

Hongjin Liang

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Research Interests

Programming languages, program verification, concurrency

Work Experience

- [07/2014 – present] University of Science and Technology of China.
 - Limited-term associate researcher
- [09/2012 – 08/2013] Yale University, New Haven, CT, USA.
 - Visiting assistant in research. Advisor: Zhong Shao. Supported by China Scholarship Council.
- [Summer 2008] Microsoft Research Asia, Beijing, China.
 - Summer intern. Mentor: Ming Zhou.

Education

- [09/2009 – 06/2014] Ph.D. in Computer Science, University of Science and Technology of China.
 - Thesis title: “Refinement Verification of Concurrent Programs and Its Applications”.
 - Advisors: Xinyu Feng and Zhong Shao.
 - Finished the courses as the first in the class of 128 students, GPA: 4.02/4.3.
- [09/2005 – 06/2009] B.S. in Computer Science, University of Science and Technology of China.
 - Diploma thesis: “Inferring Loop Invariants in Pointer Logic” (in Chinese). Advisor: Yiyun Chen.
 - Graduated from *Special Class for Gifted Young* as the top of the 7 students majoring in CS, GPA: 3.92/4.3.

Honors and Awards

- Rising Stars in EECS: An Academic Career Workshop for Women, MIT, Cambridge, MA, USA, 2015 – *by invitation only*
- CCF Outstanding Doctoral Dissertation, awarded by China Computer Federation, 2015 – *the best award in China for doctoral dissertations on Computer Science*
- Outstanding Doctoral Dissertation, awarded by Chinese Academy of Sciences, 2015.
- Special Prize of President Scholarship, awarded by Chinese Academy of Sciences, 2014.
- National Scholarship for PhD students, awarded by Ministry of Education of China, 2013.
- Microsoft Research Asia PhD Fellowship, 2012.
- Google Anita Borg Scholarship, for having demonstrated superior leadership, passion for Computer Science and academic achievement, 2011.

Teaching Experience

- Courses taught
 - *Foundations of Programming Languages* (011167, undergraduate course), University of Science and Technology of China, Spring 2016.
 - *Theories of Programming Languages* (CS05115, graduate course), University of Science and Technology of China, Spring 2016.
- Teaching assistant for *Principles of Compiler* (undergraduate course), University of Science and Technology of China, Spring 2010.

Publications

Conferences

1. Hongjin Liang and Xinyu Feng. A Program Logic for Concurrent Objects under Fair Scheduling. In *Proceedings of 43rd ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL'16)*, pages 385-399, January 2016.
2. Hongjin Liang, Xinyu Feng and Zhong Shao. Compositional Verification of Termination-Preserving Refinement of Concurrent Programs. In *Proceedings of 23rd EACSL Annual Conference on Computer Science Logic and 29th Annual IEEE Symposium on Logic in Computer Science (CSL-LICS'14)*, Article No. 65, July 2014.
3. Hongjin Liang, Jan Hoffmann, Xinyu Feng and Zhong Shao. Characterizing Progress Properties of Concurrent Objects via Contextual Refinements. In *Proceedings of 24th International Conference on Concurrency Theory (CONCUR'13)*, pages 227-241, August 2013.
4. Hongjin Liang and Xinyu Feng. Modular Verification of Linearizability with Non-Fixed Linearization Points. In *Proceedings of 34th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI'13)*, pages 459-470, June 2013.
5. Hongjin Liang, Xinyu Feng and Ming Fu. A Rely-Guarantee-Based Simulation for Verifying Concurrent Program Transformations. In *Proceedings of 39th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL'12)*, pages 455-468, January 2012.

Journals

1. Hongjin Liang, Xinyu Feng and Ming Fu. Rely-Guarantee-Based Simulation for Compositional Verification of Concurrent Program Transformations. *ACM Transactions on Programming Languages and Systems (TOPLAS)*, Volume 36, Issue 1, Article No. 3, March 2014.
2. Hongjin Liang, Yu Zhang, Yiyun Chen, Zhaopeng Li and Baojian Hua. A Pointer Logic Dealing with Uncertain Equality of Pointers (in Chinese). *Journal of Software*, 21(2):334-343, February 2010.

Theses and technical reports not published elsewhere

1. Hongjin Liang. Refinement Verification of Concurrent Programs and Its Applications. *PhD Thesis*. May 2014.
2. Hongjin Liang. Inferring Loop Invariants in Pointer Logic (in Chinese). *Bachelor Thesis*. June 2009.
3. Hongjin Liang, Yu Zhang, Yiyun Chen and Zhaopeng Li. A Shape System and Loop Invariant Inference. *Technical Report*, University of Science and Technology of China, March 2010.

Services

- Program committee member for conferences: CoqPL'17, CPP'16.
- Reviewer for journals: Formal Aspects of Computing (FAC), Journal of Systems and Software (JSS), ACM Transactions on Programming Languages and Systems (TOPLAS), Journal of Software (Chinese Journal).

- Reviewer for conferences: iFM'16, FoSSaCS'16, ICALP'15, ICPP'15, APLAS'14, PLDI'14, CONCUR'13, ESOP'13, POPL'13, SSV'12, CONCUR'12, LICS'12, APLAS'11.