

**Title of the Book or Conference Name:** computer aided verification  
**Volume Editor(s):** Swarat Chaudhuri and Azadeh Farzan  
**Title of the Contribution:** The Commutativity Problem of the MapReduce Framework: A Transd  
**Author(s) Name(s):** Yu-Fang Chen, Song Lei, and Zhilin Wu  
**Corresponding Author's Name, Address, Affiliation and Email:**  
Yu-Fang Chen, Institute of Information Science, Academia Sinica. yfc@iis.sinica.edu.tw  
128 Academia Road, Section 2, Nankang, Taipei 115, Taiwan.

When Author is more than one person the expression "Author" as used in this agreement will apply collectively unless otherwise indicated.

### **§ 1 Rights Granted**

Author hereby grants and assigns to Springer International Publishing AG, Cham (hereinafter called Springer) the exclusive, sole, permanent, world-wide, transferable, sub-licensable and unlimited right to reproduce, publish, distribute, transmit, make available or otherwise communicate to the public, translate, publicly perform, archive, store, lease or lend and sell the Contribution or parts thereof individually or together with other works in any language, in all revisions and versions (including soft cover, book club and collected editions, anthologies, advance printing, reprints or print to order, microfilm editions, audiograms and videograms), in all forms and media of expression including in electronic form (including offline and online use, push or pull technologies, use in databases and networks for display, print and storing on any and all stationary or portable end-user devices, e.g. text readers, audio, video or interactive devices, and for use in multimedia or interactive versions as well as for the display or transmission of the Contribution or parts thereof in data networks or search engines), in whole, in part or in abridged form, in each case as now known or developed in the future, including the right to grant further time-limited or permanent rights. For the purposes of use in electronic forms, Springer may adjust the Contribution to the respective form of use and include links or otherwise combine it with other works. For the avoidance of doubt, Springer has the right to permit others to use individual illustrations and may use the Contribution for advertising purposes.

The copyright of the Contribution will be held in the name of Springer. Springer may take, either in its own name or in that of copyright holder, any necessary steps to protect these rights against infringement by third parties. It will have the copyright notice inserted into all editions of the Contribution according to the provisions of the Universal Copyright Convention (UCC) and dutifully take care of all formalities in this connection in the name of the copyright holder.

### **§ 2 Regulations for Authors under Special Copyright Law**

The parties acknowledge that there may be no basis for claim of copyright in the United States to a Contribution prepared by an officer or employee of the United States government as part of that person's official duties. If the Contribution was performed under a United States government contract, but Author is not a United States government employee, Springer grants the United States government royalty-free permission to reproduce all or part of the Contribution and to authorize others to do so for United States government purposes.

If the Contribution was prepared or published by or under the direction or control of Her Majesty (i.e., the constitutional monarch of the Commonwealth realm) or any Crown government department, the copyright in the Contribution shall, subject to any agreement with Author, belong to Her Majesty.

If the Contribution was created by an employee of the European Union or the European Atomic Energy Community (EU/Euratom) in the performance of their duties, the regulation 31/EEC, 11/EAEC (Staff Regulations) applies, and copyright in the Contribution shall, subject to the Publication Framework Agreement (EC Plug), belong to the European Union or the European Atomic Energy Community.

If Author is an officer or employee of the United States government, of the Crown, or of EU/Euratom, reference will be made to this status on the signature page.

### **§ 3 Rights Retained by Author**

Author retains, in addition to uses permitted by law, the right to communicate the content of the Contribution to other scientists, to share the Contribution with them in manuscript form, to perform or present the Contribution or to use the content for non-commercial internal and educational purposes, provided the Springer publication is mentioned as the



original source of publication in any printed or electronic materials. Author retains the right to republish the Contribution in any collection consisting solely of Author's own works without charge subject to ensuring that the publication by Springer is properly credited and that the relevant copyright notice is repeated verbatim.

Author may self-archive an author-created version of his/her Contribution on his/her own website and/or the repository of Author's department or faculty. Author may also deposit this version on his/her funder's or funder's designated repository at the funder's request or as a result of a legal obligation. He/she may not use the publisher's PDF version, which is posted on SpringerLink and other Springer websites, for the purpose of self-archiving or deposit. Furthermore, Author may only post his/her own version, provided acknowledgment is given to the original source of publication and a link is inserted to the published article on Springer's website. The link must be provided by inserting the DOI number of the article in the following sentence: "The final publication is available at Springer via [http://dx.doi.org/\[insert DOI\]](http://dx.doi.org/[insert DOI])". The DOI (Digital Object Identifier) can be found at the bottom of the first page of the published paper.

Prior versions of the Contribution published on non-commercial pre-print servers like ArXiv/CoRR and HAL can remain on these servers and/or can be updated with Author's accepted version. The final published version (in pdf or html/xml format) cannot be used for this purpose. Acknowledgment needs to be given to the final publication and a link must be inserted to the published Contribution on Springer's website, by inserting the DOI number of the article in the following sentence: "The final publication is available at Springer via [http://dx.doi.org/\[insert DOI\]](http://dx.doi.org/[insert DOI])".

Author retains the right to use his/her Contribution for his/her further scientific career by including the final published paper in his/her dissertation or doctoral thesis provided acknowledgment is given to the original source of publication. Author also retains the right to use, without having to pay a fee and without having to inform the publisher, parts of the Contribution (e.g. illustrations) for inclusion in future work, and to publish a substantially revised version (at least 30% new content) elsewhere, provided that the original Springer Contribution is properly cited.

#### § 4 Warranties

Author warrants that the Contribution is original except for such excerpts from copyrighted works (including illustrations, tables, animations and text quotations) as may be included with the permission of the copyright holder thereof, in which case(s) Author is required to obtain written permission to the extent necessary and to indicate the precise sources of the excerpts in the manuscript. Author is also requested to store the signed permission forms and to make them available to Springer if required.

Author warrants that he/she is entitled to grant the rights in accordance with Clause 1 "Rights Granted", that he/she has not assigned such rights to third parties, that the Contribution has not heretofore been published in whole or in part, that the Contribution contains no libelous statements and does not infringe on any copyright, trademark, patent, statutory right or proprietary right of others, including rights obtained through licenses; and that Author will indemnify Springer against any costs, expenses or damages for which Springer may become liable as a result of any breach of this warranty.

#### § 5 Delivery of the Work and Publication

Author agrees to deliver to the responsible Volume Editor (for conferences, usually one of the Program Chairs), on a date to be agreed upon, the manuscript created according to the Springer Instructions for Authors. Springer will undertake the reproduction and distribution of the Contribution at its own expense and risk. After submission of the Consent to Publish form Signed by the Corresponding Author, changes of authorship, or in the order of the authors listed, will not be accepted by Springer.

#### § 6 Author's Discount

Author is entitled to purchase for his/her personal use (directly from Springer) the Work or other books published by Springer at a discount of 40% off the list price as long as there is a contractual arrangement between Author and Springer and subject to applicable book price regulation. Resale of such copies or of free copies is not permitted.

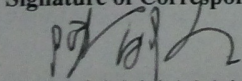
#### § 7 Governing Law and Jurisdiction

This agreement shall be governed by, and shall be construed in accordance with, the laws of Switzerland. The courts of Zug, Switzerland shall have the exclusive jurisdiction.

Corresponding Author signs for and accepts responsibility for releasing this material on behalf of any and all Co-authors.

Signature of Corresponding Author:

Date:



2016.5.8

I'm an employee of the US Government and transfer the rights to the extent transferable  
(Title 17 §105 U.S.C. applies)

I'm an employee of the Crown and copyright on the Contribution belongs to Her Majesty

I'm an employee of the EU or Euratom and copyright on the Contribution belongs to EU or Euratom