

# Amy J. Ko, Ph.D.

curriculum vita

## Associate Professor

The Information School  
University of Washington, Seattle

## Education

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- 2008    **Doctorate in Human-Computer Interaction**  
Carnegie Mellon University  
*Asking and Answering Questions about the Causes of Software Behaviors*  
Committee: Brad Myers (CMU, Chair), Bonnie John (CMU), Jonathan Aldrich (CMU), Gail Murphy (UBC)
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- 2002    **Honors Bachelor of Science in Computer Science and Psychology**  
Oregon State University  
*Individual Differences in Programming, Testing, and Debugging in a Statistical End-User Programming Environment*  
Committee: Margaret Burnett (Computer Science) and Bob Uttl (Psychology)

## Academic Appointments

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- 2014 - **Associate Professor**  
*present*    University of Washington, Seattle  
The Information School  
Paul G. Allen School of Computer Science & Engineering (courtesy)
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- 2008 - **Assistant Professor**  
2014    University of Washington, Seattle  
The Information School  
Paul G. Allen School of Computer Science & Engineering (courtesy)
- 
- 2002 - **Graduate Research Assistant**  
2008    Carnegie Mellon University  
Human-Computer Interaction Institute
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- 1999 - **Undergraduate Research Assistant**  
2002    Oregon State University  
Computer Science

# Professional Experience

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2015 - **Chief Scientist**  
*present* AnswerDash, Inc.

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2013 - **Chief Technology Officer and Co-founder**  
2015 AnswerDash, Inc.

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2006 **Research Intern**  
Microsoft Research, Redmond, WA

# Honors, Awards, and Recognitions

## Most influential paper awards

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2018 **Debugging Reinvented: Asking and Answering Why and Why Not Questions about Program Behavior**  
ACM/IEEE ICSE, *Most influential paper award*

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2014 **Six Learning Barriers in End-User Programming Systems**  
IEEE VL/HCC, *Most influential paper award*

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2013 **Development and Evaluation of a Model of Programming Errors**  
IEEE VL/HCC, *Most influential paper nominee*

## Best paper awards

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2018 **On Use of Theory in Computing Education Research**  
ACM ICER, *John Henry best paper award*

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2018 **Empowering Families Facing English Literacy Challenges to Jointly Engage in Computer Programming**  
ACM CHI, *Best paper honorable mention*

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2015 **From User-Centered Design to Adoption-Centered Design: A Case Study of a Research System Becoming a Product**  
ACM CHI, *Best paper*

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2013 **Interactive Record/Replay for Web Application Debugging**  
ACM UIST, *Best paper honorable mention*

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|------|--|
| 2013 | <b>In-Game Assessments Increase Novice Programmers' Engagement and Learning Efficiency</b><br><i>ACM ICER, John Henry best paper award</i>   |
| 2010 | <b>Cleanroom: Edit-Time Error Detection with the Uniqueness Heuristic</b><br><i>IEEE VL/HCC, Best paper award</i>  |
| 2010 | <b>How Power Users Help and Hinder Open Bug Reporting</b><br><i>ACM CHI, Best paper honorable mention</i>  |
| 2008 | <b>Debugging Reinvented: Asking and Answering Why and Why Not Questions about Program Behavior</b><br><i>ACM/IEEE ICSE, Best paper award</i>   |
| 2005 | <b>Examining Task Engagement in Sensor-Based Statistical Models of Human Interruptibility</b><br><i>ACM CHI, Best paper award</i>  |
| 2005 | <b>Eliciting Design Requirements for Maintenance-Oriented IDEs: A Detailed Study of Corrective and Perfective Maintenance Tasks</b><br><i>ACM/IEEE ICSE, Distinguished paper award</i> |
| 2003 | <b><i>Development and Evaluation of a Model of Programming Errors</i></b><br><i>IEEE VL/HCC, Best paper award</i>  |

## Honors and Recognitions

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|----------------|---|
| 2016 -<br>2018 | <b>ACM SIGCHI Exceptional Reviewer (UIST, CHI)</b>  |
| 2014           | <b>UW Presidential Entrepreneurial Faculty Fellow</b>   |
| 2010           | <b>National Science Foundation CAREER award</b>   |
| 2004           | <b>National Science Foundation Graduate Research Fellowship</b>   |
| 2004           | <b>National Defense Science &amp; Engineering Graduate Fellowship</b>   |
| 2001           | <b>CRA Outstanding Undergraduate, Honorable Mention</b>   |
| 2001           | <b>Oregon State University Waldo-Cummings Outstanding Student Award</b><br>Top 5 undergraduate of 5,000 in junior class   |
| 2000           | <b>ACM Student Chapter Excellence Award for School Service</b>  |
| 1999           | <b>Oregon State University Waldo-Cummings Outstanding Student Award</b><br>Top 5 undergraduate of 5,000 in freshman class |

# Funding

I primarily raise funding from the National Science Foundation and industry.

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|----------------|--|
| 2019 -<br>2022 | <b>Formal Verification of Accessibility</b><br>\$738,125, National Science Foundation, award 1836813<br>Michael Ernst (PI), Amy J. Ko (Co-PI), Jennifer Mankoff (Co-PI), Zach Tatlock (Co-PI)<br><i>New techniques to formally verify a range of accessibility properties of web applications.</i>   |
| 2017 -<br>2021 | <b>Programming Strategies</b><br>\$1,199,555, National Science Foundation, award 1703304<br>Thomas LaToza (PI, George Mason University), Amy J. Ko (Co-PI)<br><i>A new science of programming strategies.</i>  |
| 2017 -<br>2020 | <b>Automatically Synthesizing Valid, Personalized, Formative Assessments of CS1 Concepts</b><br>\$549,857, National Science Foundation, award 1735123<br>Amy J. Ko (PI), Min Li (Co-PI)<br><i>A new paradigm for intelligent tutoring of programming.</i>  |
| 2017           | <b>Adobe Innovation Gift</b><br>\$12,000, Adobe<br>Amy J. Ko (PI)<br><i>Gift to support the Code &amp; Cognition Lab.</i>  |
| 2015 -<br>2020 | <b>AccessComputing</b><br>\$3,797,990, National Science Foundation, award 1539179<br>Richard Ladner (PI, University of Washington), Sheryl Burgstahler (Co-PI), Amy J. Ko (Co-PI), Jacob O. Wobbrock (Co-PI)<br><i>Increases access to computing for students with disabilities.</i>   |
| 2013 -<br>2017 | <b>Variations to Support Exploratory Programming</b><br>\$2,999,991, National Science Foundation, award 1314399<br>Brad Myers (PI, Carnegie Mellon University), Amy J. Ko (Co-PI), Margaret Burnett (Co-PI, Oregon State University), Martin Erwig (Co-PI, Oregon State University), Anita Sarma (Co-PI, University of Nebraska, Lincoln), Gregg Rothermel (Co-PI, University of Nebraska, Lincoln)<br><i>New theory, tools, and techniques for supporting multiple versions and variations of programs.</i> |
| 2012 -<br>2015 | <b>Computing Education through Collaborative Debugging</b><br>\$599,999, National Science Foundation, award 1240786<br>Amy J. Ko (PI), Margaret Burnett (Co-PI, Oregon State University), Catherine Law (Co-PI, Oregon State University)<br><i>Debugging puzzle games as a new method for engaging, efficient learning of computer programming.</i>  |
| 2010 -<br>2014 | <b>CAREER: Enabling and Exploiting Evidence-Based Bug Triage</b><br>\$592,456, National Science Foundation, award 1153625<br>Amy J. Ko (PI)<br><i>Studies and tools for supporting analyzing and prioritizing bug reports.</i>   |

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| 2013 -<br>2014 | <b>W Fund Early Stage Capital Investment</b><br>\$500,000, W Fund<br>Jacob O. Wobbrock (CEO) and Amy J. Ko (CTO)<br><i>Gap fund to support the commercialization of the LemonAid research project.</i>  |
| 2013 -<br>2014 | <b>Mobile/Social Debugging Games for Computing Education</b><br>\$25,000, Microsoft Research<br>Amy J. Ko (PI)<br><i>Gift to support the Gidget research project.</i>   |
| 2012 -<br>2013 | <b>Selection-Based Contextual Help in the Wild</b><br>\$47,359, Google Faculty Research Award<br>Amy J. Ko (PI)<br><i>Gift to support the LemonAid research project.</i>  |
| 2012 -<br>2013 | <b>Automatic, Individualized Instructional Feedback to Improve Learning in an Online Programming Game</b><br>\$32,122, University of Washington, Royalty Research Fund<br>Amy J. Ko (PI)<br><i>Early stage internal grant to support Gidget.</i>                        |
| 2012           | <b>Chime: Bringing Crowdsourced Contextual Help to the Masses</b><br>\$500,000 University of Washington Center for Commercialization<br>Jacob O. Wobbrock (PI) and Amy J. Ko (Co-PI)<br><i>Early stage internal grant to support the commercialization of LemonAid.</i> |
| 2010 -<br>2011 | <b>Software Developer Help Seeking on the Web</b><br>\$6,200, Microsoft<br>Amy J. Ko (PI)<br><i>Gift to support research on developer help seeking.</i>   |

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## Publications

Authorship order indicates the degree intellectual contribution to the work, except for doctoral student work, where I place myself last (or second to last when there are co-advisors). Throughout, I include Google Scholar citation counts as of April 2019, represented in rounded multiples of 5 by the symbol “.”.

## Archival Peer-Reviewed Conference Papers

Unlike most of academia, premiere conferences in Human-Computer Interaction, Software Engineering, and Computing Education are considered high quality, selective venues for archival research. These conferences exceed many journals in their selectivity, visibility, and impact. My primary conferences include:

|        |   |
|--------|---|
| CHI    | ACM SIGCHI Conference on Human Factors in Computing Systems<br>A top HCI conference, and the largest.                                 |
| ICER   | ACM International Computing Education Research Conference<br>The top research conference on computing education.                      |
| SIGCSE | ACM SIGCSE Technical Symposium on Computer Science Education<br>The largest CS education conference. I publish in the research track. |
| ICSE   | ACM/IEEE International Conference on Software Engineering<br>A top software engineering conference, and the largest.                  |
| VL/HCC | IEEE Symposium on Visual Languages and Human-Centric Computing<br>A second-tier conference focused on human aspects of programming.   |
| UIST   | ACM Symposium on User Interface Software and Technology<br>The top technical HCI conference.  |

## 2019

### C.58 **An Item Response Theory Evaluation of a Language-Independent CS1 Knowledge Assessment**

Benjamin Xie, Matthew J. Davidson, Min Li and [Amy J. Ko](#)  
*SIGCSE (Research Track)*

### C.57 **Teaching Accessibility: A Design Exploration of Faculty Professional Development at Scale**

Saba Kawas, Laura Vonessen, and [Amy J. Ko](#)  
*SIGCSE (Research Track)*

### C.56 **Teaching Explicit Programming Strategies to Adolescents**

[Amy J. Ko](#), Thomas LaToza, Stephen Hull, Ellen Ko, William Kwok, Jane Quichocho, Harshitha Akkaraju and Rishin Pandit  
*SIGCSE (Research Track)*

## 2018

### C.55 **Who Teaches Accessibility? A Survey of U.S. Computing Faculty** ▪

Kristen Shinohara, Saba Kawas, [Amy J. Ko](#), and Richard E. Ladner  
*SIGCSE (Research Track)*

### C.54 **An Explicit Strategy to Scaffold Novice Program Tracing** ▪

Benjamin Xie, Greg Nelson, and [Amy J. Ko](#)  
*SIGCSE (Research Track)*

|             |  |                                     |
|-------------|--|-------------------------------------|
| C.53        | <b>Informal Mentoring of Adolescents about Computing: Relationships, Roles, Qualities, and Impact</b><br><u>Amy J. Ko</u> , Leanne Hwa, Katie Davis, and Jason Yip<br><i>SIGCSE (Research Track)</i>   |                                     |
| C.52        | <b>Empowering Families Facing English Literacy Challenges to Jointly Engage in Computer Programming</b><br>Rahul Banerjee, Jason C. Yip, <u>Amy J. Ko</u> , Caroline Pit, Kiley R. Sobel, Kung Lee, Leanne Liu, Meng Wang, and Zoran Popovic<br><i>CHI</i> | ★ Best paper honorable mention<br>▪ |
| C.51        | <b>Rewire: Interface Design Assistance from Examples</b><br>Amanda Swearngin, Wil Li, Mira Dontcheva, Morgan Dixon, and <u>Amy J. Ko</u><br><i>CHI</i>   | ▪                                   |
| C.50        | <b>Experiences of Computer Science Transfer Students</b><br>Harrison Kwik, Benjamin Xie, and <u>Amy J. Ko</u><br><i>ICER</i>   |                                     |
| C.49        | <b>Pedagogical Content Knowledge for Teaching Inclusive Design</b><br>Alannah Oleson, Christopher Mendez, Zoe Steine-Hanson, Claudia Hilderbrand, Christopher Perdriau, Margaret Burnett, and <u>Amy J. Ko</u><br><i>ICER</i>                              | ▪                                   |
| C.48        | <b>On Use of Theory in Computing Education Research</b><br>Greg L. Nelson and <u>Amy J. Ko</u><br><i>ICER</i>  | ★ Best paper<br>▪                   |
| <b>2017</b> |  |                                     |
| C.47        | <b>A Pedagogical Analysis of Online Coding Tutorials</b><br>Ada Kim and <u>Amy J. Ko</u><br><i>SIGCSE (Research Track)</i>   | ***                                 |
| C.46        | <b>A Three-Year Participant Observation of Software Startup Software Evolution</b><br><u>Amy J. Ko</u><br><i>ICSE (Software Engineering in Practice Track)</i>   | ▪                                   |
| C.45        | <b>Genie: Input Retargeting on the Web through Command Reverse Engineering</b><br>Amanda Swearngin, <u>Amy J. Ko</u> , and James Fogarty<br><i>CHI</i>   | ▪                                   |
| C.44        | <b>Computing Mentorship in a Software Boomtown: Relationships to Adolescent Interest and Beliefs</b><br><u>Amy J. Ko</u> and Katie Davis<br><i>ICER</i>  | **                                  |

|                      |  |                       |
|----------------------|--|-----------------------|
| C.43                 | <b>Barriers Faced by Coding Bootcamp Students</b><br>Kyle Thayer and <i>Amy J. Ko</i><br><i>ICER</i>   | ..                    |
| C.42                 | <b>Comprehension First: Evaluating a Novel Pedagogy and Tutoring System for Program Tracing in CS1</b><br>Greg Nelson, Benjamin Xie, and <i>Amy J. Ko</i><br><i>ICER</i>   | *****                 |
| C.41                 | <b>Predicting Abandonment in Online Coding Tutorials</b><br>An Yan, Michael J. Lee, and <i>Amy J. Ko</i><br><i>VL/HCC</i>  | .                     |
| 2016                 |  |                       |
| C.40                 | <b>Programming, Problem Solving, and Self-Awareness: Effects of Explicit Guidance</b><br>Dastyni Loksa, <i>Amy J. Ko</i> , William Jernigan, Alannah Oleson, Chris Mendez, Margaret M. Burnett<br><i>CHI</i>   | *****                 |
| C.39                 | <b>The Role of Self-Regulation in Programming Problem Solving Process and Success</b><br>Dastyni Loksa and <i>Amy J. Ko</i><br><i>ICER</i>   | ..                    |
| 2015 – On sabbatical |  |                       |
| C.38                 | <b>From User-Centered Design to Adoption-Centered Design: A Case Study of a Research System Becoming a Product</b><br>Parmit K. Chilana, <i>Amy J. Ko</i> , and Jacob O. Wobbrock<br><i>ICER</i>   | ★ best paper<br>***** |
| C.37                 | <b>What Makes a Great Software Engineer?</b><br>Paul Li, <i>Amy J. Ko</i> , and Jiamin Zhu<br><i>ICSE</i>  | *****                 |
| C.36                 | <b>Comparing the Effectiveness of Online Learning Approaches on CS1 Learning Outcomes</b><br>Michael J. Lee and <i>Amy J. Ko</i><br><i>ICER</i>  | *****                 |
| C.35                 | <b>A Principled Evaluation for a Principled Idea Garden</b><br>William Jernigan, Amber Horvath, Michael J. Lee, Margaret M. Burnett, Taylor Cuiilty, Sandeep Kuttal, Anicia N. Peters, Irwin Kwan, Faezeh Bahmani, and <i>Amy J. Ko</i><br><i>VL/HCC</i> | ***                   |



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C.34 **Explaining Visual Changes in Web Interfaces** \*\*\*\*  
Brian Burg, [Amy J. Ko](#), and Michael D. Ernst  
*UIST*

2014 – On leave at AnswerDash, tenured and promoted

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C.33 **Challenging Stereotypes and Changing Attitudes: The Effect of a Brief Programming Encounter on Adults' Attitudes toward Programming** \*\*\*\*  
Polina Charters, Michael J. Lee, [Amy J. Ko](#), and Dastyni Loksa  
*SIGCSE*

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C.32 **Principles of a Debugging-First Puzzle Game for Computing Education** .....

Michael J. Lee, Faezeh Bahmani, Irwin Kwan, Jillian LaFerte, Polina Charters, Amber Horvath, Fanny Luor, Jill Cao, Catherine Law, Michael Beswetherick, Sheridan Long, Margaret M. Burnett, and [Amy J. Ko](#)  
*VL/HCC*

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C.31 **A Multi-Site Field Study of Crowdsourced Contextual Help: Usage and Perspectives of End-Users and Software Teams** ...  
Parmit K. Chilana, [Amy J. Ko](#), and Jacob O. Wobbrock  
*CHI*

2013 – On leave at AnswerDash

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C.30 **In-Game Assessments Increase Novice Programmers' Engagement and Learning Efficiency** ★ Best paper .....

Michael J. Lee, Amy J. Ko, and Irwin Kwan  
*ICER*

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C.29 **Interactive Record/Replay for Web Application Debugging** ★ Best paper honorable mention .....

Brian Burg, Richard Bailey, [Amy J. Ko](#), and Michael D. Ernst  
*UIST*

2012

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C.28 **Is This What You Meant? Promoting Listening on the Web with Reflect** .....

Travis Kriplean, Michael Toomim, Jonathan Morgan, Alan Borning, and Amy J. Ko  
*CHI*

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C.27 **LemonAid: Selection-Based Crowdsourced Contextual Help for Web Applications** .....

Parmit K. Chilana, Amy J. Ko, and Jacob O. Wobbrock  
*CHI*

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## 2011

- C.26 **Design, Discussion, and Dissent in Open Bug Reports** .....  
Amy J. Ko and Parmit K. Chilana  
*iConference*
- C.25 **Characterizing the Differences Between Pre- and Post- release Versions of Software** .....  
Paul L. Li, Ryan Kivett, Zhiyuan Zhan, Sung-eok Jeon, Nachiappan Nagappan, Brendan Murphy, and Amy J. Ko  
*ICSE (Software Engineering in Practice Track)*
- C.24 **FeedLack Detects Missing Feedback in Web Applications** ..  
Amy J. Ko and Xing Zhang  
*CHI*
- C.23 **Personifying Programming Tool Feedback Improves Novice Programmers' Learning** .....  
Michael J. Lee and Amy J. Ko  
*ICER*

## 2010

- C.22 **Understanding Usability Practices in Complex Domains: Implications for Training the Next Generation of Usability Professionals** .....  
Parmit K. Chilana, Jacob O. Wobbrock, and Amy J. Ko  
*CHI*
- C.21 **How Power Users Help and Hinder Open Bug Reporting** ★ best paper nominee .....  
Amy J. Ko and Parmit K. Chilana  
*CHI*
- C.20 **Cleanroom: Edit-Time Error Detection with the Uniqueness Heuristic** ★ best paper ..  
Amy J. Ko and Jacob O. Wobbrock  
*VL/HCC*
- C.19 **Gestalt: Integrated Support for Implementation and Analysis in Machine Learning Processes** .....  
Kayer Patel, Naomi Bancroft, Steven M. Drucker, James Fogarty, *Amy J. Ko*, and James A. Landay  
*UIST*

## 2009

|      |  |       |
|------|--|-------|
| C.18 | <b>Fixing the Program My Computer Learned: Barriers for End Users, Challenges for the Machine</b><br>Todd Kuleza, Weng-Keen Wong, Simone Stumpf, Stephen Perona, Rachel White, Margaret M. Burnett, Ian Oberst, and <u>Amy J. Ko</u><br><i>International Conference on Intelligent User Interfaces (IUI)</i> | ..... |
|------|--|-------|

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|------|---|----------------|
| C.17 | <b>Finding Causes of Program Output with the Java Whyline</b><br><u>Amy J. Ko</u> and Brad A. Myers<br><i>CHI</i> | .....<br>..... |
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|------|--|------|
| C.16 | <b>Attitudes and Self-Efficacy in Young Adults' Computing Autobiographies</b><br><u>Amy J. Ko</u><br><i>VL/HCC</i> | .... |
|------|--|------|

2008 – 1st year at UW

|      |   |   |
|------|---|---|
| C.15 | <b>Debugging Reinvented: Asking and Answering Why and Why Not Questions about Program Behavior</b><br><u>Amy J. Ko</u> and Brad A. Myers<br><i>ICSE</i> | ★ best paper<br>★ most influential paper<br><br>.....<br>.....<br>..... |
|------|---|---|

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|------|--|----------------|
| C.14 | <b>How Designers Design and Program Interactive Behaviors</b><br>Brad A. Myers, Sun Young Park, Yoko Nakano, Greg Mueller, and <u>Amy J. Ko</u><br><i>VL/HCC</i> | .....<br>..... |
|------|--|----------------|

2007

|      |   |                                  |
|------|---|----------------------------------|
| C.13 | <b>Let's Go to the Whiteboard: How and Why Software Developers Draw Code</b><br>Mauro Cherubini, Gina Venolia, Rob DeLine, and <u>Amy J. Ko</u><br><i>CHI</i> | .....<br>.....<br>.....<br>..... |
|------|---|----------------------------------|

|      |   |   |
|------|---|---|
| C.12 | <b>Information Needs in Collocated Software Development Teams</b><br><u>Amy J. Ko</u> , Rob DeLine, and Gina Venolia<br><i>ICSE</i> | .....<br>.....<br>.....<br>.....<br>..... |
|------|---|---|

2006

|      |  |       |
|------|--|-------|
| C.11 | <b>Barista: An Implementation Framework for Enabling New Tools, Interaction Techniques and Views for Code Editors</b><br>Amy J. Ko and Brad A. Myers<br><i>CHI</i> | ..... |
|------|--|-------|

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| C.10 | <b>Answering Why and Why Not Questions in User Interfaces</b><br>Brad A. Myers, David Weitzman, <a href="#">Amy J. Ko</a> , and Duen Horng Chau<br><i>CHI</i>  | .....<br>..  |
| C.9  | <b>A Linguistic Analysis of How People Describe Software Problems in Bug Reports</b><br><a href="#">Amy J. Ko</a> , Brad A. Myers, and Duen Horng Chau<br><i>VL/HCC</i>  | .....<br>.   |
| 2005 |  |  |
| C.8  | <b>Eliciting Design Requirements for Maintenance-Oriented IDEs: A Detailed Study of Corrective and Perfective Maintenance Tasks</b><br>Amy J. Ko, Htet Htet Aung, and Brad A. Myers<br><i>ICSE</i>                           | ★ best paper<br>.....<br>.....<br>.....                            |
| C.7  | <b>Examining Task Engagement in Sensor-Based Statistical Models of Human Interruptibility</b><br>James Fogarty, <a href="#">Amy J. Ko</a> , Htet Htet Aung, Elspeth Golden, Karen P. Tang, and Scott E. Hudson<br><i>CHI</i> | ★ best paper<br>.....<br>.....                                     |
| C.6  | <b>Citrus: A Language and Toolkit for Simplifying the Creation of Structured Editors for Code and Data</b><br>Amy J. Ko and Brad A. Myers<br><i>UIST</i>   | ....   |
| 2004 |  |  |
| C.6  | <b>Designing the Whyline: A Debugging Interface for Asking Questions About Program Failures</b><br><a href="#">Amy J. Ko</a> and Brad A. Myers<br><i>CHI</i>   | .....<br>.....<br>.....<br>.....<br>..                             |
| C.5  | <b>Six Learning Barriers in End-User Programming Systems</b><br><a href="#">Amy J. Ko</a> , Brad A. Myers, and Htet Htet Aung<br><i>VL/HCC</i>   | ★ most influential paper<br>.....<br>.....<br>.....<br>.....<br>.. |
| 2003 |  |  |
| C.4  | <b>Individual Differences in Program Comprehension Strategies in Unfamiliar Environments</b><br><a href="#">Amy J. Ko</a> and Bob Uttl<br><i>IEEE International Workshop on Program Comprehension (IWPC)</i>                 | .....  |

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C.3 **Development and Evaluation of a Model of Programming Errors** ★ best paper  
Amy J. Ko and Brad A. Myers ★ most  
VL/HCC influential paper  
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2002 – first year at CMU

2001 – last year at OSU

C.2 **Visually Testing Recursive Programs in Spreadsheet Languages** \*\*\*  
Margaret M. Burnett, Bing Ren, [Amy J. Ko](#), Curtis Cook, and Gregg Rothermel  
VL/HCC

2000

C.1 **Using the Cognitive Walkthrough to Improve the Design of a  
Visual Programming Experiment** \*\*\*  
Thomas R.G. Green, Margaret M. Burnett, and [Amy J. Ko](#)  
VL/HCC

## Journal Articles

Journal articles, while still highly regarded in computing, are still not a primary venue for most researchers, and often play the role of extended versions of already robust conference papers. My journals are a mix of extensions of conference papers and “journal-first” submissions. I have recently shifted to a balance of conference and journal-first submissions.

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J.12 **A Systematic Investigation of Replications in Computing  
Education Research**  
Qiang Hao, David Smith, Naitra Iriumi, Michael Tsikerdekis, and [Amy J. Ko](#) (to appear)  
*ACM Transactions on Computing Education*

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J.11 **What Distinguishes Great Software Engineers?**  
Paul L. Li, Andrew Begel, and [Amy J. Ko](#) (to appear)  
*Empirical Software Engineering Journal*

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J.10 **A Theory of Robust API Knowledge**  
Kyle Thayer and [Amy J. Ko](#) (in review, 1st major revisions)  
*ACM Transactions on Computing Education*

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J.9 **Explicit Programming Strategies**  
Thomas D. LaToza, Maryam Arab, Dastyni Loksa, and [Amy J. Ko](#) (in review)  
*Empirical Software Engineering Journal*

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|-----|---|---|
| J.8 | <b>A Theory of Instruction for Introductory Programming Skills</b><br>Benjamin Xie, Dastyni Loksa, Greg L. Nelson, Matthew J. Davidson, Dongsheng Dong, Harrison Kwik, Alex Hui Tan, Leanne Hwa, Min Li, and <u>Amy J. Ko</u> (2019)<br><i>Computer Science Education</i>   |   |
| J.7 | <b>A Practical Guide to Controlled Experiments of Software Engineering Tools with Human Participants</b><br><u>Amy J. Ko</u> , Thomas LaToza, and Margaret M. Burnett (2013)<br><i>Empirical Software Engineering</i>   | .....<br>..                               |
| J.6 | <b>The State of the Art in End-User Software Engineering</b><br><u>Amy J. Ko</u> , Robin Abraham, Laura Beckwith, Alan Blackwell, Margaret M. Burnett, Martin Erwig, Chris Scaffidi, Joseph Lawrance, Henry Lieberman, Brad A. Myers, Mary Beth Rosson, Gregg Rothermel, Mary Shaw, and Susan Wiedenbeck (2011)<br><i>ACM Computing Surveys</i> , 43(3) | .....<br>.....<br>.....<br>.....<br>..    |
| J.5 | <b>Why-Oriented End-User Debugging of Naive Bayes Text Classification</b><br>Todd Kulesza, Simone Stumpf, Weng-Keen Wong, Margaret M. Burnett, Stephen Perona, <u>Amy J. Ko</u> , and Ian Oberst (2011)<br><i>ACM Transactions on Interactive Intelligent Systems</i> , 1(1)  | .....                                     |
| J.4 | <b>Extracting and Answering Why and Why Not Questions about Java Program Output</b><br><u>Amy J. Ko</u> and Brad A. Myers (2010)<br><i>ACM Transactions on Software Engineering and Methodology</i> , 22(2)   | .....                                     |
| J.3 | <b>An Exploratory Study of How Developers Seek, Relate, and Collect Relevant Information during Software Maintenance Tasks</b><br><u>Amy J. Ko</u> , Brad A. Myers, Michael J. Coblenz, and Htet Htet Aung (2006)<br><i>IEEE Transactions on Software Engineering</i> , 32(12)  | .....<br>.....<br>.....<br>.....<br>..... |
| J.2 | <b>A Framework and Methodology for Studying the Causes of Software Errors in Programming Systems</b><br><u>Amy J. Ko</u> and Brad A. Myers (2005)<br><i>Journal of Visual Languages and Computing</i> , 16(1-2)   | .....<br>.....<br>..                      |
| J.1 | <b>Using the Cognitive Walkthrough to Improve the Design of a Visual Programming Experiment</b><br><u>Amy J. Ko</u> , Margaret M. Burnett, Thomas R.G. Green, Karen J. Rothermel, and Curtis R. Cook (2002)<br><i>Journal of Visual Languages and Computing</i> , 13(5)   | ...                                       |

## Short Archival Peer-Reviewed Conference Papers

Some computing conferences allow for “short” submissions, which are just as rigorously peer reviewed, but make smaller contributions. Many of these are smaller projects, further analysis of data sets, or undergraduate research projects.

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|     |  |       |
|-----|--|-------|
| S.8 | <b>Investigating the Role of Purposeful Goals on Novices' Engagement in a Programming Game</b><br>Michael J. Lee and <a href="#">Amy J. Ko</a> (2012)<br>VL/HCC                          | ****  |
| S.7 | <b>Post-Deployment Usability: A Survey of Current Practices</b><br>Parmit K. Chilana, <a href="#">Amy J. Ko</a> , Jacob O. Wobbrock, Tovi Grossman, and George Fitzmaurice (2011)<br>CHI | ***** |
| S.6 | <b>The Role of Conceptual Knowledge in API Usability</b><br><a href="#">Amy J. Ko</a> and Yann Riche (2011)<br>VL/HCC  | ****  |
| S.5 | <b>Understanding Expressions of Unwanted Behaviors in Open Bug Reporting</b><br>Parmit K. Chilana, <a href="#">Amy J. Ko</a> , and Jacob O. Wobbrock (2010)<br>VL/HCC                    | **    |
| S.4 | <b>Designers' Natural Descriptions of Interactive Behaviors</b><br>Sunyoung Park, Brad A. Myers, and <a href="#">Amy J. Ko</a> (2008)<br>VL/HCC  | ***   |
| S.3 | <b>Dimensions Characterizing Programming Feature Usage by Information Workers</b><br>Chris Scaffidi, <a href="#">Amy J. Ko</a> , Brad A. Myers, and Mary Shaw (2006)<br>VL/HCC           | ****  |
| S.2 | <b>Design Requirements for More Flexible Structured Editors from a Study of Programmers' Text Editing</b><br><a href="#">Amy J. Ko</a> , Htet Htet Aung, and Brad A. Myers (2005)<br>CHI | ***** |
| S.1 | <b>Using Objects of Measurement to Detect Spreadsheet Errors</b><br>Michael J. Coblenz, <a href="#">Amy J. Ko</a> , and Brad A. Myers (2005)<br>VL/HCC                                   | ***** |

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## Full Archival Peer-Reviewed Workshop Papers

In some communities, workshops peer review and archive workshop papers alongside the main conference. These are less prestigious but still considered peer-reviewed.

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|     |  |       |
|-----|--|-------|
| W.8 | <b>Cross-Disciplinary Perspectives on Collaborations with Software Engineers</b><br>Paul Luo Li, <a href="#">Amy J. Ko</a> , and Andrew Begel (2017)<br><i>International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)</i>                           | ▪     |
| W.7 | <b>Modeling Programming Problem Solving Through Interactive Worked Examples</b><br>Dastyni Loksa and Amy J. Ko (2017)<br><i>ACM Workshop on Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)</i>  |       |
| W.6 | <b>What is a Programming Language, Really?</b><br><a href="#">Amy J. Ko</a> (2016)<br><i>ACM Workshop on Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)</i>   | ▪     |
| W.5 | <b>Thirty Years of Software Problems in the News</b><br><a href="#">Amy J. Ko</a> , Brian Dosono, and Neeraja Duriseti (2014)<br><i>International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)</i>  | ▪     |
| W.4 | <b>Representations of User Feedback in an Agile, Collocated Software Team</b><br>Michael J. Lee and <a href="#">Amy J. Ko</a> (2012)<br><i>International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)</i>   | ▪     |
| W.3 | <b>A Case Study of Post-Deployment User Feedback Triage</b><br><a href="#">Amy J. Ko</a> , Michael J. Lee, Valentina Ferarri, Stephen Ip, and Casey Tran (2011)<br><i>International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)</i>                | ***** |
| W.2 | <b>Comparing Bioinformatics Software Development by Computer Scientists and Biologists: An Exploratory Study</b><br>Parmit K. Chilana, Carole Palmer, and <a href="#">Amy J. Ko</a> (2009)<br><i>Workshop on Software Engineering for Computational Science and Engineering.</i> | ***   |
| W.1 | <b>JASPER: An Eclipse Plug-In to Facilitate Software Maintenance Tasks</b>   | ***** |

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Michael J. Coblenz, [Amy J. Ko](#), and Brad A. Myers (2006)  
*Workshop on Eclipse Technology eXchange*, 65-69.

## Archival Non-Peer-Reviewed Conference Papers

Some conference papers are curated rather than peer-reviewed, where program chairs provide feedback and select for interesting topics. These are like conventional conference papers in the rest of academia, except that they are archived.

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|      |  |     |
|------|--|-----|
| N.14 | <b>Crowdsourced Q&amp;A-based Contextual Help for Web Applications: Challenges and Opportunities</b><br>Parmit K. Chilana, <a href="#">Amy J. Ko</a> , and Jacob O. Wobbrock (2013)<br><i>CSCW Workshop on Social Media Question Asking</i>  |     |
| N.13 | <b>Designing for a Billion Users: A Case Study of Facebook</b><br>Parmit K. Chilana, Christina Holsberry, Flavio Oliveira, and <a href="#">Amy J. Ko</a> (2012)<br><i>CHI (Case Studies)</i>   | **  |
| N.12 | <b>Mining Whining in Support Forums with Frictionary</b><br><a href="#">Amy J. Ko</a> (2012)<br><i>CHI (alt.chi)</i>   | **  |
| N.11 | <b>Supporting Active Listening and Grounding on the Web through Restatement</b><br>Travis Kriplean, Michael M. Toomim, Jonathan T. Morgan, Alan Borning, and <a href="#">Amy J. Ko</a> (2011)<br><i>ACM Conference on Computer Supported Cooperative Work (CSCW), Horizons Track</i> | *** |
| N.10 | <b>Designing Crowdsourced, Context-Sensitive Help for Web Applications</b><br>Parmit K. Chilana, <a href="#">Amy J. Ko</a> , and Jacob O. Wobbrock (2011)<br><i>Workshop on Crowdsourcing and Human Computation</i>  |     |
| N.9  | <b>How Do Open Source Developers Talk about Users?</b><br><a href="#">Amy J. Ko</a> and Parmit K. Chilana (2010)<br><i>CHI Workshop on The Future of FLOSS Research and Practice</i>   |     |
| N.8  | <b>Designing Software for Unfamiliar Domains</b><br>Parmit K. Chilana, <a href="#">Amy J. Ko</a> , and Jacob O. Wobbrock (2009)<br><i>Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)</i>  |     |
| N.7  | <b>More Natural End-User Software Engineering</b><br>Brad A. Myers, <a href="#">Amy J. Ko</a> , SunYoung Park, Jeffrey Stylos, Thomas D. LaToza, and Jack Beaton (2008)<br><i>International Workshop on End-User Software Engineering</i>  | *** |

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- N.6 **Source-Level Debugging with the Whyline**  
Amy J. Ko and Brad A. Myers (2008)  
*Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)*
- 
- N.5 **The Role of Science in Supporting Software Development**  
Amy J. Ko (2006)  
*Workshop on Supporting the Social Side of Large-Scale Software Development*
- 
- N.4 **End-User Programming Productivity Tools**  
Amy J. Ko, Brad A. Myers, Michael J. Coblenz, and Jeffrey Stylos (2006)  
*Workshop on End-User Software Engineering*
- 
- N.3 **More Natural and Open User Interface Tools**  
Brad A. Myers and Amy J. Ko (2005)  
*Workshop on the Future of User Interface Design Tools*
- 
- N.2 **Human Factors Affecting Dependability in End-User Programming** \*\*\*\*  
Amy J. Ko and Brad A. Myers (2005)  
*Workshop on End-User Software Engineering*
- 
- N.1 **Studying Development and Debugging To Help Create a Better Programming Environment** \*\*  
Brad A. Myers and Amy J. Ko (2003)  
*Workshop on Perspectives in End User Development*

## Book Chapters

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- B.8 **Why Not to Measure Productivity**  
Amy J. Ko (2019)  
*Rethinking Productivity in Software Engineering (Thomas Zimmermann and Caitlin Sadowski, Eds.)*
- 
- B.7 **Individual, Team, Organization, and Market: Four Lenses of Productivity**  
Amy J. Ko (2019)  
*Rethinking Productivity in Software Engineering (Thomas Zimmermann Caitlin Sadowski, Eds.)*
- 
- B.6 **Human-Centered Methods to Boost Productivity**  
Brad A Myers, Amy J. Ko, Thomas D. LaToza, YoungSeok Yoon (2019)  
*Rethinking Productivity in Software Engineering (Thomas Zimmermann Caitlin Sadowski, Eds.)*
- 
- B.5 **Tools and Environments**  
Lauri Malmi, Ian Utting, and Amy J. Ko (2019)  
*Cambridge Handbook on Computing Education Research (Sally Fincher, Anthony Robin, Eds.)*
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- B.4 Learning Outside the Classroom**  
Andrew Begel and [Amy J. Ko](#) (2019)  
*Cambridge Handbook on Computing Education Research (Sally Fincher, Anthony Robin, Eds.)*
- 
- B.3 A Study Design Process**  
[Amy J. Ko](#) and Sally Fincher (2019)  
*Cambridge Handbook on Computing Education Research (Sally Fincher, Anthony Robin, Eds.), to appear.*
- 
- B.2 The World is Your Test Suite**  
[Amy J. Ko](#) (2016)  
*Perspectives on Data Science for Software Engineering, 1st Edition.*
- 
- B.1 Software Engineering Through Qualitative Methods**  
[Amy J. Ko](#) (2010)  
*Making Software: What Really Works, and Why We Believe It*

## Magazine Articles

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- M.2 New to the Movement: Reflections on the Future of Information Schools from Inspired Junior Faculty**  
Jacob O. Wobbrock, [Amy J. Ko](#), and Julie A. Kientz (2009)  
*Interactions*
- 
- M.1 Natural Programming Languages and Environments**  
Brad A. Myers, John F. Pane, and [Amy J. Ko](#) (2004)  
*Communications of the ACM*

## Whitepapers

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- H.1 The Importance of Computing Education Research**  
Steve Cooper, Jeff Forbes, Armando Fox, Susanne Hambrusch, [Amy J. Ko](#), and Beth Simon (2016)  
*Computing Research Association*
- 

## Patents

I don't explicitly seek out patents, but occasionally a commercial opportunity arises, and patenting is a reasonable way of protecting my intellectual property.

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- 2017 Context- and Activity-Aware Content Selection**  
U.S. Patent No. 9,727,561  
[Amy J. Ko](#) and Victor Medina
-

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2012 **Systems and Methods for Selection-Based Contextual Help Retrieval**  
U.S. Patent No. 9,811,583  
Parmit Chilana, Amy J. Ko, and Jacob O. Wobbrock

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2010 **A Debugging Interface**  
U.S. Patent No. 7,735,066  
Amy J. Ko and Brad A. Myers

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## Keynotes

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2019 **Koli Calling International Conference on Computing Education Research**  
*Topic to be determined*  
Koli, Finland

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2018 **International Conference on Mining Software Repositories +  
IEEE International Conference on Program Comprehension (joint keynote)**  
*Mining the Mind, Minding the Mine: Grand Challenges in Comprehension and Mining*  
Gothenburg, Sweden

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2016 **ACM SIGPLAN Conference on Systems, Programming, Languages and  
Applications: Software for Humanity (SPLASH)**  
*A Human View of Programming Languages*  
Amsterdam, The Netherlands

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2009 **CHOOSE Forum**  
*Where HCI and Software Engineering Meet*  
Bern, Switzerland

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2009 **ACM SIGSOFT India Software Engineering Conference**  
*Asking and Answering Questions about the Causes of Software Behavior*  
Pune, India

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## Invited Talks

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2019 **ETH Zurich, Department of Computer Science**  
Distinguished speaker colloquium  
*Programming: what it is and how to teach it*  
Zurich, Switzerland

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2018 **ACM/IEEE International Conference on Software Engineering (ICSE)**  
Most influential paper award talk  
*Big ideas behind the Whyline*  
Gothenburg, Sweden

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2018 **Stanford University, Department of Computer Science**

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|      |  |
|------|--|
|      | <b>HCI Seminar</b><br><i>Learning to Code: How We Fail, How we Flourish</i><br>Palo Alto, CA   |
| 2017 | <b>University of Michigan</b><br>MISC Seminar<br><i>Learning to Code: How We Fail, How we Flourish</i><br>Ann Arbor, MI                            |
| 2017 | <b>Northwestern University</b><br>CS+X Colloquium<br><i>Learning to Code: How We Fail, How we Flourish</i><br>Evanston, IL                         |
| 2017 | <b>ACM Learning Center Webinar</b><br><i>Three Years in the Startup Trenches: Reflections on People, Product, and Software Evolution</i><br>Online |
| 2017 | <b>Amazon Stackhouse Talks</b><br><i>Three Years in the Startup Trenches</i><br>Seattle, WA  |
| 2015 | <b>ACM Learning Center Webinar</b><br><i>What Makes a Great Software Engineer?</i><br>Online   |
| 2012 | <b>Microsoft</b><br><i>Defect Detection for the Wayward Web</i><br>Redmond, WA   |
| 2011 | <b>Coverity</b><br><i>Defect Detection for the Wayward Web</i><br>San Francisco, CA  |
| 2011 | <b>Massachusetts Institute of Technology</b><br><i>Defect Detection for the Wayward Web</i><br>Cambridge, MA                                       |
| 2011 | <b>UNC Charlotte</b><br><i>Defect Detection for the Wayward Web</i><br>Charlotte, NC   |
| 2010 | <b>IBM T.J. Watson Research Center</b><br><i>Where is the User in Software Evolution?</i><br>Hawthorne, NY   |
| 2009 | <b>IIT Mumbai</b><br><i>Asking and Answering Questions about the Causes of Software Behavior</i><br>Mumbai, India                                  |

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2009 **Intel Research Seattle**  
*Asking and Answering Questions about the Causes of Software Behavior*  
Seattle, WA

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2008 **Accenture**  
*Asking and Answering Questions about the Causes of Software Behavior*  
Chicago, IL

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2008 **SRI International**  
*Asking and Answering Questions about the Causes of Software Behavior*  
Menlo Park, CA

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2008 **Washington University in St. Louis**  
Department of Computer Science  
*Asking and Answering Questions about the Causes of Software Behavior*  
St. Louis, MO

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2006 **IBM T.J. Watson Research Center**  
*Asking and Answering Questions about the Causes of Software Behavior*  
Hawthorne, NY

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2006 **Oregon State University**  
School of EECS Seminar  
*Asking and Answering Questions about the Causes of Software Behavior*  
Corvallis, OR

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2006 **Microsoft**  
Visual Studio User Experience Group  
*Information Needs in Software Development Work*  
Redmond, WA

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2006 **Microsoft Research**  
*Information Needs in Software Development Work*  
Redmond, WA

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2006 **University of British Columbia**  
CS Department  
*Human-Centered Approaches to Software Engineering Research*  
Vancouver, British Columbia

# Teaching

## University of Washington, Seattle

All scores are adjusted combined medians, which attempt to measure students' perceptions of the effectiveness of an instructor's teaching. The scale is from "Very Poor" (0) to "Excellent" (5).

|                    |  |                       |     |
|--------------------|--|-----------------------|-----|
| <i>Spring 2019</i> | <b>Cooperative Software Development</b>                    | <i>36 undergrads</i>  | TBD |
| <i>Winter 2019</i> | <b>User Interface Software and Technology</b><br>HCID 520  | <i>34 masters</i>     | 4.8 |
| <i>Autumn 2018</i> | <b>Intellectual Foundations of Informatics</b><br>INFO 200 | <i>150 undergrads</i> | 4.8 |
| <i>Winter 2018</i> | <b>User Interface Software and Technology</b><br>HCID 520  | <i>33 masters</i>     | 4.8 |
| <i>Winter 2018</i> | <b>Design Methods</b><br>INFO 360                          | <i>35 undergrads</i>  | 4.8 |
| <i>Autumn 2017</i> | <b>Design Methods</b><br>INFO 360                          | <i>36 undergrads</i>  | 4.5 |
| <i>Spring 2017</i> | <b>Cooperative Software Development</b><br>INFO 461        | <i>35 undergrads</i>  | 4.8 |
| <i>Winter 2017</i> | <b>Design Thinking</b><br>INFO 360                         | <i>35 undergrads</i>  | 5.0 |
| <i>Fall 2016</i>   | <b>Design Thinking</b><br>INFO 360                         | <i>35 undergrads</i>  | 4.9 |
| <i>Fall 2015</i>   | <b>Design Thinking</b><br>INFO 360                         | <i>37 undergrads</i>  | 4.2 |
| <i>Spring 2013</i> | <b>Capstone II</b><br>INFO 491                             | <i>96 undergrads</i>  | 4.1 |
| <i>Winter 2013</i> | <b>Capstone I</b><br>INFO 490                              | <i>96 undergrads</i>  | 4.0 |
| <i>Autumn 2012</i> | <b>Design Thinking</b>                                     | <i>40 undergrads</i>  | 4.3 |

|                    |   |                      |            |
|--------------------|---|----------------------|------------|
|                    | INFO 360  |                      |            |
| <i>Autumn 2012</i> | <b>Design Thinking</b><br>INFO 360                    | <i>39 undergrads</i> | <i>4.7</i> |
| <i>Spring 2012</i> | <b>Capstone I</b><br>INFO 490                         | <i>18 undergrads</i> | <i>4.7</i> |
| <i>Winter 2012</i> | <b>Collaborative Software Development</b><br>INFO 461 | <i>38 undergrads</i> | <i>4.5</i> |
| <i>Autumn 2011</i> | <b>Design Thinking</b><br>INFO 360                    | <i>38 undergrads</i> | <i>4.4</i> |
| <i>Autumn 2011</i> | <b>Design Thinking</b><br>INFO 360                    | <i>39 undergrads</i> | <i>4.3</i> |
| <i>Spring 2011</i> | <b>HCI and Design Fundamentals</b><br>INSC 541        | <i>15 masters</i>    | <i>4.7</i> |
| <i>Spring 2011</i> | <b>Design Thinking</b><br>INFO 360                    | <i>37 undergrads</i> | <i>4.3</i> |
| <i>Winter 2011</i> | <b>Capstone I</b><br>INFO 490                         | <i>22 undergrads</i> | <i>3.5</i> |
| <i>Autumn 2010</i> | <b>Collaborative Software Design</b><br>INFO 461      | <i>26 undergrads</i> | <i>4.5</i> |
| <i>Spring 2010</i> | <b>User-Centered Design</b><br>INFO 360               | <i>37 undergrads</i> | <i>4.3</i> |
| <i>Spring 2010</i> | <b>User-Centered Design</b><br>INFO 360               | <i>37 undergrads</i> | <i>4.6</i> |
| <i>Winter 2010</i> | <b>HCI and Design Fundamentals</b><br>INSC 541        | <i>15 graduates</i>  | <i>4.8</i> |
| <i>Autumn 2008</i> | <b>User-Centered Design</b><br>INFO 440               | <i>35 undergrads</i> | <i>4.5</i> |
| <i>Autumn 2008</i> | <b>User-Centered Design</b><br>INFO 440               | <i>35 undergrads</i> | <i>4.6</i> |



## Doctoral Students

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2008 - **Parmit Chilana**  
2013 *Information School (Co-advisor: Jacob O. Wobbrock)*  
– Assistant Professor, Simon Fraser University, Computer Science (2016-present)  
– Assistant Professor, University of Waterloo, Management Sciences (2013-2016)  
– Facebook PhD Fellowship (2010)  
– Canadian SSHRC Fellowship (2009)

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2009 - **Michael Lee**  
2015 *Information School*  
– Assistant Professor, New Jersey Institute of Technology, Information Systems (2015-present)  
– ICER 2013 Best Paper Award

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2012 - **Brian Burg**  
2015 *Computer Science & Engineering (Co-advisor: Michael D. Ernst)*  
– Senior Engineer, Apple, Inc. (2015-present)  
– UIST 2015 Best Paper Nominee

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2010 - **Paul Li**  
2015 *Information School*  
– Senior Data Scientist, Microsoft (2016-present)

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2013 - **Dastyni Loksa**  
*present Information School*

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2016 - **Greg Nelson**  
*present Computer Science & Engineering*  
– ICER Best Paper Award (2018)  
– CHI Best Paper Nominee (2016)  
– NSF Graduate Research Fellowship (2017)

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2015 - **Amanda Swearngin**  
*present Computer Science & Engineering (Co-advisor: James Fogarty)*  
– Microsoft Research Intern (2019)  
– Google Research Intern (2018)  
– Adobe Research Intern (2017)  
– NSF Graduate Research Fellowship (2016)

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2015 - **Zakariya Dehlawi**  
2017 *Information School*

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2016 - **Kyle Thayer**  
*present Computer Science & Engineering (Co-advisor: Katharina Reinecke)*

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2016 - **Benjamin Xie**  
*present* *Information School*  
– NSF Graduate Research Fellowship (2016)

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2018 - **Yim Register**  
*present* *Information School*  
– NSF Graduate Research Fellowship (2019)

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2018 - **Alannah Oleson**  
*present* *Information School*  
– NSF Graduate Research Fellowship (2018)

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2019 - **Neil Ryan**  
*present* *Computer Science & Engineering*

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2009 - **Casey Hickerson**  
2011 *Information School*

## Service

### Academic Program Chairing

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2017 - **Informatics**  
*present* Program Chair, iSchool's undergraduate major, ~450 majors, 450 minors  
– Reframed curriculum around the study, design, and development of information technology  
– Reduced reliance on guest faculty  
– Increased inclusiveness and scalability of admissions

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2016 - **Masters in HCI+Design**  
2017 *Program Chair, UW's interdisciplinary HCI masters degree, ~35 students*  
– Renewed memorandum of agreement between four units and graduate school  
– Hired new director, Michael Smith  
– Secured design studio space

### Journal Editor

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2015 - **ACM Transactions on Computing Education**  
*present* *Associate Editor*

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2016 - **IEEE Transactions on Software Engineering**  
*present* *Associate Editor*

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2009 **IEEE Software Special Issue on End-User Software Engineering**  
*Co-Editor*

## Conference Program Chair

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2020 - **ACM International Computing Education Research Conference (ICER)**  
2021 *Program Co-Chair*

2020 **ACM/IEEE International Conference on Software Engineering (ICSE)**  
Software Engineering Education and Training Track  
*Program Co-Chair*

2013 **ACM Conference on Human Factors in Computing (CHI)**  
*Program Sub-Committee Chair*

2012 **ACM Conference on Human Factors in Computing (CHI)**  
*Program Sub-Committee Chair*

2011 **IEEE Symposium on Visual Languages and Human-Centric Computing**  
*Program Co-Chair*

## Conference Program Committee Member

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2019 **International Conference on Software Engineering (ICSE)**  
*Program Board*

2014 - **ACM International Conference on Computing Education (ICER)**  
2019 *Senior Member*

2016 - **ACM Technical Symposium on Computer Science Education (SIGCSE)**  
2019 *Senior Member*

2017 **Summit on Advances in Programming Languages (SNAPL)**

2014 - **International Conference on Software Engineering (ICSE)**  
2018

2010 - **ACM Conference on Human Factors in Computing (CHI)**  
2013 *Associate Chair*

2011 **ACM Symposium on User Interface Software and Technology (UIST)**  
*Associate Chair*

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2011     **ACM Symposium on the Foundations of Software Engineering (FSE)**

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2009 -     **IEEE Visual Languages and Human-Centric Computing**  
2015

## Doctoral Consortium Chair

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2009,     **IEEE Symposium on Visual Languages and Human-Centric Computing**  
2010     *Co-Chair*

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2018,     **ACM International Conference on Computing Education (ICER)**  
2019     *Co-Chair*

## Grant Proposal Reviewing

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2010 -     **National Science Foundation**  
*present*     *Panelist (CISE, EHR)*

## Public Service

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2018 -     **CS for All Washington**  
*present*     *Director and Co-Founder*  
An advocacy group organizing the implementation of K-12 CS education in Washington state. In 2019, successfully advocated for two bills expanding access, and a budget line for supporting CS teacher professional development.

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2018 -     **Seattle Public Schools CS Advisory Board**  
*present*     *Secretary*  
A group of experts that informs the city on K-12 CS education. I connect Seattle efforts to the statewide efforts I organize through CS for All Washington.

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2017 -     **ACM Education Advisory Board**  
*present*     *Member*

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2018     **Computing Research Association (CRA)**  
*Undergraduate Research Award Committee Member*

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2013 -     **Director**  
2015     *EUSES Consortium*  
A coalition furthering discoveries in end-user programming.