Andrew J. Ko

ajko@uw.edu | http://faculty.washington.edu/ajko

The Information School
University of Washington

Research Areas

My research concerns the human understanding of software systems. I invent technologies that help software developers, aspiring programmers, and end users better understand software behavior, especially when software behavior is problematic or unexpected, requiring troubleshooting or debugging. I also conduct social science on the role of software problems in society, investigating the communication dynamics between software designers and software users through social media, software issue trackers, and traditional support processes. My work contributes broadly to human-computer interaction, software engineering, and computing education research.

Education

Carnegie Mellon University   2008
Ph.D. in Human-Computer Interaction
Human-Computer Interaction Institute
> Dissertation: *Asking and Answering Questions about the Causes of Software Behaviors*
> Committee: Brad Myers (Chair), Bonnie John (CMU), Jonathan Aldrich (CMU), Gail Murphy (UBC)

Oregon State University   2002
Honors B.S. in Computer Science
Honors B.S. in Psychology
> Thesis: *Individual Differences in Programming, Testing, and Debugging in a Statistical End-User Programming Environment*
> Advisors: Margaret Burnett (Computer Science) and Bob Uttl (Psychology)

Professional Experience

Qazzow, Inc.   2013-present
> Chief Technology Officer, Co-Founder

Assistant Professor, University of Washington   2008-present
> The Information School

Adjunct Assistant Professor, University of Washington   2008-present
> Computer Science and Engineering

Research Intern, Microsoft Research   2006
> Mentor: Rob DeLine

Graduate Research Assistant, Carnegie Mellon University   2002-2008
> Human-Computer Interaction Institute
> Advisor: Brad Myers

Undergrad Research Assistant, Oregon State University   1999-2002
> Computer Science Department
> Advisor: Margaret M. Burnett

Grants, Gifts, and Other Funding

National Science Foundation, Computing Education for the 21st Century (2012-2015) $2,999,991
> HCC: Large: Collaborative Research: Variations to Support Exploratory Programming
> Brad Myers (PI, Carnegie Mellon University), **Andrew 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)

National Science Foundation, Computing Education for the 21st Century (2012-2015) $599,999
> CER: Computing Education through Collaborative Debugging
> **Andrew J. Ko** (PI), Margaret M. Burnett (Co-PI, Oregon State University), Catherine Law (Co-PI, Oregon State University)

National Science Foundation, CAREER Award (2010-2014) $592,456
> CAREER: Enabling and Exploiting Evidence-Based Bug Triage
> **Andrew J. Ko** (PI)

W Fund, Early Stage Capital Investment $500,000
> Early seed round investment for Qazzow, Inc., commercializing research on LemonAid
> Jacob O. Wobbrock (CEO), **Andrew J. Ko** (CTO)

Microsoft Research Software Engineering Innovation Foundation Award (2013-2014) $25,000
> Mobile/Social Debugging Games for Computing Education
> **Andrew J. Ko** (PI)

Google Faculty Research Award (2012-2013) $47,359
> Selection-Based Contextual Help in the Wild
> **Andrew J. Ko** (PI)

National Science Foundation, REU Supplement (2013) $14,000
> Research Experience for Undergraduates Supplement
> **Andrew J. Ko** (PI)

University of Washington, Royalty Research Fund (2012-2013) $32,122
> Automatic, Individualized Instructional Feedback to Improve Learning in an Online Programming Game
> **Andrew J. Ko** (PI)

National Science Foundation, REU Supplement (2012) $16,000
> Research Experience for Undergraduates Supplement
> **Andrew J. Ko** (PI)

University of Washington Center for Commercialization Gap Fund (2012-2013) $50,000
> Chime: Bringing Crowdsourced Contextual Help to the Masses
> Jacob O. Wobbrock (PI), **Andrew J. Ko** (Co-PI)

Microsoft Gift (2010) $6,200
> Software Developer Help Seeking on the Web
> **Andrew J. Ko** (PI)

National Science Foundation (2010) $19,040
> Workshop: Democratizing Access to Computational Tools
> **Andrew J. Ko** (PI)

National Science Foundation (2009) $14,880
> Workshop: Democratizing Access to Computational Tools
> **Andrew J. Ko** (PI)

Publicly Disclosed Patents

U.S. Patent Pending   2012
> Systems and Methods for Selection-Based Contextual Help Retrieval
> Chilana, P., **Ko, A.J.**, and Wobbrock, J.O.

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

Publications

Unlike most of academia, premiere conferences in Human-Computer Interaction (HCI), Software Engineering (SE), and Computing Education are selective venues for archival research. These conferences exceed many journals in their selectivity, visibility, and impact. Moreover, some of the conferences below are listed as workshops (e.g., ICER), but are in fact selective, archival 2-day research venues (ACM requires that conferences of fewer than 3 days are called workshops). The key venues for my research include **CHI** (for HCI), **ICSE** (for software engineering), **ICER** (for computing education), and **VL/HCC** (for research at the intersection of these fields).

Authorship order indicates the scope of my intellectual contribution to the work. However, because I collaborate closely with my Ph.D. students on research, they are first author on many of my key publications. I denote my students with a * next to their name. My name is in **bold** throughout.

Refereed Conference Papers

In-Game Assessments Increase Novice Programmers' Engagement and Learning Efficiency   2013
  *Lee, M.J., **Ko, A.J.**, Kwan, I.
  ICER: International Computing Education Research Workshop, to appear
  ACCEPTANCE RATE 30%

Interactive Record/Replay for Web Application Debugging   2013
  *Burg, B., Bailey, R., **Ko, A.J.**, and Ernst, M.
  UIST: ACM Symposium on User Interface Software and Technology, to appear
  ACCEPTANCE RATE *TBD*

A Multi-Site Field Study of Crowdsourced Contextual Help: Usage and Perspectives of End-Users and Software Teams   2013
  *Chilana, P.K., **Ko, A.J.**, and Wobbrock, J.O.
  CHI: ACM Conference on Human Factors in Computing Systems, 217-226
  ACCEPTANCE RATE 20%

LemonAid: Selection-Based Crowdsourced Contextual Help for Web Applications   2012
  *Chilana, P.K., **Ko, A.J.**, and Wobbrock, J.O
  CHI: ACM Conference on Human Factors in Computing Systems, 1549-1558.
  ACCEPTANCE RATE 25%

Is This What You Meant? Promoting Listening on the Web with Reflect   2012
  *Kriplean, T., Toomim, M., Morgan, J., Borning, A., and **Ko, A.J.**
  CHI: ACM Conference on Human Factors in Computing Systems, 1559-1568.
  ACCEPTANCE RATE 25%

FeedLack Detects Missing Feedback in Web Applications   2011
  Ko, A.J. and Zhang, X.
  CHI: ACM Conference on Human Factors in Computing Systems, 2177-2186.
  ACCEPTANCE RATE 25%

Design, Discussion, and Dissent in Open Bug Reports   2011
  Ko, A.J. and Chilana, P.K.
  iConference 106-113.
  ACCEPTANCE RATE 63%

Personifying Programming Tool Feedback Improves Novice Programmers' Learning   2011
  *Lee, M.J. and **Ko, A.J.**
  ICER: International Computing Education Research Workshop, 109-116.
  ACCEPTANCE RATE 30%

Characterizing the Differences Between Pre- and Post-release Versions of Software   2011
  *Li, P., Kivett, R. Zhan T., Jeon S., Nagappan, N., Murphy, B., and **Ko, A.J.**
  ICSE: International Conference on Software Engineering, SEIP Track, 716-725
  ACCEPTANCE RATE 18%

BEST PAPER AWARD Cleanroom: Edit-Time Error Detection with the Uniqueness Heuristic. 2010
  Ko, A.J. and Wobbrock, J.O.
  VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 7-14
  ACCEPTANCE RATE 29%

Gestalt: Integrated Support for Implementation and Analysis in Machine Learning Processes 2010
  Patel, K., Bancroft, N., Drucker, S., Fogarty, J., **Ko, A.J.**, and Landay, J.A.
  UIST: ACM Symposium on User Interface Software and Technology, 37-46
  ACCEPTANCE RATE 18%

Understanding Usability Practices in Complex Domains: Implications for Training the Next 2010
Generation of Usability Professionals
  *Chilana P., Wobbrock, J.O., and **Ko, A.J.**
  CHI: ACM Conference on Human Factors in Computing Systems, 2337-2346
  ACCEPTANCE RATE 24%

BEST PAPER NOMINEE How Power Users Help and Hinder Open Bug Reporting 2010
  Ko, A.J. and *Chilana, P.K.
  CHI: ACM Conference on Human Factors in Computing Systems, 1665-1674
  ACCEPTANCE RATE 24%

Attitudes and Self-Efficacy in Young Adults' Computing Autobiographies 2009
  Ko, A.J.
  VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 67-74
  ACCEPTANCE RATE 25%

Finding Causes of Program Output with the Java Whyline 2009
  Ko, A.J. and Myers, B.A.
  CHI: ACM Conference on Human Factors in Computing Systems, 1569-1578
  ACCEPTANCE RATE 24%

Fixing the Program My Computer Learned: Barriers for End Users, Challenges for the Machine 2009
  Kuleza T., Wong W.K., Stumpf S., Perona S., White R., Burnett M.M., Oberst I., and **Ko, A.J.**
  IUI: International Conference on Intelligent User Interfaces, 187-196
  ACCEPTANCE RATE 29%

How Designers Design and Program Interactive Behaviors 2008
  Myers B.A., Park S., Nakano Y., Mueller G., and **Ko, A.J.**
  VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 177-184
  ACCEPTANCE RATE 29%

BEST PAPER AWARD Debugging Reinvented: Asking and Answering Why and Why Not Questions about Program 2008
Behavior
  Ko, A.J. and Myers, B.A.
  ICSE: International Conference on Software Engineering, 301-310
  ACCEPTANCE RATE 15%

Information Needs in Collocated Software Development Teams 2007
  Ko, A.J., DeLine, R., and Venolia, G.
  ICSE: International Conference on Software Engineering, 344-353
  ACCEPTANCE RATE 14%

Let's Go to the Whiteboard: How and Why Software Developers Draw Code 2007
  Cherubini, M., Venolia, G. DeLine, R. and **Ko, A.J.**
  CHI: ACM Conference on Human Factors in Computing Systems, 557-566
  ACCEPTANCE RATE 26%

A Linguistic Analysis of How People Describe Software Problems in Bug Reports 2006
  Ko, A.J., Myers, B.A., and Chau, D.H.
  VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 127-134
  ACCEPTANCE RATE 28%

Answering Why and Why Not Questions in User Interfaces 2006
  Myers, B. A., Weitzman, D., **Ko, A.J.**, and Chau, D. H.
  CHI: ACM Conference on Human Factors in Computing Systems, 397-406
  ACCEPTANCE RATE 23%

Barista: An Implementation Framework for Enabling New Tools, Interaction Techniques and Views for Code Editors 2006
    Ko, A.J. and Myers, B.A.
    CHI: ACM Conference on Human Factors in Computing Systems, 387-396
    ACCEPTANCE RATE 23%

Citrus: A Language and Toolkit for Simplifying the Creation of Structured Editors for Code and Data 2005
    Ko, A.J. and Myers, B.A.
    UIST: ACM Symposium on User Interface Software and Technology
    ACCEPTANCE RATE 19%

BEST PAPER AWARD Examining Task Engagement in Sensor-Based Statistical Models of Human Interruptibility 2005
    Fogarty, J., **Ko, A.J.**, Aung, H.H., Golden, E., Tang, K.P., and Hudson, S.E.
    CHI: ACM Conference on Human Factors in Computing Systems, 331-340
    ACCEPTANCE RATE 25%

BEST PAPER AWARD Eliciting Design Requirements for Maintenance-Oriented IDEs: A Detailed Study of Corrective and Perfective Maintenance Tasks 2005
    Ko, A.J., Aung, H., and Myers, B.A.
    ICSE: International Conference on Software Engineering, 126-135
    ACCEPTANCE RATE 14%

Six Learning Barriers in End-User Programming Systems 2004
    Ko, A.J., Myers, B.A., and Aung, H.
    VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 199-206
    ACCEPTANCE RATE 32%

Designing the Whyline: A Debugging Interface for Asking Questions About Program Failures 2004
    Ko, A.J. and Myers, B.A.
    CHI: ACM Conference on Human Factors in Computing Systems, 151-158
    ACCEPTANCE RATE 16%

BEST PAPER AWARD Development and Evaluation of a Model of Programming Errors 2003
    Ko, A.J. and Myers, B.A.
    VL/HCC: IEEE Symposia on Human-Centric Computing Languages and Environments, 7-14
    ACCEPTANCE RATE 33%

Individual Differences in Program Comprehension Strategies in Unfamiliar Environments 2003
    Ko, A.J. and Uttl, B.
    IWPC: IEEE International Workshop on Program Comprehension, 175-184
    ACCEPTANCE RATE 40%

Visually Testing Recursive Programs in Spreadsheet Languages 2001
    Burnett, M.M., Ren, B., and **Ko, A.J.**
    VL/HCC: IEEE Symposium on Human-Centric Computing Languages and Environments, 288-295
    ACCEPTANCE RATE 30%

Using the Cognitive Walkthrough to Improve the Design of a Visual Programming Experiment 2000
    Green, T.R.G., Burnett, M.M., **Ko, A.J.**
    VL/HCC: IEEE Symposium on Visual Languages, 172-179
    ACCEPTANCE RATE 32%

Journal Articles

Thirty Years of Software Problems in the News IN REVIEW
    Ko, A.J., Dosono, B., Duriseti, N.
    TSE: IEEE Transactions on Software Engineering (*Resubmitted with major revisions*)

A Practical Guide to Controlled Experiments of Software Engineering Tools with Human Participants IN PRESS
    Ko, A.J., LaToza, T., Burnett, M. M.
    ESE: Empirical Software Engineering (*Accepted with minor revisions*)

Why-Oriented End-User Debugging of Naive Bayes Text Classification 2011
    Kulesza, T., Stumpf, S., Wong, W., Burnett, M.M., Perona, S., and **Ko, A.J.**
    TIIS: ACM Transactions on Interactive Intelligent Systems, 1(1), Article 2, 31 pages

The State of the Art in End-User Software Engineering   2011
   Ko, A.J., Abraham, R., Beckwith, L., Blackwell, A., Burnett, M.M., Erwig, M., Scaffidi, C., Lawrance, J.,
   Lieberman, H., Myers, B.A., Rosson, M.B., Rothermel, G., Shaw, M., and Wiedenbeck, S.
   ACM Computing Surveys, 43(3), Article 21, 44 pages.

Extracting and Answering Why and Why Not Questions about Java Program Output   2010
   Ko, A.J. and Myers, B.A.
   TOSEM: ACM Transactions on Software Engineering and Methodology, 22(2), Article 4

An Exploratory Study of How Developers Seek, Relate, and Collect Relevant Information during   2006
Software Maintenance Tasks
   Ko, A.J., Myers, B.A., Coblenz, M.J., and Aung, H.H.
   TSE: IEEE Transactions on Software Engineering, 32(12), 971-987

A Framework and Methodology for Studying the Causes of Software Errors in Programming Systems   2005
   Ko, A.J. and Myers, B.A.
   JVLC: Journal of Visual Languages and Computing, 16(1-2), 41-84

Using the Cognitive Walkthrough to Improve the Design of a Visual Programming Experiment   2002
   Ko, A.J., Burnett, M.M., Green, T.R.G., Rothermel, K.J., and Cook, C.R.
   JVLC: Journal of Visual Languages and Computing, 13(5), 517-544

Refereed Short Conference Papers (Archival papers, such as CHI Notes)

Investigating the Role of Purposeful Goals on Novices' Engagement in a Programming Game   2012
   *Lee, M.J. and **Ko, A.J**
   VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 163-166
   ACCEPTANCE RATE 25%

The Role of Conceptual Knowledge in API Usability   2011
   Ko, A.J. and Riche, Y.
   VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 173-176
   ACCEPTANCE RATE 35%

Post-Deployment Usability: A Survey of Current Practices   2011
   *Chilana, P.K., **Ko, A.J.**, Wobbrock, J.O., Grossman, T., and Fitzmaurice, G.
   CHI: ACM Conference on Human Factors in Computing Systems, 2243-2246
   ACCEPTANCE RATE 25%

Understanding Expressions of Unwanted Behaviors in Open Bug Reporting   2010
   *Chilana, P.K., **Ko, A.J.**, Wobbrock, J.O.
   VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 203-206
   ACCEPTANCE RATE 29%

The Past, Present and Future of Programming in HCI   2009
   Myers, B.A. and **Ko, A.J.**
   HCIC: Human-Computer Interaction Consortium

Designers' Natural Descriptions of Interactive Behaviors   2008
   Park S., Myers B.A., **Ko, A.J.**
   VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 185-188
   ACCEPTANCE RATE 29%

Dimensions Characterizing Programming Feature Usage by Information Workers   2006
   Scaffidi, C., **Ko, A.J.**, Myers, B. A., and Shaw, M.
   VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 59-62

Design Requirements for More Flexible Structured Editors from a Study of Programmers' Text   2005
Editing
   Ko, A.J., Aung, H., and Myers, B.A.
   CHI: ACM Conference on Human Factors in Computing Systems, 1557-1560

Invited Research Overview: End-User Programming   2006
   Myers, B.A., **Ko, A.J.**, Burnett, M.M.
   CHI: ACM Conference on Human Factors in Computing, Extended Abstracts, 75-80

Debugging by Asking Questions About Program Output	2006

Ko, A.J.
ICSE: International Conference of Software Engineering, 989-992

Using Objects of Measurement to Detect Spreadsheet Errors	2005

Coblenz, M.J., **Ko, A.J.**, and Myers. B.A.
VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 314-316

Designing a Flexible and Supportive Direct-Manipulation Programming Environment	2004

Ko, A.J.
VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing, 277-278

Preserving Non-Programmers Motivation with Error-Prevention and Debugging Support Tools	2003

Ko, A.J.
VL/HCC: IEEE Symposia Human-Centric Computing Languages and Environments, 271-272

A Contextual Inquiry of Expert Programmers in an Event-Based Programming Environment	2003

Ko, A.J.
CHI: ACM Conference on Human Factors in Computing, 1036-1037

Refereed Workshop Papers (Archived and peer reviewed, but in a 1 or 2 day venue)

Representations of User Feedback in an Agile, Collocated Software Team	2012

*Lee, M.J. and **Ko, A.J.**
CHASE: International Workshop on Cooperative and Human Aspects of Software Engineering, 76-82

A Case Study of Post-Deployment User Feedback Triage	2011

Ko, A.J., Lee, M.J., Ferrari, V., Ip, S., and Tran, C.
CHASE: International Workshop on Cooperative and Human Aspects of Software Engineering, 1-8

Designing Software for Unfamiliar Domains	2009

*Chilana, P.K., **Ko, A.J.**, and Wobbrock, J.O.
CHASE: International Workshop on Cooperative and Human Aspects of Software Engineering

Comparing Bioinformatics Software Development by Computer Scientists and Biologists: An Exploratory Study	2009

*Chilana, P.K., Palmer, C., and **Ko, A.J.**
Workshop on Software Engineering for Computational Science and Engineering

Source-Level Debugging with the Whyline	2008

Ko, A.J. and Myers, B.A.
CHASE: Cooperative and Human Aspects of Software Engineering, 69-72

JASPER: An Eclipse Plug-In to Facilitate Software Maintenance Tasks	2006

Coblenz, M.J., **Ko, A.J.**, and Myers. B.A.
Workshop on Eclipse Technology eXchange, 65-69

Juried Conference Papers (Archived and reviewed by experts, but in a less rigorous process)

Mining Whining in Support Forums with Frictionary	2012

Ko, A.J.
CHI, alt.chi: ACM Conference on Human Factors in Computing Systems, 191-200

Designing for a Billion Users: A Case Study of Facebook	2012

*Chilana, P.K., Holsberry, C., Oliveira, F., and **Ko, A.J.**
CHI, Case Studies: ACM Conference on Human Factors in Computing Systems, 419-431

Supporting Active Listening and Grounding on the Web through Restatement	2011

*Kriplean, T., Toomim, M., Morgan, J.T., Borning, A., and **Ko, A.J.**
CSCW, Horizons: ACM Conference on Computer Supported Cooperative Work

Book Chapters

Software Engineering Through Qualitative Methods 2012
    Ko, A.J.
    In **Making Software: What Really Works, and Why We Believe It**, 55-63

Refereed Invited Articles

New to the Movement: Reflections on the Future of Information Schools from Inspired Junior Faculty 2009
    Wobbrock, J.O., **Ko, A.J.**, and Kientz, J.A.
    Interactions, 69-71

Natural Programming Languages and Environments 2004
    Myers, B.A., Pane, J.F., and **Ko, A.J.**
    Communications of the ACM, 47-52

Non-Referred Workshop Papers

Crowdsourced Q&A-based Contextual Help for Web Applications: Challenges and Opportunities 2013
    *Chilana, P.K., **Ko, A.J.**, Wobbrock, J.O.
    Workshop on Social Media Question Asking, at CSCW

Designing Crowdsourced, Context-Sensitive Help for Web Applications 2011
    *Chilana, P.K., **Ko, A.J.**, and Wobbrock, J.O.
    Workshop on Crowdsourcing and Human Computation, at CHI

How Do Open Source Developers Talk about Users? 2010
    Ko, A.J. and *Chilana, P.K.
    Workshop on The Future of FLOSS in CHI Research and Practice, at CHI

More Natural End-User Software Engineering 2008
    Myers, B.A., **Ko, A.J.**, Park, S.Y., Stylos, J., LaToza, T.D., and Beaton, J.
    International Workshop on End-User Software Engineering, at CHI 30-34

End-User Programming Productivity Tools 2006
    Ko, A.J., Myers, B.A., Coblenz, M., and Stylos, J.
    International Workshop on End-User Software Engineering, at CHI

The Role of Science in Supporting Software Development 2006
    Ko, A.J.
    Workshop on Supporting the Social Side of Large-Scale Software Development, at CSCW

Human Factors Affecting Dependability in End-User Programming 2005
    Ko, A.J. and Myers, B.A.
    Workshop on End-User Software Engineering, 1-4

More Natural and Open User Interface Tools 2005
    Myers, B.A. and **Ko, A.J.**
    Workshop on the Future of User Interface Design Tools, at CHI

Studying Development and Debugging To Help Create a Better Programming Environment 2003
    Myers, B.A. and **Ko, A.J.**
    Workshop on Perspectives in End User Development, at CHI, 65-68

Honors and Awards

Best Paper Awards

Cleanroom: Edit-Time Error Detection with the Uniqueness Heuristic 2010
    VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing
    Best Paper Award (top submission)

Debugging Reinvented: Asking and Answering Why and Why Not Questions about Program Behavior 2008
    ICSE: International Conference on Software Engineering
    Distinguished Paper Award (top 1% of submissions)

Examining Task Engagement in Sensor-Based Statistical Models of Human Interruptibility   2005
    CHI: ACM Conference on Human Factors in Computing
    Best Paper Award (top 1% of submissions)

Eliciting Design Requirements for Maintenance-Oriented IDEs: A Detailed Study of Corrective and
Perfective Maintenance Tasks   2005
    ICSE: International Conference on Software Engineering
    Distinguished Paper Award (top 1% of submissions)

Development and Evaluation of a Model of Programming Errors   2003
    VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing
    Best Paper Award (one of top three papers)

Best Paper Nominations

How Power Users Help and Hinder Open Bug Reporting   2010
    CHI: ACM Conference on Human Factors in Computing
    Best Paper Honorable Mention (top 5% of submissions)

Most Influential Paper Nominations

Development and Evaluation of a Model of Programming Errors   2012
    VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing
    Nominated for Most Influential Paper published between 2001-2003

Fellowships and Recognitions

PROF Award, iSchool Teaching Award, Nominee   2013

UW Undergraduate Research Mentor Award, Nominee   2013

Intel Early Career Faculty Honor Program, Nominee   2012

National Science Foundation CAREER Award   2010

National Science Foundation Graduate Research Fellowship   2004

National Defense and Science Engineering Graduate Fellowship   2004

National Science Foundation Graduate Research Fellowship, Honorable Mention   2003

CRA Outstanding Undergraduate, Honorable Mention   2001

Press

Frictionary 'mines your whines' to pinpoint software bugs   May 31st, 2012
    Paul Marks, NewScientist
    http://www.newscientist.com/blogs/onepercent/2012/05/frictionary.html

Study: Facebook relies on good design to retain users   May 9th, 2012
    Joab Jackson, IDG News
    http://www.pcworld.com/businesscenter/article/255340/study_facebook_relies_on_good_design_to_retain_users.html

Violence against technology has psychological roots   November 4th, 2010
    Owen Lei, King5 News
    http://www.king5.com/news/technology/Hourglass-Syndrome-106739108.html

The Ten Biggest Problems in Computing and How We'll Solve Them   2005
    Alan Cohen, PC Magazine

Researchers to Help Exterminate Bugs in Spreadsheets, Web Applications   May 5th, 2004
    David Hart, NSF Press Release NSF PR 04-065

Researchers Aim to Make Debugging Simpler   2004
    Mike Crissey, Associated Press
    Appeared online at CNN, PC World, PC Magazine, and hundreds of print and online newspapers

Invited Keynotes

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

Where HCI and Software Engineering Meet   2009
    iEDGE Conference, Seattle, WA

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

Invited Talks

Defect Detection for the Wayward Web   2012
    Microsoft, Redmond, WA

Defect Detection for the Wayward Web   2011
    Coverity, San Francisco, CA

Defect Detection for the Wayward Web   2011
    MIT, Cambridge, MA

Defect Detection for the Wayward Web   2011
    UNC Charlotte, Charlotte, NC

Human Factors in Software Development Tools   2010
    Schloss Dagstuhl, Wadern, Germany

Where HCI and Software Engineering Meet   2010
    Conference on Software User Assistance, Seattle, WA

Where is the User in Software Evolution?   2010
    IBM T.J. Watson Research Center, Hawthorne, NY

Asking and Answering Questions about the Causes of Software Behavior   2009
    IIT Mumbai, Mumbai, India

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

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

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

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

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

Asking and Answering Questions about the Causes of Software Behavior   2006
    Oregon State University, Electrical Engineering and Computer Science Department, Corvallis, OR

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

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

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

Teaching (Multiple teaching evaluation scores represent multiple sections of a course)

Capstone (INFO 490)   **4.0**/5.0
  96 undergraduate students, Winter 2013

Design Thinking (INFO 360)   **4.3**/5.0, **4.7**/5.0
  79 undergraduate students, Autumn 2012

Capstone (INFO 490)   **4.7**/5.0
  18 undergraduate students, Spring 2012

Collaborative Software Design (INFO 461)   **4.5**/5.0
  38 undergraduate students, Winter 2012

Design Thinking (INFO 360, Autumn)   **4.4**/5.0, **4.3**/5.0
  77 undergraduate students, Autumn 2011

Human-Computer Interaction and Design Fundamentals (INSC 541)   **4.7**/5.0
  15 graduate students, Spring 2011

Design Thinking (INFO 360)   **4.3**/5.0
  37 undergraduate students, Spring 2011

Capstone (INFO 490)   **3.5**/5.0
  22 undergraduate students, Winter 2011

Collaborative Software Design (INFO 461)   **4.5**/5.0
  26 undergraduate students, Autumn 2010

User-Centered Design (INFO 360)   **4.3**/5.0, **4.6**/50
  74 undergraduate students, Spring 2010

Human-Computer Interaction and Design Fundamentals (INSC 541)   **4.8**/5.0
  15 graduate students, Winter 2010

User-Centered Design (INFO 440)   **4.5**/5.0, **4.6**/5.0
  70 undergraduate students, Autumn 2008

Doctoral Student Supervision

Chair

Parmit Chilana, The Information School (Co-advised with Jacob O. Wobbrock)   2008-2013
  Assistant Professor at the University of Waterloo, Management Sciences, starting Fall 2013
  Facebook PhD Fellowship, 2010
  Canadian Social Sciences and Humanities Research Council (SSHRC) Doctoral Award, 2009

Michael Lee, The Information School   2009-present

Paul Li, The Information School   2010-present

Brian Burg, Computer Science & Engineering (Co-advised with Mike Ernst)   2012-present

Casey Hickerson, The Information School   2009-2011

Committee Member

Sean Fullerton, Information School   2012-present

Jared Bauer, Information School   2011-present

Marilyn Ostergren, Information School   2011-2013

Kayur Patel, Computer Science & Engineering   2008-2012

Michael Toomim, Computer Science & Engineering   2010-2013

Travis Kriplean, Computer Science & Engineering   2010-2012

External Committee Member

Roshanak Zilouchian, Computer Science, University of Illinois, Urbana-Champaign	2012-present
Paul Gross, Computer Science, Washington University in St. Louis	2011-present
Jing Xie, Computer Science, UNC Charlotte	2011-2012

Professional Service

Program Chairing

Program Sub-Committee Chair, ACM Conference on Human Factors in Computing	2013
Deputy Program Sub-Committee Chair, ACM Conference on Human Factors in Computing	2012
Program Co-Chair, IEEE Symposium on Visual Languages and Human-Centric Computing	2011

Program Committee Member

ICSE: International Conference on Software Engineering	2014
CHI: ACM Conference on Human Factors in Computing	2010-2013
UIST: ACM Symposium on User Interface Software and Technology	2011
FSE: ACM Symposium on the Foundations of Software Engineering	2011
VL/HCC: IEEE Visual Languages and Human-Centric Computing	2009, 2010, 2012, 2013
LIVE: International Workshop on Live Programming	2013
SUITE: International Workshop on Search-Driven Development	2009, 2010
USER: Workshop on User Evaluation for Software Engineering Researchers	2012, 2013

Reviewer

CHI: ACM Conference on Human Factors in Computing	2005-2013
VL/HCC: IEEE Visual Languages and Human-Centric Computing	2004-2007, 2009-2013
UIST: ACM Symposium on User Interface and Software Technology	2005-2007, 2009, 2010, 2013
TOCE: ACM Transactions on Computing Education	2012, 2013
IJHCS: International Journal of Human-Computer Studies	2006
CSCW: ACM Conference on Computer-Supported Cooperative Work	2010-2011
EICS: ACM Symposium on Engineering Interactive Computing Systems	2010
TOSEM: ACM Transactions on Software Engineering and Methodology	2009
IUI: International Conference on Intelligent User Interfaces	2009
TSE: IEEE Transactions on Software Engineering	2009
AHCI: Advances in Human-Computer Interaction	2008
GI: Graphics Interface	2006
JVLC: Journal of Visual Languages and Computing	2004-2005

Steering Committees

VL/HCC: IEEE Symposium on Visual Languages and Human-Centric Computing	2011-present

Other Professional Service

Director, EUSES Consortium	2013-2015
Panel member, National Science Foundation Proposal Review Panel	2012
Graduate Consortium Chair, Visual Languages and Human-Centric Computing	2009-2010
Member, EUSES Consortium Executive Committee	2010-2011
Co-Editor, IEEE Software Special Issue on End-User Software Engineering	2009

University of Washington Service

Member, Masters in HCI and Design Steering Committee	2012-present
Co-organizer, DUB Retreat	2013
Member, Masters in HCI and Design Hiring Committee	2013
Organizer, CHI 2012 DUB reception	2012