

# Nicholas Chen

(931)-99-NCHEN • nicholas.chen@mac.com • www.vazexqi.com  
linkedin.com/in/nicholaschen • github.com/vazexqi

## Education

---

<b>University of Illinois</b> <i>Ph.D., Computer Science</i> Thesis: Interactive Source-to-source Transformations for Flow-based Applications	<b>Urbana, IL</b> 2008–2013
<i>M.S., Computer Science</i> Thesis: Extending Automated Refactoring Support Across XML Configuration Files	2006–2008
<i>B.S., Electrical and Computer Engineering (Math Minor, Highest Honors)</i>	2003–2006

## Experience

---

<b>University of Illinois</b> <i>Teaching Assistant</i> CS242: Programming Studio CS427/428: Software Engineering I & II CS598REJ: Object-Oriented Programming and Design VLSI CAD: Logic to Layout	2006 - 2013
<ul style="list-style-type: none"><li>Co-developed the <i>original</i> syllabus, lectures, assignments and machine problems that are used today.</li><li>Developed internal software for grading and managing student groups that are used today (Ruby on Rails, Groovy).</li><li>As head TA, organized weekly meetings and supervised other TAs.</li><li>Developing backend auto-grading software for the department's new VLSI CAD (MOOC course on Coursera with 17,000+ students).</li></ul>	

<b>University of Illinois</b> <i>Research Assistant</i>	2007 - 2012
<ul style="list-style-type: none"><li>Developing static analyses for interactive tools to help parallelize flow-based object-oriented applications.</li><li>Developing <i>Language of Languages</i> (LoLs), an open source language workbench that enables collaborative editing of software models in multiple languages (Smalltalk, Javascript).</li><li>Identified problems with current IDEs through <i>empirical studies</i> (26 developers, 1268 hours of total development time). Used the results to create and evaluate new and more efficient tools for IDEs.</li><li>Developed software package for <i>non-intrusive continuous personal health monitoring</i> resulting in publication in America Medical Informatics Association (AMIA) and \$10,000 prize from Center for Integration of Medicine and Innovative Technology (CIMIT).</li><li>Contributed open source code to <i>Photran</i> (Eclipse IDE for Fortran) and <i>GPars</i> (Groovy Parallel Systems).</li><li>Mentored six undergraduate students under NSF Research Experience for Undergraduates (REU), Illinois Trust Institute (ITI) and Undergraduate Research Lab (URL). Two are now graduate students at the University of Washington, Seattle and Seoul National University, South Korea.</li></ul>	

## Awards and Honors

---

<b>Ray Ozzie Computer Science Fellowship:</b> One recipient each year	2012
<b>Graduate Student Outstanding Service Award:</b> One recipient each year	2010
<b>CIMIT Prize for Primary Healthcare Finalist:</b> \$10,000 award, 10 finalists nationwide	2010
<b>Outstanding Teaching Assistant Award:</b> CS242, CS427, CS428 and CS598REJ	
<b>Full undergraduate scholarship:</b> Awarded by the Public Service Department of Malaysia	
<b>Eta Kappa Nu:</b> Electrical and Computer Engineering Honor Society, Illinois Alpha Chapter	
<b>Tau Beta Pi:</b> Engineering Honor Society, Illinois Alpha Chapter	

## Selected Publications

---

- A Compositional Approach to Automating Refactorings**  
*Mohsen Vakilian, Nicholas Chen, Roshanak Moghaddam, Stas Negara, Ralph Johnson* ECOOP '13
- Drag-and-Drop Refactoring: Intuitive and Efficient Program Transformation**  
*Yun Young Lee, Nicholas Chen, Ralph Johnson* ICSE '13
- Is It Dangerous to Use Version Control Histories to Study Source Code Evolution?**  
*Stas Negara, Mohsen Vakilian, Nicholas Chen, Ralph Johnson, Danny Dig* ECOOP '12
- Use, Disuse, and Misuse of Automated Refactorings**  
*Mohsen Vakilian, Nicholas Chen, Stas Negara, Balaji Rajkumar, Brian Bailey, Ralph Johnson* ICSE '12
- Expressing Pipeline Parallelism Using Intel's TBB Constructs**  
*Eric Reed, Nicholas Chen and Ralph Johnson* TMC '11
- The Language of Languages Research Project**  
*James R. Douglass, Nicholas Chen, Ralph Johnson* OOPSLA/SPLASH DEMO '11
- Toward Dietary Assessment via Mobile Phone Video Cameras**  
*Nicholas Chen, Yun Young Lee, Maurice Rabb, Bruce Schatz* AMIA '10
- Feasibility of Long-term Monitoring of Everyday Health Through Smartphones**  
*Nicholas Chen, Maurice Rabb, Yun Young Lee, Bruce Schatz* UIUC Tech Report
- Personalized Implicit Health Monitors**  
*Nicholas Chen, Maurice Rabb, Yun Young Lee, Bruce Schatz* UIUC Tech Report

## Synergistic Activities

---

- Invited speaker:** *How to Give a Good Presentation* 2009,2012
- Demo Program Committee Member:** OOPSLA/SPLASH 2011
- Panelist:** Computer Science Qualifying Exam Seminar 2011
- Panelist:** Illinois Trust Institute (ITI) Graduate Panel 2011
- Graduate Ambassador:** Assist incoming students to the Computer Science Department 2010,2011
- Technical Reviewer:** *Parallel Programming with Microsoft .NET* book 2010
- Student Representative:** Fellowships, Awards and Admissions (FAA) Committee 2010
- Committee Member:** *First* Computer Science Graduate Academic Council 2009-2011
- Student volunteer:** OOPSLA 2009
- External Reviewer:** OOPSLA '13, ECOOP '13, FSE'12, OOPSLA'12, ASE'11, FSE'10, OOPSLA'09

## Computer skills

---

- Languages:** Java, Groovy, Javascript, Smalltalk, C++, C, Ruby, Scala
- Frameworks:** Eclipse Platform and SDK, Groovy Parallel Systems (GPar), Gradle, d3.js  
Intel's Threading Building Blocks (TBB), Intel's OpenCV, Google Caliper
- Software Design:** Design Patterns, Refactoring, eXtreme Programming (XP)
- Version Control:** Git, Mercurial, Subversion      **IDEs:** Eclipse, IntelliJ IDEA, XCode, Understand

## Referees

---

Available upon request