposed placement optimization framework is novel.

[Literature Survey Sufficiency]

The related work survey is comprehensive.

[Technical Details (correctness, reproducibility)]

The technical techniques and experimental evaluations are sound and clearly justified.

[Presentation]

Presentation is organized well and the Q&A session is handled well.

Reviewer 2:

[Depth of proposal (adequate scope for PhD?)]

This proposal addresses real-time data stream processing on multicore architectures with a mix of UMA and NUMA. The key contributions are: BriskStream with relative-location aware scheduling to optimize streaming execution plan, and transaction state management, an asynchronous state maintenance scheme to extract more extract parallelism.

Candidate has published 2 key articles (ICDE, SIGMOD) an co-authored 4 joint publications.

[Originality]

Candidate has demonstrated a good understanding of the key issues in using multicore for streaming. RLAS allows streaming to be scaled and T-stream demonstrated 2x higher throughput.

[Literature Survey Sufficiency]

Chapter 3 - 6 pages, literature review, is rather thin. Beside exposing issues of current work, some discussion of how it relates to this thesis should be included.

[Technical Details (correctness, reproducibility)]

The proposed schemes are well discussed and supported with profiling and experimental results.

[Presentation]

Powerpoint presentation - easy to follow but a bit long

Thesis proposal - The organisation needs rethinking.

- chapter 2 is on Background and chapters 4 and 5 both have subsections that repeats the backgroud.
- chapter 2 is poorly conceived - diagrams repeated in the later chapters, figures referencing are all incorrect, ...

- chapter 1 is rather thin too and may not have sufficient background to fully appreciate the problems being addressed.