



# THE UNIVERSITY of EDINBURGH

College of Science and Engineering

RESEARCH  
DEGREE  
EXAMINATION  
NS

## SPECIFIC EXAMINATION CRITIQUE TO BE GIVEN TO THE STUDENT BY THE COLLEGE COMMITTEE

(always to be completed unless no thesis amendments are required)

<b>Name of Student:</b>	Jiansen He	<b>University User Number</b>	S1024484
<b>Title of Thesis:</b>	Type-parameterized Actors and Their Supervision.		
<b>Degree Sought:</b>	MPHIL		
<ul style="list-style-type: none"><li>The joint report must include any conclusions reached by the examiners as a result of the oral examination, particularly in any areas of concern identified in the individual reports.</li><li>Where editorial corrections or modifications are required these should be specified in the joint report.</li><li>If the thesis is considered to be substantially deficient, the report should explain in detail which aspects of the thesis require revision to bring it up to the standard required. If the examiners recommend that no degree should be awarded, the main reasons for rejecting the thesis must be given.</li><li><b>If examiners pass information to students about recommendations they must make it clear that these are only provisional, as the final decision rests with the Examinations Committee.</b> (Copies of any corrections given to the student at the viva must also be copied to the College with this report.)</li></ul>			
<b>Critique to the Student (The space will expand as required in the electronic version. If using paper, please continue your comments on a separate sheet)</b>			
<p>We recommend that the candidate make the following alterations to the thesis, in consultation with the internal examiner. We discussed these changes with the candidate shortly after the examination itself, and most address issues already mentioned during the viva.</p> <p>Chapter 1. Make a clear statement of the “thesis” proposed in the work. List explicitly the specific motivations for the work and the concrete benefits identified.</p> <p>Chapter 2. Include context for the work, beyond the current minimum, to indicate the other ways that this problem has been approached.</p> <p>Chapter 3. Give a precise statement of the properties expected of type actors, such as type soundness and pattern matching completeness. Add a diagram or diagrams to explain the distribution mechanism, both for standard Akka and for the new TAKka typed name server.</p> <p>Chapters 4-7. Restructure these chapters for balance and coherence. As part of this, move §5.1 on using type filters to stop pollution out of Chap. 5; and move the content of Chapters 6 and 7 into a single final chapter in the reverse order.</p>			
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Chapter 5. In the section on expressiveness, add an evaluation of the different kinds of code lines rewritten during porting to complement the raw quantitative data. Make precise the statements of what this evidence indicates.

Appendices. Add an appendix containing the full Akka and T Akka API.

Finally, we have a list of minor editorial corrections which we shall pass to the student directly.