

# Xuankang Lin

## Objective

Available from my personal blog so as to better demonstrate myself

## Research Interests

Concurrency, Distributed Systems, Machine Learning, Program Synthesis, Relaxed Memory Models, Software Engineering, Verified Compilation.

## Education

- **Purdue University** West Lafayette, IN  
*Ph.D. in Computer Science* 05/2019
  - GPA: 4.0 / 4.0
  - Passed Qualifying Examination in 11/2015
- **Oregon Programming Languages Summer School** Eugene, OR  
06/2014
- **Tongji University** Shanghai, China  
*B.E. in Software Engineering* 06/2013
  - GPA: 4.69 / 5.0, top 2.4%
  - Outstanding Graduate of Shanghai in 2013
- **Rose-Hulman Institute of Technology** Terre Haute, IN  
*Exchange student in Computer Science and Software Engineering* 08/2012 – 11/2012
  - GPA: 4.0 / 4.0

## Work Experience

- **Purdue University** West Lafayette, IN  
*Graduate Research Assistant* 05/2016 – Present
  - Use machine learning approach to help weak memory behavior understanding.
- **Purdue University** West Lafayette, IN  
*Graduate Teaching Assistant* 08/2015 – 05/2016
  - TA for CS505 Distributed Systems in 16 Spring.
  - TA for CS503 Operating Systems in 15 Fall.
- **Purdue University** West Lafayette, IN  
*Graduate Research Assistant* 08/2013 – 08/2015
  - Contributed to project Verigc, a sub-project for a verified Java compiler and runtime. Helped developed a Rely/Guarantee proof for the GC algorithm, defined and proved an IR for one layer of the concurrent GC.
- **Intel** Shanghai, China  
*Intern at SSG group* 12/2012 – 06/2013
  - Optimized Cocos2d-html5's display on Apple devices with Retina display
  - Re-implemented Cocos2d-html5 audio engine using Web Audio API so as to play multiple effects simultaneously on previous unsupported devices (merged into official repository)
  - One HTML5-based file sharing app

## Selected Projects

[more on Github](#)

- **XLTSO** *04/2014 – 05/2014*
  - Course project of *CS565 Programming Languages*
  - Formalized a simple concurrent programming language that exposes TSO semantics
  - Proved main results about data-race-free programs in this language have SC semantics
- **Xinu** *09/2013 – 12/2013*
  - Course project of *CS503 Operating Systems*, based on provided source codes
  - Implemented time-sharing scheduling and message passing alone
  - Implemented paging support (serve as team leader)
- **Pacman** *08/2012 – 11/2012*
  - Course project of *Artificial Intelligence* using Python
  - Team leader, responsible for the design and most of the implementation. Applied alpha-beta pruning search and genetic algorithms. It can intelligently beat most other groups in the class tournament.
- **973 National Scientific Research Project of China** *03/2011 – 01/2012*
  - Participated in *Platform of Information Service and its Application in Traffic and Medical Areas*. Contributed to Personal Health Record System, Medical Record System, and Transferring Consultation System with Java, GAE, GWT, SVN.
  - Responsible for Authority Management, Archiving Service, History Look-up, File Downloading; Test, Diagnosis, Prescribe pages of medical procedures.
  - Also involved in Persistence, UI design and implementations; Summary page and Transfer-Out Service.

## Selected Courses

13 Fall CS503 Operating Systems (A+)  
14 Spring CS565 Programming Languages (A+)  
15 Spring CS510 Software Engineering (A+)  
15 Fall CS502 Compiling and Programming Systems (A+)

## Skills

**Advanced** : Coq, C/C++, Git, Vim, Emacs

**Proficient** : Java, Python, JavaScript, Linux, SVN, L<sup>A</sup>T<sub>E</sub>X