

# REID HOLMES

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CURRICULUM VITAE

Associate Professor  
Department of Computer Science  
University of British Columbia  
Vancouver, British Columbia, V6T 1Z4

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EDUCATION

**Associate Professor** 2015–Present  
University of British Columbia, Vancouver, Canada

**Associate Professor** 2015  
University of Waterloo, Waterloo, Canada

**Assistant Professor** 2010–2015  
University of Waterloo, Waterloo, Canada

**Adjunct Professor** 2011–2013  
University of Washington, Seattle, USA

**Postdoctoral Fellow, Computer Science** 2008–2010  
University of Washington, Washington, USA  
Host: David Notkin

**Ph.D., Computer Science** 2004–2008  
University of Calgary, Calgary, Canada  
*Pragmatic Software Reuse*  
Supervisor: Robert J. Walker

**M.Sc., Computer Science** 2002–2004  
University of British Columbia, Vancouver, Canada  
*Using Structural Context to Recommend Source Code Examples*  
Supervisor: Gail C. Murphy

**B.Sc., Computer Science** 1997–2002  
University of British Columbia, Vancouver, BC, Canada

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RESEARCH EXPERIENCE

*Postdoctoral Fellow* **University of Washington**  
*Department of Computer Science &* **Washington, USA**  
*Engineering* **2008–2010**  
Hosted by David Notkin  
Investigated new techniques to automatically detect when software behaviour is inconsistent with a developer's expectations.

*Research Assistant*  
*Department of Computer Science*

**University of Calgary**  
**Calgary, Canada**  
**2004–2008**

Investigated a comprehensive approach, termed *Pragmatic Reuse*, by which productivity can be increased by supporting informal source code reuse tasks.

*Research Intern*  
*Human Interactions in Programming*

**Microsoft Research**  
**Redmond, USA**  
**Fall 2007**

Investigated developer information needs while exploring external source code and developed a tool to increase the developer's understanding of how and why code had changed in the past.

*Visiting Researcher*  
*Center for Advanced Studies*

**IBM Canada**  
**Ottawa, Canada**  
**August 2006**

Performed early validation of doctoral thesis premise and early prototype tool. Remainder of time was spent brainstorming techniques to make source code dependency investigation more effective.

*Research Assistant*  
*Department of Computer Science*

**University of British Columbia**  
**Vancouver, Canada**  
**2002–2004**

Researched approaches to automatically locate source code examples that are relevant to a developer's current workspace in order to help them better understand how to use large frameworks.

*Undergraduate Researcher*  
*Software Practices Lab*

**University of British Columbia**  
**Vancouver, Canada**  
**April–Dec 2000**

Researched and implemented techniques for increasing the scalability of an object-oriented runtime visualization system.

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INDUSTRIAL  
EXPERIENCE

*Program Manager*  
*Digital Lifestyle User Experience*

**Microsoft Corporation**  
**Redmond, USA**  
**May–Aug 2002**

*Software Engineer*  
*Integration Engine*

**Pivotal Corporation**  
**Vancouver, Canada**  
**April–Sept 2001**

*Information Technologist*  
*Network Solutions*

**Suncor Energy**  
**Fort McMurray, Canada**  
**Jan–Aug 1999**

*Network Engineer*  
*University Support Services*

**University of British Columbia**  
**Vancouver, Canada**  
**Sept 1997–Jan 1999**

HONOURS AND  
AWARDS

- **Outstanding Young Computer Science Researcher Award**  
CS—Can | Info—Can 2018
- **ICSE Most Influential Paper 10 Years Later Runner-Up:**  
“Using Structural Context to Recommend Source Code Examples” 2015
- **ACM Distinguished Paper Award:** “Are Mutants a Valid Substitute  
for Real Faults in Software Testing?”, *In Proceedings of the International  
Symposium on the Foundations of Software Engineering (FSE)* 2014
- **ACM Distinguished Paper Award:** “Coverage Is Not Strongly  
Correlated With Test Suite Effectiveness”, *International  
Conference on Software Engineering (ICSE)* 2014
- **Distinguished Paper Award:** “The Influence of Non-Technical  
Factors on Code Review”, *Working Conference on Reverse  
Engineering (WCRE)* 2013
- **ACM Distinguished Paper Award:** “Proactive Detection  
of Collaboration Conflicts”, *Foundations of Software  
Engineering (FSE)* 2011
- Nominated for the Governor General’s Gold Medal 2009
- Nominated for the Chancellor’s Graduate Medal 2009
- NSERC PDF Postdoctoral Fellowship – \$80,000 2008
- **MSR Challenge Award:** “A Newbie’s Guide to Eclipse APIs”,  
*Working Conference on Mining Software Repositories* 2008
- **Best Presentation Award:** “Informing Eclipse API Production and  
Consumption”, *Eclipse Technology Exchange Workshop at OOPSLA* 2007
- Ruby Doctoral Scholarship – \$16,000 2007
- Queen Elizabeth II Doctoral Scholarship – \$15,000 2007
- Departmental Research Award – \$8,000 2006
- **ACM Distinguished Paper Award:** “Using Structural Context  
to Recommend Source Code Examples”, *International Conference  
on Software Engineering (ICSE)* 2005
- Departmental Research Award – \$8,000 2005
- Departmental Research Award – \$8,000 2004

## GRANTS

- NSERC Collaborative Research Development Grant – *Empowering Productivity* – \$375,000 2018
- ABB Industrial Grant – *Empowering Productivity* – \$375,000 2018
- NSERC Discovery – *Improving software quality with introspective testing* – \$215,000 2016
- NSERC Discovery – *Accelerator* – \$120,000 2016
- NSERC Discovery – *Understanding dynamic behaviour* – \$120,000 2011
- NSERC Discovery – *Supplement* – \$25,000 2011
- NSF SHF:Small Grant – *Partitioning static and dynamic dependences across versions* (with David Notkin) – \$188,424 2010
- NSF SHF:Medium Grant – *Speculation and continuous validation for software development* (with Michael Ernst, David Notkin, and Yuriy Brun) – \$750,000 2010
- IBM Jazz Innovation Grant – *Proactive Entropy Awareness System* (with David Notkin) – \$16,000 2008
- ACM Travel Grant – \$1,000 2006
- IBM Eclipse Innovation Grant – *Real-Time Example Generation, Analysis, and Integration* (with Rob Walker) – \$25,000 2005
- ACM Travel Grant – \$1,000 2005

TEACHING  
ACTIVITIES

## University of British Columbia — Department of Computer Science

- Professor CS 310 - Software Engineering (2 sections) Sept 2019
- Professor CS 507 - Advanced Software Engineering Sept 2018
- Professor CS 310 - Software Engineering Sept 2018
- Professor CS 507 - Advanced Software Engineering Jan 2018
- Professor CS 310 - Software Engineering Jan 2018
- Professor CS 507 - Advanced Software Engineering Jan 2017
- Professor CS 310 - Software Engineering Jan 2017
- Professor CS 310 - Software Engineering Sept 2016
- Professor CS 507 - Advanced Software Engineering Jan 2016
- Professor CS 410 - Advanced Software Engineering Sept 2015

## University of Waterloo — David R. Cheriton School of Computer Science

- Professor CS 846 - Human Aspects of SE Winter 2015
- Professor CS 446 - Software Architecture and Design Winter 2015
- Professor CS 846 - Recommendation Systems for SE Winter 2014
- Professor CS 446 - Software Architecture and Design Winter 2014
- Professor CS 446 - Software Architecture and Design Winter 2013
- Professor CS 246 - Object-Oriented Software Development Fall 2012

- Professor CS 846 - Human Aspects of SE Fall 2012
- Professor CS 846 - Human Aspects of SE Fall 2011
- Professor CS 446 - Software Architecture and Design Fall 2011
- Professor CS 436 - Networking and Distributed Systems Winter 2011
- Professor CS 446 - Software Architecture and Design Fall 2010

University of Washington — Department of Computer Science & Engineering

- Guest Lecture CSEP 504 - Advanced Software Engineering Winter 2009

University of Calgary — Department of Computer Science

- Teaching Assistant CS 531 - Software Evolution Winter 2006
- Teaching Assistant CS 531 - Software Evolution Winter 2005
- Teaching Assistant CS 311 - Software Engineering Fall 2004

University of British Columbia — Department of Computer Science

- Teaching Assistant CS 319 - Software Engineering Project Fall 2003
- Teaching Assistant CS 410 - Advanced Software Engineering Fall 2002
- Teaching Assistant CS 310 - Software Engineering Winter 2002
- Teaching Assistant CS 310 - Software Engineering Fall 2002
- Teaching Assistant CS 310 - Software Engineering Winter 2000
- Teaching Assistant CS 310 - Software Engineering Fall 1999

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In all publications, students are denoted by \* and postdocs are denoted by \*\*.

JOURNAL  
PUBLICATIONS

- ESE15 Olga Baysal, Oleksii Kononenko\*, **Reid Holmes**, and Michael W. Godfrey. Investigating Technical and Non-Technical Factors Influencing Modern Code Review. *Empirical Software Engineering*. 21(6): 932–959. June 2016.
- TSE13 Yuriy Brun, **Reid Holmes**, Michael D. Ernst, and David Notkin. Early Detection of Collaboration Conflicts and Risks. *IEEE Transactions on Software Engineering (TSE)*, 39(10):1359–1375. October 2013.
- IEEESW13 Olga Baysal\*, **Reid Holmes**, and Michael W. Godfrey. Developer Dashboards: The Need For Qualitative Analytics. *IEEE Software*. 30(4):46–52. July-August 2013.
- TOSEM12 **Reid Holmes** and Robert J. Walker. Systematizing Pragmatic Software Reuse. *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 21(4):1–44, November 2012.
- TSE06 **Reid Holmes\***, Robert J. Walker, and Gail C. Murphy. Approximate Structural Context Matching: An Approach for Recommending Relevant

Examples. *IEEE Transactions on Software Engineering (TSE)*, 32(12):952–970, December 2006.

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CONFERENCE  
PUBLICATIONS

Bold headings represent long and short *research papers* at top-tier software engineering venues (ICSE, FSE, and OOPSLA). These venues are generally held in the same regard as the premiere software engineering journals.

ASE20 Yiqun Chen, Rahul Gopinath, Anita Tadakamalla, Michael D. Ernst, **Reid Holmes**, Gordon Fraser, Paul Ammann, and Rene Just. Revisiting the relationship between fault detection, test adequacy criteria, and test set size. *In Proceedings of the International Conference on Automated Software Engineering (ASE)*. 2020. 10 pages. TO APPEAR. [ASE-35; Online (was Melbourne, Australia)] (23% acceptance rate)

VISSOFT20 Xinhong Liu\* and **Reid Holmes**. Exploring Developer Preferences for Visualizing External Information Within Source Code Editors. *In Proceedings of the International Working Conference on Software Visualization (VISSOFT)*. 2020. 10 pages. TO APPEAR. [VISSOFT-8; Online (was Adelaide, Australia)]

SPLASH19 Elisa Baniassad, Ivan Beschastnikh, **Reid Holmes**, Gregor Kiczales, and Meghan Allen. Learning to Listen for Design. *In Proceedings of International Conference on Systems, Programming Languages, and Applications (SPLASH), Onwards! Essays Track*. 2019. 179–186. [SPLASH-19; Athens, Greece]

ICSME19 Quinn Hanam\*, Ali Mesbah, and **Reid Holmes**. Aiding Code Change Understanding with Semantic Change Impact Analysis. *In Proceedings of the International Conference on Software Maintenance and Evolution (ICSME)*. 2019. 202–212. [ICSME-35; Cleveland, USA] (23% acceptance rate)

QRS19 Weiqin Zou\*, Weiqiang Zhang\*, Xin Xia, **Reid Holmes**, and Zhenyu Chen. Branch Use in Practice: A Large-Scale Empirical Study of 2,923 Projects on GitHub. *In the Proceedings of the International Conference on Software Quality, Reliability, and Security (QRS)*. 2019. 306–317. [QRS-19; Sofia, Bulgaria] (22% acceptance rate)

ICSE18a Nicholas Bradley\*, Thomas Fritz, and **Reid Holmes**. Context-Aware Conversational Developer Assistants. *In Proceedings of the International Conference on Software Engineering (ICSE)*. 2018. 993–1003. [ICSE-40; Gothenburg, Sweden] (21% acceptance rate)

ICSE18b **Reid Holmes**, Meghan Allen, and Michelle Craig. Dimensions of Experientialism for Software Engineering Education. *In Proceedings of the International Conference on Software Engineering (ICSE). - Education*

*and Training Track* 2018. 31–39. [ICSE-40; Gothenburg, Sweden] (28% acceptance rate)

**FSE17** Adriaan Labuschagne\*, Laura Inozemtseva\*, and **Reid Holmes**. Measuring the Cost of Regression Testing in Practice. *In Proceedings of the International Symposium on the Foundations of Software Engineering (ESEC/FSE)*. 2017. 821–830. [ESEC/FSE-11; Paderborn, Germany] (24% acceptance rate)

MSR15 Adriaan Labuschagne\* and **Reid Holmes**. Do Onboarding Programs Work? *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2015. 381–385. [MSR-12; Florence, Italy] (33% acceptance rate)

**FSE14** René Just\*\*, Darioush Jalali\*, Laura Inozemtseva\*, Michael D. Ernst, **Reid Holmes** and Gordon Fraser. Are Mutants a Valid Substitute for Real Faults in Software Testing?. *In Proceedings of the International Symposium on the Foundations of Software Engineering (FSE)*. 2014. 654–665. [FSE-22; Hong Kong, China] (22% acceptance rate)  
**Awarded ACM SIGSOFT Distinguished Paper Award.**

**FSE14b** Olga Baysal\*, **Reid Holmes**, and Mike Godfrey. No Issue Left Behind: Reducing Information Overload in Issue Tracking. *In Proceedings of the International Symposium on the Foundations of Software Engineering (FSE)*. 2014. 666–677. [FSE-22; Hong Kong, China] (22% acceptance rate)

**ICSE14** Laura Inozemtseva\* and **Reid Holmes**. Coverage Is Not Strongly Correlated With Test Suite Effectiveness. *In Proceedings of the International Conference on Software Engineering (ICSE)*. 2014. 435–445. [ICSE-36; Hyderabad, India] (20% acceptance rate)  
**Awarded ACM SIGSOFT Distinguished Paper Award.**

**ICSE14b** Siddharth Subramanian\*, Laura Inozemtseva\*, and **Reid Holmes**. Live API Documentation. *In Proceedings of the International Conference on Software Engineering (ICSE)*. 2014. 643–652. [ICSE-36; Hyderabad, India] (20% acceptance rate)

**ICSE14c** Laura Inozemtseva\*, Siddharth Subramanian\*, and **Reid Holmes**. Integrating Software Project Resources Using Source Code Identifiers. *In Proceedings of the International Conference on Software Engineering (ICSE), New Ideas and Emerging Results (NIER) Track*. 2014. 400–403. [ICSE-36; Hyderabad, India] (24% acceptance rate)

ICSE14d **Reid Holmes**, Michelle Craig, Karen Reid, and Eleni Stroulia. Lessons Learned Managing Distributed Software Engineering Courses. *In Proceedings of the International Conference on Software Engineering (ICSE)*,

*Software Engineering Education and Training (SEET) track*. 2014. 321–324. [ICSE-36; Hyderabad, India] (33% acceptance rate)

MSR14 Quinn Hanam\*, Lin Tan, **Reid Holmes**, and Patrick Lam. Finding Patterns in Static Analysis Alerts: Improving Actionable Alert Ranking. *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2014. 152–161. [MSR-11; Hyderabad, India] (34% acceptance rate)

MSR14b Oleksii Kononenko\*, Olga Baysal\*, **Reid Holmes**, and Michael W. Godfrey. Mining Modern Repositories with Elasticsearch. *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2014. 328–331. [MSR-11; Hyderabad, India] (37% acceptance rate)

**FSE13** Laura Inozemtseva\*, Hadi Hemmati\*\* and **Reid Holmes**. Using Fault History to Improve Mutation Reduction. *In Proceedings of the International Symposium on the Foundations of Software Engineering (ESEC/FSE), New Ideas Track*. 2013. 639–642. [FSE-21; St. Petersburg, Russia] (36% acceptance rate)

**ICSE13** Olga Baysal\*, **Reid Holmes**, and Michael W. Godfrey. Situational Awareness: Personalizing Issue Tracking Systems. *In Proceedings of the International Conference on Software Engineering (ICSE), New Ideas and Emerging Results (NIER) Track*. 2013. 1185–1188. [ICSE-35; San Francisco, USA] (22% acceptance rate)

MSR13 Hadi Hemmati\*\*, Sarah Nadi\*, Olga Baysal\*, Oleksii Kononenko\*, Wei Wang\*, **Reid Holmes**, and Michael W. Godfrey. The MSR Cookbook: Mining a Decade of Research. *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2013. 343–353. [MSR-10; San Francisco, USA] (38% acceptance rate)

MSR13b Siddharth Subramanian\* and **Reid Holmes**. Making Sense of Online Code Snippets. *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2013. 85–88. [MSR-10; San Francisco, USA] (23% acceptance rate)

WCRE13 Olga Baysal\*, Oleksii Kononenko\*, **Reid Holmes**, and Michael W. Godfrey. The Influence of Non-technical Factors on Code Review. *In Proceedings of the Working Conference on Reverse Engineering (WCRE)*. 2013. 122–131. [WCRE-20; Koblenz, Germany] (39% acceptance rate)  
**Awarded Distinguished Paper Award.**

**OOPSLA12** Kivanç Muşlu\*, Yuriy Brun\*\*, Reid Holmes, Michael D. Ernst, and David Notkin. Speculative Analysis of Integrated Development Environment Recommendations. *In Proceedings of the International Conference on Object Oriented Programming Systems Languages and Applications (OOPSLA)*. 2012. 669–682. [OOPSLA; Tuscon, USA] (25% acceptance rate)



- ICSE12** Kivanç Muşlu\*, Yuriy Brun\*\*, **Reid Holmes**, Michael D. Ernst, and David Notkin. Improving IDE Recommendations by Considering Global Implications of Existing Recommendations. *In Proceedings of the New Ideas and Emerging Results Track (NIER) at the International Conference on Software Engineering (ICSE)*. 2012. 1349–1352. [ICSE-34; Zurich, Switzerland] (17% acceptance rate)
- MSR12 Olga Baysal\*, **Reid Holmes**, and Michael W. Godfrey. Mining Usage Data and Development Artifacts. *In Proceedings of the Working Conference on Mining Software Repositories (MSR)*. 2012. 98–107. [MSR-9; Zurich, Switzerland] (28% acceptance rate)
- VLHCC12 Oleksii Kononenko\*, David Dietrich\*, Rahul Sharma\*, and **Reid Holmes**. Automatically locating relevant programming help online. *In Proceedings of the Symposium on Visual Languages and Human-Centric Computing (VLHCC)*. 2012. 127–134. [VLHCC-28; Innsbruck, Austria] (28% acceptance rate)
- WCRE12 Olga Baysal\*, Oleksii Kononenko\*, **Reid Holmes**, and Michael W. Godfrey. The Secret Life of Patches: A Firefox Case Study. *In Proceedings of the Working Conference on Reverse Engineering (WCRE)*. 2012. 447–455. [WCRE-18; Kingston, Canada] (36% acceptance rate)
- FSE11** Yuriy Brun\*\*, **Reid Holmes**, Michael D. Ernst, and David Notkin. Proactive Detection of Collaboration Conflicts *In Proceedings of the Symposium on the Foundations of Software Engineering (ESEC/FSE)*. 2011. 168–178. [FSE-8; Szeged, Hungary] (17% acceptance rate).  
**Awarded ACM SIGSOFT Distinguished Paper Award.**
- ICSE11** **Reid Holmes** and David Notkin. Identifying Program, Test, and Environmental Changes That Affect Behaviour. *In Proceedings of the International Conference on Software Engineering (ICSE)*. 2011. 371–380. [ICSE-33; Honolulu, USA] (14% acceptance rate)
- ICSE10** **Reid Holmes\*\*** and Robert J. Walker. Customized Awareness: Recommending Relevant External Change Events. *In Proceedings of the International Conference on Software Engineering (ICSE)*. 2010. 465–474. [ICSE-32; Cape Town, South Africa] (14% acceptance rate)
- ASE09 **Reid Holmes\***, Tristan Ratchford\*, Martin P. Robillard, and Robert J. Walker. Automatically Recommending Triage Decisions for Pragmatic Reuse Tasks. *In Proceedings of the International Conference on Automated Software Engineering (ASE)*. 2009. 397–408. [ASE-24; Auckland, New Zealand] (17% acceptance rate)
- ICSM09 **Reid Holmes\***, Rylan Cottrell\*, Robert J. Walker, and Joerg Denzinger. The End-to-End Use of Source Code Examples: An Exploratory Study. *In Proceedings of the International Conference on Software Maintenance*

(*ICSM*). 2009. 555–558. [ICSM-25; Edmonton, Canada] (39% acceptance rate)

ICSR08 **Reid Holmes\*** and Robert J. Walker. Lightweight, Semi-Automated Enactment of Pragmatic-Reuse Plans. *In Proceedings of the International Conference on Software Reuse*. 2008. 330–342. [ICSR-10; Beijing, China] (26% acceptance rate)

MSR08 **Reid Holmes\*** and Andrew Begel. Deep Intellisense: A Tool for Rehydrating Evaporated Information. *In Proceedings of the Working Conference on Mining Software Repositories*. 2008. 23–26. [MSR-5; Leipzig, Germany] (40% acceptance rate)

MSR08b **Reid Holmes\*** and Robert J. Walker. A Newbie’s Guide to Eclipse APIs. *In Proceedings of the Working Conference on Mining Software Repositories*, Challenge Track. 2008. 149–152. [MSR-5; Leipzig, Germany]  
**MSR Mining Challenge Award.**

ICSE07 **Reid Holmes\*** and Robert J. Walker. Supporting the Investigation and Planning of Pragmatic Reuse Tasks. *In Proceedings of the International Conference on Software Engineering*. 2007. 447–457. [ICSE-29; Minneapolis, USA] (15% acceptance rate)

ICSE06 **Reid Holmes\***. Unanticipated Reuse of Large Scale Software Features. *In Proceedings of the International Conference on Software Engineering*, Doctoral Symposium. 2006. 961–964. [ICSE-28; Shanghai, China] (29% acceptance rate)

ICSE05 **Reid Holmes\*** and Gail C. Murphy. Using Structural Context to Recommend Source Code Examples. *In Proceedings of the International Conference on Software Engineering*. 2005. 117–125. [ICSE-27; St. Louis, USA] (14% acceptance rate)  
**Awarded ACM SIGSOFT Distinguished Paper Award.**

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WORKSHOP PUBLICATIONS ROSE19 Nico Ritschel\*, Ron Garcia, and **Reid Holmes** Novice-Friendly Multi-Armed Robotics Programming. *In the Proceedings of ICSE Workshop on Robotics Software Engineering (ROSE)*. 2019. 29–32. [ROSE-2; Montreal, Canada]

DAPSE13 Olga Baysal\*, Oleksii Kononenko\*, **Reid Holmes**, and Michael W. Godfrey. Extracting Artifact Lifecycle Models From Metadata History. *In Proceedings of the ICSE Workshop on Data Analysis Patterns in Software Engineering (DAPSE)*. 2013. 17–19. [DAPSE-1; San Francisco, USA]

FCSD12 Yuriy Brun\*\*, Kivanç Muşlu\*, **Reid Holmes**, Michael D. Ernst, and

- David Notkin. Predicting Development Trajectories to Prevent Collaboration Conflicts. *In Proceedings of the Future of Collaborative Software Development (FCSD) at the International Conference on Computer Supported Cooperative Work (CSCW)*. 2012. 2 pages. [FCSD-1; Seattle, USA]
- USER12 **Reid Holmes**, David Notkin, and Mark Hancock. Industrially Validating Longitudinal Static and Dynamic Analyses. *In Proceedings of the User evaluation for Software Engineering Researchers (USER) Workshop at the International Conference on Software Engineering (ICSE)*. 2012. 43–44. [USER-1; Zurich, Switzerland]
- USER12b Olga Baysal\*, **Reid Holmes**, and Michael W. Godfrey. Revisiting Bug Triage and Resolution Practices. *In Proceedings of the User evaluation for Software Engineering Researchers (USER) Workshop at the International Conference on Software Engineering (ICSE)*. 2012. 29–30. [USER-1; Zurich, Switzerland]
- FoSER10 Yuriy Brun\*\*, **Reid Holmes\*\***, Michael D. Ernst, and David Notkin. Speculative Analysis: Exploring Future States of Software, *In Proceedings of the Foundations of Software Engineering Working Conference on the Future of Software Engineering Research*. 2010. 59–64. [FoSER; Santa Fe, USA]
- SUITE10 **Reid Holmes\*\***, David Notkin. Enhancing Static Source Code Search With Dynamic Data. *In Proceedings of the International Workshop on Search-Driven Development - Users, Infrastructure, Tools and Evaluation (SUITE)*. 2010. 13–16. [SUITE-2; Cape Town, South Africa]
- VISSOFT09 Rylan Cottrell\*, Brina Goyette\*, **Reid Holmes\***, Robert J. Walker, and Joerg Denzinger. Compare and Contrast: Visual Exploration of Source Code Examples. *In Proceedings of the International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT)*. 2009. 29–32. [VISSOFT-5; Edmonton, Canada]
- SUITE09 **Reid Holmes.\*** Do Developers Search For Source Code Examples Using Multiple Facts?. *In Proceedings of the International Workshop on Search-Driven Development - Users, Infrastructure, Tools and Evaluation (SUITE)*. 2009. 13–16. [SUITE-1; Vancouver, Canada]
- STC09 **Reid Holmes\*** and Robert J. Walker. Developer-Specific Awareness of External Changes. *In Proceedings of the Workshop on Socio-Technical Congruence (STC)*. 2009. 4 pages. [STC-2; Vancouver, Canada]
- CHASE08 **Reid Holmes\*** and Robert J. Walker. Promoting Developer-Specific Awareness. *In Proceedings of the Workshop on Cooperative and Human Aspects of Software Engineering at the International Conference on Software Engineering*. 2008. 61–64. [CHASE-1; Leipzig, Germany]

ETX07 **Reid Holmes\*** and Robert J. Walker. Informing Eclipse API Production and Consumption. *In Proceedings of the Eclipse Technology Exchange Workshop at the ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications*. 2007. 70–74. [ETX-5; Montreal, Canada]  
**Best Presentation Award.**

VISSOFT07 **Reid Holmes\*** and Robert J. Walker. Supporting Task-Specific Source Code Dependency Investigation. *In Proceedings of the International Workshop on Visualizing Software for Understanding and Analysis*. 2007. 100–107. [VISSOFT-4; Banff, Canada]

MSR06 Robert J. Walker, **Reid Holmes\***, Ian Hedgeland\*, Puneet Kapur\*, and Andrew Smith. A Lightweight Approach to Technical Risk Estimation via Probabilistic Impact Analysis. *In Proceedings of the Mining Software Repositories Workshop at the International Conference on Software Engineering*. 2006. 98–104. [MSR-3; Shanghai, China]

ETX04 **Reid Holmes\*** and Gail C. Murphy. Unsticking Eclipse Plug-in Development. *Eclipse Technology Exchange Workshop at the ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications*. 2004. 8 pages. [ETX-2; Vancouver, Canada]

OSSE03 Davor Cubranic\*, **Reid Holmes\***, Annie T. T. Ying\*, and Gail C. Murphy. Tools for Light-Weight Knowledge Sharing in Open-Source Software Development. *Position paper for the Workshop on Open Source Software: Taking Stock of the Bazaar at the International Conference on Software Engineering*. 2003. 25–30. [OSSE-3; Portland, USA]

IWPC03 Andrew Chan\*, **Reid Holmes\***, Gail C. Murphy, and Annie T. T. Ying. Scaling an Object-Oriented System Execution Visualizer Through Sampling. *In Proceedings of the International Workshop on Program Comprehension*. 2003. 237–244. [IWPC-11; Portland, USA]

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RESEARCH DEMONSTRATIONS ICSE14e Oleksii Kononenko\*, Olga Baysal\*, **Reid Holmes**, and Mike Godfrey. DASHboards: Enhancing Developer Situational Awareness. *In Proceedings of the International Conference on Software Engineering (ICSE), Research Demonstration Track*. 2014. 552–555. [ICSE-36; Hyderabad, India].

ICSE11b **Reid Holmes** and David Notkin. Identifying Opaque Behavioural Changes. *In Proceedings of the International Conference on Software Engineering (ICSE), Research Demonstration Track*. 2011. 995–997. [ICSE-33; Honolulu, USA]

FSE11 Yuriy Brun\*\*, **Reid Holmes**, Michael D. Ernst, and David Notkin. Crys-

tal: Precise and Unobtrusive Conflict Warnings. *In Proceedings of the Symposium on the Foundations of Software Engineering (ESEC/FSE), Research Demonstration Track*. 2011. 444–447. [FSE-8; Szeged, Hungary]

ASE08 **Reid Holmes\*\*** and Robert J. Walker. Semi-automating pragmatic reuse tasks. *In Proceedings of the Conference on Automated Software Engineering (ASE), Research Demonstration Track*. 2008. 481–482. [ASE-23; L’Aquila, Italy]

FSE05 **Reid Holmes\*** and Gail C. Murphy. Strathcona example recommendation tool. *In Proceedings of the International Symposium on Foundations of Software Engineering (ESEC/FSE), Research Demonstration Track*. 2005. 237–240. [FSE-13; Lisbon, Portugal]

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BOOK  
CHAPTERS

ASA15 Olga Baysal\*, Oleksii Kononenko\*, **Reid Holmes**, and Michael W. Godfrey. Synthesizing Knowledge from Software Development Artifacts. *Book chapter in The Art and Science of Analyzing Software Data*. Eds. Chris Bird, Tim Menzies, and Thomas Zimmermann. 2015.

RSSE14 Laura Inozemtseva\*, **Reid Holmes**, and Robert J. Walker. Recommendations in the Small. *Book chapter in Recommendation Systems in Software Engineering*. Eds. Martin Robillard, Walid Maalej, Robert J. Walker and Thomas Zimmermann. Springer, 2014. 77–92.

RSSE14 Robert J. Walker and **Reid Holmes**. Simulation. *Book chapter in Recommendation Systems in Software Engineering*. Eds. Martin Robillard, Walid Maalej, Robert J. Walker and Thomas Zimmermann. Springer, 2014. 301–327.

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TECHNICAL  
REPORTS

TR13 Siddharth Subramanian\*, Laura Inozemtseva\* and **Reid Holmes**. Live API Documentation. *University of Waterloo Technical Report CS-2013-17*. 2013. 10 pages.

TR12 Olga Baysal\* and **Reid Holmes**. *A Qualitative Study of Mozillas Process Management Practices*. *University of Waterloo Technical Report CS-2012-10*. 2012. 35 pages.

TR10 Yuriy Brun\*\*, **Reid Holmes\*\***, Michael D Ernst, David Notkin. Speculative Identification of Merge Conflicts and Non-Conflicts. *University of Washington Technical Report UW-CSE-10-03-01*. 2010. 10 pages.

TR09 **Reid Holmes\*\***, Rylan Cottrell\*, Robert J. Walker, and Joerg Denzinger. The End-to-End Use of Source Code Examples: An Exploratory

Study — Appendix. *University of Calgary Technical Report 2009-934-13*. 2009. 8 pages.

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THESES **Reid Holmes**. Pragmatic Software Reuse. *Ph.D. Dissertation*, November 2008. 247 pages.

**Reid Holmes** Using Structural Context to Recommend Source Code Examples. *M.Sc. Dissertation*, August 2004. 63 pages.

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PATENTS Benedek, Franco, Guo, Hally, **Holmes**, Pamucci, Praitis, Sager, and Wentz. System and Method of Preventing a Web Browser Plug-in Module From Generating a Failure. US Patent # 7,398,433. Awarded July 2008.

Begel, Venolia, **Holmes**. Development Environment Integration With Version History Tools. US Application # 12/126,251. May, 2008.

Franco, Guo, Pamucci, Sager, **Holmes**, Hally, and Bendek. Add-on Management. US Application # 10/822,221. April 2004.

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OTHER TALKS *Assessing Software Quality From First Principles*  
University of California, Irvine Informatics Seminar  
Irvine, California, USA. June 3, 2016

*Mobile App Development*  
CEMC Workshop in Computer Science for Young Women  
Waterloo, Ontario, Canada. May 26, 2014

*The Spec is Right*  
CS4U: Computer Science Community Outreach  
Waterloo, Ontario, Canada. December 4, 2013

*Mobile App Development*  
CEMC Workshop in Computer Science for Young Women  
Waterloo, Ontario, Canada. May 27, 2013

*Recovering Semantic Links From Source Code Fragments*  
Consortium for Software Engineering Research  
Markham, Ontario, Canada. November 17, 2013

*Proactive Detection of Collaboration Conflicts*  
Mannheim Department of Computer Science  
Universität Mannheim, Mannheim, Germany. June 11, 2012

*Proactive Detection of Collaboration Conflicts*

Department of Computer Science  
University of Calgary, Calgary, Canada. March 5, 2012

*Proactive Detection of Collaboration Conflicts*  
Indian Software Engineering Conference (ISEC)  
Kanpur IIT, Kanpur, India. February 24, 2012

*Keynote: Improving Comprehension of Source Code Changes*  
Consortium for Software Engineering Research  
Kingston, Ontario, Canada. June 21, 2011

*Exposing Opaque Changes by Contrasting Static and Dynamic Analyses*  
Department of Computer Science & Engineering Industrial Affiliates Day  
University of Washington, Seattle, USA. October 29, 2009

*Pragmatic Software Reuse*  
Departmental Graduate Seminar  
University of Calgary, Calgary, Canada. November 21, 2008

*Deep Intellisense: Re-hydrating Evaporated Knowledge*  
Research Overview  
Microsoft Research, Redmond, USA. December 14, 2007

*Using Structural Context to Recommend Source Code Examples*  
Departmental Graduate Seminar  
University of Calgary, Calgary, Canada. June 10, 2005

*Using Structural Context to Recommend Source Code Examples*  
Departmental Graduate Seminar  
University of British Columbia, Vancouver, Canada. August 22, 2004

*OOVisualizer: Visualizing Software Execution*  
Consortium of Canadian Software Engineering Research  
Toronto, Canada. September 20, 2000

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SERVICE  
ACTIVITIES

Software Engineering Community

- Associate Editor — IEEE Transactions on Software Engineering (TSE) 2020
- Award Committee — ACM SIGSOFT Early Career Research Award (SIGSOFT-ECRA) 2020
- Award Committee — CFI John R. Evans Leaders Fund 2020
- Program Committee Member — International Conference on Software Analysis, Evolution, and Reengineering - Early Research Advancements (SANER-ERA) 2020

- Program Committee Member — Centre for Advanced Studies Conference (CASCON) 2020
- Associate Editor — IEEE Transactions on Software Engineering (TSE) 2019
- Workshop Chair — International Conference on Automating Software Engineering 2019
- Award Committee — ACM SIGSOFT Early Career Research Award (SIGSOFT-ECRA) 2019
- Award Committee — CS-Can/Info-Can Dissertation Award 2019
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2019
- Program Committee Member — International Conference on Software Engineering (ICSE) 2019
- Associate Editor — IEEE Transactions on Software Engineering (TSE) 2018
- Program Committee Member — Foundations of Software Engineering - New Ideas Track (FSE) 2018
- Reviewer — Empirical Software Engineering Journal (EMSE) 2018
- Program Committee Member — International Conference on Program Comprehension (ICPC) 2018
- Associate Editor — IEEE Transactions on Software Engineering (TSE) 2017
- Program Committee Member — Innovations in Software Engineering Conference (ISEC) 2017
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2017
- Program Committee Member — International Workshop on API Usage and Evolution (WAPI @ ICSE) 2017
- Program Committee Member — International Conference on Software Maintenance and Evolution - Early Research Advances (ICSME) 2017
- Program Committee Member — Foundations of Software Engineering - Research Demonstrations (FSE) 2017
- Program Committee Member — Centre for Advanced Studies Conference (CASCON) 2017
- Reviewer — NSERC Discovery 2017
- Reviewer — Empirical Software Engineering Journal (EMSE) 2017
- Program Committee Member — International Conference on Software Engineering (ICSE) 2016
- Program Committee Member — International Conference on Software Analysis, Evolution, and Reengineering (SANER) 2016



- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2016
- Program Committee Member — International Conference on Software Maintenance and Evolution - Early Research Advances (ICSME) 2014
- Program Committee Member — International Workshop on Software Analytics (SWAN) 2016
- Program Committee Member — International Workshop on Release Engineering (RELENG) 2016
- Organizing Committee Member — Foundations of Software Engineering (FSE) 2016
- Organizing Committee Member — International Conference on Functional Programming (ICFP) 2016
- Organizing Committee Member — European Conference on Object-Oriented Programming (ECOOP) 2016
- Lead Organizer — Canadian Consortium for Software Engineering Research (CSER) 2015
- Program Committee Member — International Conference on Software Engineering (ICSE) 2015
- Program Committee Member — International Conference on Software Reuse (ICSR) 2015
- Organizing Committee Member — Foundations of Software Engineering (FSE) 2015
- Organizing Committee Member — International Requirements Engineering Conference (RE) 2015
- Workshop Organizer — International Workshop on Recommendation Systems for Software Engineering (RSSE @ ICSE) 2014
- Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2014
- Reviewer — IEEE Software Reviewer 2014
- Program Committee Member — International Conference on Software Maintenance and Evolution (ICSME) 2014
- Program Committee Member — International Workshop on Release Engineering (RELENG) 2014
- Program Committee Member — Working Conference on Reverse Engineering (WCRE) 2014
- Program Committee Member — International Conference on Program Comprehension (ICPC) 2014
- Reviewer — New University Researchers Start-up Program of Fonds de Recherche du Québec 2014
- Organizing Committee Member — International Conference on Software Engineering (ICSE) 2014

- Organizing Committee Member — Foundations of Software Engineering (FSE) 2014
- Organizing Committee Member — International Requirements Engineering Conference (RE) 2014
- Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2013
- Reviewer — IEEE Software Reviewer 2013
- Reviewer — Empirical Software Engineering Journal (EMSE) 2013
- Program Committee Member — International Conference on Object Oriented Programming Systems Languages and Applications (OOPSLA) 2013
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2013
- Program Committee Member — International Workshop on Release Engineering (RELENG) 2013
- Organizing Committee Member — International Conference on Software Engineering (ICSE) 2013
- Organizing Committee — International Conference on Automated Software Engineering (ASE) 2013
- Organizing Committee — International Conference on Software Engineering (ICSE) 2013
- Organizing Committee — International Requirements Engineering Conference (RE) 2013
- Organizing Committee — International Conference on Software Maintenance — Early Research Track (ICSM) 2013
- Organizing Committee — Working Conference on Reverse Engineering (WCRE) 2013
- Reviewer — NSERC Discovery 2012
- Reviewer — IEEE Transactions on Software Engineering (TSE) 2012
- Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2012
- Reviewer — ACM Conference on Human Factors in Computing Systems (CHI) 2012
- Program Committee Member — Working Conference on Reverse Engineering (WCRE) 2012
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2012
- Program Committee Member — International Conference on Program Comprehension (ICPC) 2012
- Program Committee Member — Search-Driven Development: Users, Infrastructure, Tools and Evaluation (SUITE @ ICSE) 2012

- Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2011
- Reviewer — IEEE Transactions on Software Engineering (TSE) 2011
- Reviewer — IEEE Software 2011
- Reviewer — Empirical Software Engineering Journal 2011
- Program Committee Member — Working Conference on Reverse Engineering (WCRE) 2011
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2011
- Program Committee Member — Symposium on the Foundations of Software Engineering — New Ideas Track (ESEC/FSE) 2011
- Program Committee Member — International Conference on Software Maintenance — Early Research Track (ICSM) 2011
- Program Committee Member — Search-Driven Development: Users, Infrastructure, Tools and Evaluation (SUITE @ ICSE) 2011
- Reviewer — ACM Symposium on User Interface Software and Technology (UIST) 2011
- Reviewer — ACM Conference on Human Factors in Computing Systems (CHI) 2011
- Program Committee Member — International Conference on Program Comprehension (ICPC) 2011
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2011
- Workshop Organizer — International Workshop on Recommendation Systems for Software Engineering (RSSE @ ICSE) 2010
- Reviewer — IEEE Trans. on Systems, Man, and Cybernetics (SMC) 2010
- Reviewer — ACM Conference on Human Factors in Computing Systems (CHI) 2010
- Reviewer — International Conference on Aspect-Oriented Software Development (AOSD) 2010
- Program Committee Member — Working Conference on Mining Software Repositories (MSR) 2010
- Program Committee Member — Search-Driven Development: Users, Infrastructure, Tools and Evaluation (SUITE @ ICSE) 2010
- Program Committee Member — International Workshop on Knowledge Collaboration in Software Development (KCSO) 2009
- Program Committee Member — Search-Driven Development: Users, Infrastructure, Tools and Evaluation (SUITE @ ICSE) 2009
- Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2009

- Reviewer — ACM Symposium on User Interface Software and Technology (UIST) 2009
  - Jury Member — Mining Software Repositories Challenge 2009
  - Reviewer — Software: Practice and Experience (SPE) 2009
  - Reviewer — ACM Transactions on Software Engineering and Methodology (TOSEM) 2008
  - Reviewer — IEEE Software 2008
  - Reviewer — Automated Software Engineering Journal 2007
- University of British Columbia — Department of Computer Science
- Chair, Industrial Partnership Committee 2020
  - Chair, Industrial Partnership Committee 2019
  - Academic Coordinator, Digital Supercluster — Capacity Building Initiative 2019
  - Chair, Industrial Partnership Committee 2018
  - Chair, Computing Committee 2017
  - Strategic Planning Committee 2017
  - Chair, Computing Committee 2016
  - Faculty Affairs Committee 2015
- University of Waterloo — School of Computer Science
- Commons Committee 2014
  - CEMC Workshop in Computer Science for Young Women (half-day session on app development using AppInventor) 2013
  - CS4U Presenter 2013
  - Commons Committee 2013
  - CEMC Workshop in Computer Science for Young Women (half-day session on app development using TouchDevelop) 2012
  - Undergraduate Recruitment 2012
  - March Break Open House Lab Tour Organizer (2012)
  - CS 697 - Graduate Unhandbook panel
  - Undergraduate Recruitment 2011
  - March Break Open House Lab Tour Organizer (2011)
  - Undergraduate Recruitment 2010
  - Fall Open House Lab Tour Organizer (2010)
- University of Calgary — Department of Computer Science
- Hiring Committee 2006
  - Vice-President (Social), Computer Science Graduate Student's Association 2005

- New Graduate Student Orientation Co-ordinator 2005

University of British Columbia — Department of Computer Science

- Vice-President (Social), Computer Science Graduate Student's Association 2004
- New Graduate Student Orientation Co-ordinator 2004
- Student Volunteer — Window on the World Conference Newspaper, ICSE-25, Portland, OR, USA 2003

University of Waterloo — Centre for Teaching Excellence

- CTE663: Open Classroom November 2011
- CTE601: Instructional Skills Workshop (3 days) April 2011
- CTE639: Qualitative Research Design December 2010
- CTE642: Course Design Fundamentals October 2010
- CTE906: Successful Classroom September 2010
- CTE907: Graduate Teaching/Supervision September 2010

University of Waterloo — Other Training

- TCPS2: Course on Research Ethics (CORE) November 2012
- SO1038: Emergency First Aid December 2010
- SO1081: Workplace Violence - Awareness October 2010
- SO1001: Staff Safety Orientation October 2010

STUDENTS

Postdoc

- 2020-Present: Shaiful Chowdhury Ongoing
- 2016-2017: Xin Xia (w/ Murphy) Faculty, Monash U.
- 2014-2015: Cheng Zhang (w/ Godfrey) N/A
- 2014-2015: Haroon Malik (w/ Godfrey) Faculty, Marshall U.
- 2012-2013: Hadi Hemmanti (w/ Godfrey) Faculty, U. of Calgary

PhD

- 2018-Present: Nick Bradley (Spring 2023)
- 2017-Present: Nico Ritschel (w/ Garcia) (Spring 2022)
- 2016-2019: Quinn Hanam (w/ Mesbah) On Leave @ Amazon
- 2012-2017: Laura Inozemtseva Ghost Automation
- 2012-2014: Olga Baysal (w/ Godfrey) Faculty, Carleton U.

Masters of Science / Mathematics / Engineering

- 2020-2022: Syed Ishtiaque Ahmad (Spring 2022)
- 2019-2021: Lucas Zamprogno (Spring 2021)
- 2017-2019: Xinhong Liu Amazon

- 2017-2019: Jan Pilzer Amazon
- 2017-2019: Anna Scholtz Mozilla
- 2017-2019: Felix Grund Atlassian
- 2016-2018: Rodrigo Arajo Hack Capital
- 2016-2018: Nick Bradley UBC PhD
- 2014-2016: Adriaan Labuschagne N/A
- 2012-2014: Quinn Hanam (w/ Tan) UBC PhD
- 2012-2014: Siddharth Subramanian National Instruments
- 2012-2014: Divam Jain (w/ Lam) Google
- 2011-2013: Laura Inozemtseva Ghost Automation
- 2011-2013: Abdullah El-Sayed Waveline Media
- 2010-2012: Kimiisa Oshikoji Symantec

Research Essay Masters of Mathematics

- 2013-2014: Ravi Chandra Malleboina BlackBerry
- 2013-2014: S Ashar Ghani Bentley CAD

Undergraduate Research Assistants

- 2019: Braxton Hall UBC
- 2018: Annie Wang UBC
- 2017: Lucas Zamprogno UBC

LEGAL  
CONSULTING

- 2018: Andrew Payne vs. FansUnite Media Inc.
- 2018: Atlantis Services, Inc. vs. Asigra, Inc.
- 2017: MPC Group, Inc. vs. Pacific Coast Information Systems Ltd.
- 2015: Nexus Solutions, Inc. vs. Limesoft, Inc.

Last Revised: October 28, 2020