

# Yucheng Zhang

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CONTACT INFORMATION 229-3755 W 6th Ave  
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TECHNICAL SKILLS

- *Programming Languages*: Java, C++, C, PHP, JavaScript, Python, HTML, SQL, CSS
- *Develop Environments*: Eclipse, Visual Studio, IntelliJ, gcc
- *Specialty*: Algorithm Design, Software Testing, Full-Stack Web Development, Data Analysis and Modeling

EDUCATION **The University of British Columbia** (UBC), Vancouver, British Columbia, Canada

MASc. in Computer Engineering 9/2014 – Present

- Advisor: Dr. [Ali Mesbah](#)
- GPA: 4.0/4.33

**The University of British Columbia** (UBC), Vancouver, British Columbia, Canada

B.Sc. in Computer Science and Statistics 9/2009 – 5/2014

- GPA: 3.85/4.33

**University of Waterloo**, Ontario, Canada

Mathematics/Business Honors (Transfer Credit) 9/2008 – 12/2008

AWARDS AND HONORS

- ACM SIGSOFT Grant 2015
- Graduate student travel fund of University of British Columbia 2015
- University of British Columbia President's Entrance Scholarship 2009
- University of Waterloo President's Scholarship 2008

PUBLICATIONS [1] **Assertions Are Strongly Correlated With Test Suite Effectiveness**  
**Yucheng Zhang** and Ali Mesbah  
*In Proc. the 10th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2015)*. Bergamo, Italy. (Acceptance Rate: 25.4%)

ACADEMIC ACTIVITIES **Conference Talks**

- Assertions Are Strongly Correlated With Test Suite Effectiveness  
ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2015)

WORKING EXPERIENCE **Samsung Research America** (SRA), Mountain View, CA, USA 5/2015 – 9/2015

Software Engineer Intern

- Supervisor : Bruce Hoenig, David Paquet
- Designed and maintained a database for the GPU research team based on complex design requirements.
- Analyzed and visualized data generated by various processes of the Advanced Processor Lab to provide insights on user volume consumption, job delays, etc.
- Implemented a team profile management tool which are now being used by the entire Advanced Processor Lab.

**NEXSM Inc.**, Vancouver, British Columbia, Canada

6/2014 – 7/2014

Database Management and Web Developer

- Independently designed and implemented a social media application.

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|                          | <b>School of Music, UBC</b> , Vancouver, British Columbia, Canada 5/2015 – 8/2013<br>Database Management and Web Developer Assistant <ul style="list-style-type: none"> <li>Independently designed and implemented a student information management and practice room hours booking system.</li> <li>Designed and implemented database of the application.</li> <li>Configured and deployed the application on a Redhat Linux server.</li> <li>The application is currently being used by school of music and their students.</li> </ul>   |
|                          | <b>Gumstix Research (Canada) Ltd.</b> , Vancouver, British Columbia, Canada 1/2012 – 8/2012<br>Software Engineer <ul style="list-style-type: none"> <li>Refactored the webERP company management system and osCommerce online store using Symfony2 as framework, Doctrine as database management tool, and Twig as template.</li> <li>Independently developed a product selector tool using JavaScript and DOJO to make it easier for customers to understand and select their desired products.</li> <li>Improved and added new features to the existing web application as required by customers.</li> <li>Assisted system admin in implementing auto application installer using Python.</li> </ul>   |
| RESEARCH EXPERIENCE      | <b>Research Assistant, (UBC)</b> , Vancouver, British Columbia, Canada Sep 2014 – Present<br><b>Research Interest: Software Testing</b><br><b>Advisor: Dr. Ali Mesbah</b><br><b>Assertions Are Strongly correlated With Test Suite Effectiveness</b> <ul style="list-style-type: none"> <li>Designed and conducted controlled experiments to verify the influence of assertions on test suite effectiveness from three different angles : assertion quantity, assertion coverage, and assertion types</li> <li>Built infrastructure to automatically compose test suites of target properties and executed through mutation testing</li> <li>Statistically analyze the experiment results by using correlations, significant tests, and analysis of variance</li> <li>Published at <b>ESEC/FSE 2015</b></li> </ul> <b>Why Assertion Types Influence Test Suite Effectiveness</b> <ul style="list-style-type: none"> <li>Customized PIT (a very popular mutation testing tool) to collect mapping information between test assertions and detectable mutants</li> <li>Built infrastructure to automatically collect assertion related properties, such as assertion content types, direct/indirect assertion coverage, assertion density, cyclo-matic complexity, and etc.</li> <li>Study and make understanding of the experiment result from different angles, ex : relationship between assertions content types and mutation operators</li> </ul> |
| TEACHING EXPERIENCE      | <b>Teaching Assistant</b> , The University of British Columbia <ul style="list-style-type: none"> <li>Economic Analysis of Engineering Projects (CPEN 481 ) 1/2016 – Present</li> <li>Software Testing (CPEN 422) 9/2015 – 12/2015</li> <li>Introduction to Probability (Math 302) 1/2014 – 5/2014</li> <li>Applied Linear Algebra (Math 307) 9/2013 – 12/2013</li> <li>Math 180 9/2013 – 12/2013</li> </ul>   |
| ACTIVITIES AND INTERESTS | <ul style="list-style-type: none"> <li>Accepted professional violin training for 10+ years, and achieved Level 9 (<b>the highest technical level</b> issued by Chinese Musicians' Association) at the age of 15</li> <li>Won the Euclid Mathematics Contest in Waterloo</li> <li>Making handcrafts including beading, knitting and crocheting</li> </ul>   |