# Jialiang Chang


## CONTACT
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## RESEARCH INTERESTS
My research focus on applying formal methods to ensure reliability of complex software systems.

## EDUCATION
*Doctor of Philosophy*, Computer Science
Western Michigan University, Kalamazoo, MI — In progress

*Master of Science*, Computer Science
DePaul University, Chicago, IL — June 2015

*Master of Science*, Information Resources Management
Wuhan University, Wuhan, China — June 2011

*Bachelor of Science*, Information Management and Information System
Qingdao Technological University, Qingdao, China — June 2009

## PROFESSIONAL EXPERIENCE
*Teaching Assistant* — September 2017 – Present
Western Michigan University
- Teaching 60 undergraduates about basic computer science knowledge in lab sessions, including excel, matlab and c programming language.

*Research Assistant* — September 2015 – May 2017
Western Michigan University
- Contributing to the NSF funded project, "Systematic and Scalable Testing of Concurrent Software in the Cloud", with concolic execution formal method, DPOR theory and cloud computing tool. The aim is to try to solve long-standing path-explosion conundrum and to gain an ability to test large concurrent program through introduced online service.
- Contributing to the taint-analysis project with cloud computing tool. The aim is to find out the source of the taint in the program and improve the cyber security of the program in lower overhead costs.
- Contributing to the parallel reuse distance project with concolic execution formal method and cloud computing tool. The aim is to introduce the state-of-the-art parallel reuse distance definition and show how to measure the shared variable reuse distances in concurrent programs on large scalable platform. The benefit of the project could help to the cache optimization and reduce the program security risk.
- Contributed to GUI testing project with symbolic execution formal method and cloud computing tool. The contributions are bringing the symbolic execution method in the GUI testing area for the first time, and implemented and introduced an online service to test GUI program in parallel.

*Back End Web Developer* — September 2014 – May 2015
Unscene Squared Inc Chicago
- Implemented the official website back end with Node.js and some frameworks like Express.js, Passport.js.
- Contributed to content administration, databases with MongoDB and mongoose.js framework.
- Written RESTful API to implement CRUD function of the project.
- Merged, organized, queried data sheets, pulling from factual API and google places API.

*Full Stack Web Developer* September 2013 – October 2014
Department of Institutional Research and Market Analytics, DePaul University
- Implemented the official department website with HTML, CSS, ASP, JavaScript and SQL.
- Used Mercurial to control the code version and collaborate with the team.

*Medical Records Manager* July 2012 – July 2013
The Affiliated Hospital of Medical College, Qingdao University, Qingdao, China
- Responsible for collecting, sorting, coding, analyzing and recording Health information.
- Provided electronic health records access for statistic and research purposes in the hospital.
- Optimized the workflow and shortened the time of collecting medical information from one week to three days.

## PUBLICATIONS

- Hao Li, **Jialiang Chang**, Zijiang Yang and Steve Carr. Memory Distance Measurement for Concurrent Programs. The 30th International Workshop on Languages and Compilers for Parallel Computing (LCPC), October 11-13, 2017. College Station, Texas.
- Xiaodong Zhang, Zijiang Yang, Qinghua Zheng, Pei Liu, **Jialiang Chang**, Yu Hao and Ting Liu. Automated Testing of Definition-Use Data Flow for Multithreaded Programs. The 10th IEEE International Conference on Software Testing, Verification and Validation (ICST), March 13-18, 2017. Tokyo, Japan.
- Lin Cheng, **Jialiang Chang**, Zijiang Yang and Chao Wang. GUICat: GUI Testing as a Service. The 31st IEEE/ACM International Conference on Automated Software Engineering (ASE), September 3-7, 2016. Singapore. Tool Paper.

## PROJECTS

- irma.depaul.edu, Official website of Institutional Research and Market Analytics of DePaul University.
- Study, Design and Plan the Intelligence center of A Tobacco Company in Hubei Province, China.
  - Used Weka and Lucene to realize competitive intelligence module of the intelligence center.
  - Used MySQL to store, and analyze the information materials for supporting decision-making.
  - Used SPSS for information statistic and prediction, and make interactive charts to visualize and present the information.

## HONORS

- Department Graduate Research Publication Award, 2018 April 2018
- Department Graduate Research Publication and Creative Scholar April 2017
- Department Graduate Research Publication Award, 2017 April 2017