

Jeffrey Nichols

Curriculum Vitae

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Research Interests

Human-computer interaction, intelligent user interfaces, crowdsourcing, mobile and ubiquitous computing, end-user programming, and social software.

Education

Ph.D. in Human-Computer Interaction
Carnegie Mellon University
December 2006

B.S. Cum Laude in Computer Engineering
University of Washington
April 2000

Experience

Machine Learning Research Scientist, Apple
April 2020-present
Developing intelligent user interfaces for future products.

Staff Research Scientist, Google
August 2014-February 2020
Managed a team of 20 people working on the Fuchsia operating system. Led work across multiple teams on user interface frameworks, machine intelligence, and accessibility. Created the Rico dataset with UIUC collaborators.

Manager and Research Staff Member, IBM Almaden Research Center
Manager, January 2012-July 2014
Research Staff Member, December 2006-July 2014
Led a variety of projects investigating social media analysis and engagement, mobile interaction, end-user programming, social software, and multi-device interaction technologies. Main research projects: System U (2012-2014), Smart Social Q&A (2011-2014), qCrowd (2011-2013), Highlight (2007-2010), and CoScripter (2007-2011).

Graduate Student/Research Assistant, Carnegie Mellon University
August 2000-December 2006
Worked on the Pebbles and Personal Universal Controller research projects.
Advisor: Brad A. Myers.

Research Intern, Intel Research Seattle
September 2003-January 2004
Worked with the Personal Server research team to integrate my automatic interface generation research with the Personal Server.

Research Assistant, University of Washington
September 1998-March 2000
Implemented a user interface for the window constraints in the Scheme Constraints Window Manager (SCWM) under the advisement of Professor Alan Borning. Assisted in the design, testing, and layout of a low-power, mixed-signal linear collator under the advisement of Associate Professor Chris Diorio.

Teaching

Teaching

INFO 213: User Interface Design and Development

University of California, Berkeley – Spring 2010

4 units. <http://courses.ischool.berkeley.edu/i213/s10/>

CS 160: User Interface Design, Prototyping, and Evaluation

University of California, Berkeley – Spring 2009

Co-taught with Associate Professor Maneesh Agrawala

Teaching Assistantships

05-630: Programming User Interfaces

Carnegie Mellon University - Spring 2003

Gave lectures, led in-class critiques of student interfaces, and graded assignments.

05-631: User Interface Software

Carnegie Mellon University - Fall 2002

In charge of assignments, including authoring and grading. Gave lectures on Java programming, interaction techniques, and constraints.

CSE 468: Very Large Scale Integration (VLSI)

University of Washington - Winter 2000

Assisted with creation of assignments and grading. Managed lab space and assisted students with CAD tools.

CSE 477: Embedded Systems Design

University of Washington - Fall 1999

Ported all lab assignments to a new hardware platform (Intel StrongARM) and assisted with authoring the midterm and grading.

Guest Lectures

INFO 152: Mobile Application Design & Development (2 Lectures)

University of California, Berkeley – Spring 2010

Titles: “Designing Mobile User Interfaces”

“Evaluating and Iterating on Mobile User Interfaces”

CS 160: User Interface Design, Prototyping, and Evaluation

University of California, Berkeley - Fall 2007

Title: “Event-based UI Programming, Model-View-Controller, and the Web”

05-830: Advanced User Interface Software

Carnegie Mellon University - Spring 2003 and Fall 2004

Title: “New Model-Based Approaches”

Honors

ACM Distinguished Member, 2020

ACM Senior Member, 2013

NSF Graduate Fellowship Recipient, 2000-2003

Intel Honors Intern Program, June 1996-August 2000

Eagle Scout, May 1996

Publications

Journal Papers

- [J.1] Gale Lucas, Jonathan Gratch, Nikolaos Malandrakis, Evan Szablowski, Eli Fessler and Jeffrey Nichols. “GOAALLL!: Using Sentiment in the World Cup to Explore Theories of Emotion”, To appear in *Image and Vision Computing*

- [J.2] Kyumin Lee, Jalal Mahmud, Jilin Chen, Michelle Zhou, Jeffrey Nichols. "Who Will Retweet This? Detecting Strangers from Twitter to Retweet Information," *ACM Transactions on Intelligent Systems and Technology (TIST)*, Vol. 6, Issue 3, Article 31. April 2015.
- [J.3] Jalal Mahmud, Jeffrey Nichols, Clemens Drews. "Home Location Identification of Twitter Users," *ACM Transactions on Intelligent Systems and Technology (TIST)*, Vol. 5, Issue 3, Article 47. July 2014.
- [J.4] Saleema Amershi, Jalal Mahmud, Jeffrey Nichols, Tessa Lau, German Attanasio Ruiz. "Live Action: Automating Web Task Model Generation," *ACM Transactions on Interactive Intelligent Systems (TiiS)*, Vol. 3, Issue 3, Article 14. October 2013.
- [J.5] Jeffrey Nichols and Brad A. Myers. "Creating a Lightweight User Interface Description Language: An Overview and Analysis of the Personal Universal Controller Project," *ACM Transactions on Computer-Human Interaction*, Vol. 16, Issue 4, Article 17. November 2009.
- [J.6] Jeffrey Nichols and Brad A. Myers. "Controlling Home and Office Appliances Using Smartphones," *IEEE Pervasive Computing*. Vol. 5, No. 3, July-Sept 2006, pp. 60-67
- [J.7] Brad A. Myers, Jeffrey Nichols, Jacob O. Wobbrock, Robert C. Miller. "Taking Handheld Devices to the Next Level." *IEEE Computer*. December 2004. pp 40-47.

Conference Papers

- [C.1] Xiaoyi Zhang, Lilian de Greef, Amanda Swearngin, Samuel White, Kyle Murray, Lisa Yu, Qi Shan, Jeffrey Nichols, Jason Wu, Chris Fleizach, Aaron Everitt, Jeffrey P. Bigham. "Screen Recognition: Creating Accessibility Metadata for Mobile Applications from Pixels," In *Proceedings of CHI 2021*. Yokohama, Japan. **Best Paper Award**
- [C.2] Forrest Huang, John F. Canny, Jeffrey Nichols. "Swire: Sketch-based User Interface Retrieval," In *Proceedings of CHI 2019*. Glasgow, Scotland, UK.
- [C.3] Biplab Deka, Zifeng Huang, Chad Franzen, Joshua Hibsichman, Daniel Afergan, Yang Li, Jeffrey Nichols, Ranjitha Kumar. "Rico: A Mobile App Dataset for Building Data-Driven Design Applications," In *Proceedings of User Interface Software & Technology (UIST'17)*. Quebec City, Canada. pp. 845-854.
- [C.4] Biplab Deka, Zifeng Huang, Chad Franzen, Jeffrey Nichols, Yang Li, Ranjitha Kumar. "ZIPT: Zero-Integration Performance Testing of Mobile App Designs," In *Proceedings of User Interface Software & Technology (UIST'17)*. Quebec City, Canada. pp. 727-736.
- [C.5] Katie O'Leary, Tao Dong, Julia Katherine Haines, Michael Gilbert, Elizabeth F. Churchill, Jeffrey Nichols. "The Moving Context Kit: Designing for Context Shifts in Multi-Device Experiences," In *Proceedings of Designing Interactive Systems (DIS'17)*. Edinburgh, Scotland. pp. 309-320.
- [C.6] Tao Dong, Elizabeth Churchill, Jeffrey Nichols. "Understanding the Challenges of Designing and Developing Multi-Device Experiences," In *Proceedings of Designing Interactive Systems (DIS'16)*. Brisbane, Australia. pp. 62-51.
- [C.7] Richard P. Gabriel, Jilin Chen, and Jeffrey Nichols. "InkWell: A Creative Writer's Creative Assistant," In *Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition (C&C '15)*. Edinburgh, Scotland. pp. 93-102.

- [C.8] Huiji Gao, Jalal Mahmud, Jilin Chen, Jeffrey Nichols, Michelle X. Zhou. "Modeling User Attitude toward Controversial Topics in Online Social Media," In *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media (ICWSM 2014)*, Ann Arbor, Michigan, June 2-4, 2014. pp. 121-130
- [C.9] N. Sadat Shami, Jeffrey Nichols, Jilin Chen. "Social Media Participation and Performance at Work: A Longitudinal Study," In *Proceedings of CHI 2014*, Toronto, Canada, April 26-May 1, 2014. pp. 115-118. **Honorable Mention Award**
- [C.10] Gary Hsieh, Jilin Chen, Jalal Mahmud, Jeffrey Nichols. "You Read What You Value: Understanding Personal Values and Reading Interests," In *Proceedings of CHI 2014*, Toronto, Canada, April 26-May 1, 2014. pp. 983-986
- [C.11] Kyumin Lee, Jalal Mahmud, Jilin Chen, Michelle X. Zhou, Jeffrey Nichols. "Who Will Retweet This? Automatically Identifying and Engaging Strangers on Twitter to Spread Information," In *Proceedings of IUI 2014*, Haifa, Israel, February 24-27, 2014. pp. 247-256. **Nominated for Best Paper Award**
- [C.12] Jilin Chen, Gary Hsieh, Jalal Mahmud, Jeffrey Nichols. "Understanding Individuals' Personal Values from Social Media Word Use," In *Proceedings of CSCW 2014*, Baltimore, MD, February 15-19, 2014. pp. 405-414
- [C.13] Aditya Pal, Fei Wang, Michelle Zhou, Jeffrey Nichols, Barton A. Smith. "Question Routing to User Communities," In *Proceedings of CIKM 2013*, San Francisco, CA, October 27-November 1, 2013. pp. 2357-2362
- [C.14] Walter S. Lasecki, Rachel Wesley, Jeffrey Nichols, Anand Kulkarni, James F. Allen, Jeffrey P. Bigham. "Chorus: a crowd-powered conversational assistant," In *Proceedings of UIST 2013*. St. Andrews, Scotland, October 8-11, 2013. pp. 151-162
- [C.15] Jilin Chen, Allen Cypher, Clemens Drews, Jeffrey Nichols, "CrowdE: Filtering Tweets for Direct Customer Engagements," In *Proceedings of ICWSM 2013*, Boston, MA, July 8-11, 2013. pp. 51-60
- [C.16] Jalal Mahmud, Jilin Chen, Jeffrey Nichols. "When Will You Answer This? Estimating Response Time in Twitter," In *Proceedings of ICWSM 2013*, Boston, MA, July 8-11, 2013. pp. 697-700
- [C.17] Jalal Mahmud, Michelle X. Zhou, Nimrod Megiddo, Jeffrey Nichols, Clemens Drews. "Recommending targeted strangers from whom to solicit information on social media," In *Proceedings of IUI 2013*, Santa Monica, CA, March 19-22, 2013. pp. 37-48. **Nominated for Best Paper Award**
- [C.18] Jeffrey Nichols, Michelle X. Zhou, Huahai Yang, Jeon Hyung Kang, Xiaohua Sun. "Analyzing the Quality of Information Solicited from Targeted Strangers on Social Media," In *Proceedings of CSCW 2013*, San Antonio, TX, February 23-27, 2013. pp. 967-976
- [C.19] Jalal Mahmud, Jeffrey Nichols, Clemens Drews. "Where Is This Tweet From? Inferring Home Locations of Twitter Users," in *Proceedings of ICWSM 2012*, Dublin, Ireland, June 5-7, 2012. pp. 511-514
- [C.20] Jeffrey Nichols, Jalal Mahmud. "Summarizing Sporting Events Using Twitter," in *Proceedings of IUI 2012*, Lisbon, Portugal, February 14-17, 2012. pp. 189-198
- [C.21] Jeffrey Nichols, Jeon Hyung Kang. "Asking Questions of Targeted Strangers on Social Networks," in *Proceedings of CSCW 2012*, Bellevue, WA. February 11-15, 2012. pp. 999-1003

- [C.22] Jeffrey Bardzell, Jeffrey Nichols, Tyler Pace, Shaowen Bardzell. "Come Meet Me At Ulduar: Progression Raiding in World of Warcraft," in *Proceedings of CSCW 2012*, Bellevue, WA, February 11-15, 2012. pp. 603-612
- [C.23] Stephen Oney, John J. Barton, Brad A. Myers, Tessa Lau, Jeffrey Nichols. "Playbook: Revision Control & Comparison for Interactive Mockups," in *Proceedings of International Symposium on End-User Development*, Torre Canne, Italy June 7-10. pp. 295-300
- [C.24] Tessa Lau, Julian Cerruti, Guillermo Manzato, Mateo Bengualid, Jeffrey P. Bigham, Jeffrey Nichols. "A Conversational Interface to Web Automation," in *Proceedings of UIST 2010*, New York, NY, October 3-6, 2010. pp. 229-238
- [C.25] Ian Li, Jeffrey Nichols, Tessa Lau, Clemens Drews, Allen Cypher. "Here's what i did: sharing and reusing web activity with ActionShot," in *Proceedings of CHI 2010*. Atlanta, GA. April 10-15. pp. 723-732
- [C.26] Jeffrey P. Bigham, Ryan Kaminsky, Jeffrey Nichols. "Mining Web Interactions to Automatically Create Mash-Ups," In *Proceedings of UIST 2009*. Victoria, British Columbia, Canada. October 4-7. pp. 203-212
- [C.27] Tessa Lau, Clemens Drews, Jeffrey Nichols. "Interpreting Hand-Written How-To Documentation," In *Proceedings of IJCAI 2009*. Pasadena, CA. July 11-17. pp. 1433-1438
- [C.28] Heather Wiltse, Jeffrey Nichols. "PlayByPlay: Collaborative Web Browsing for Desktop and Mobile Devices," In *Proceedings of CHI 2009*. Boston, MA. April 4-9. pp. 1781-1790.
- [C.29] James Lin, Jeffrey Wong, Allen Cypher, Jeffrey Nichols, Tessa Lau. "End-User Programming of Mashups with Vegemite," In *Proceedings of IUI 2009*. Sanibel Island, FL. February 8-11. pp. 97-106.
- [C.30] Jeffrey P. Bigham, Tessa Lau, Jeffrey Nichols. "TrailBlazer: Enabling Blind Users to Blaze Trails Through the Web," In *Proceedings of IUI 2009*. Sanibel Island, FL. February 8-11. pp. 177-186.
- [C.31] Jeffrey Nichols, Zhigang Hua, John Barton. "Highlight: A System for Creating and Deploying Mobile Web Applications," in *Proceedings of UIST'2008*. Monterey, CA. October 19-22. pp. 249-258.
- [C.32] Jeffrey S. Pierce, Jeffrey Nichols. "An Infrastructure for Building Applications That Span Multiple Personal Devices," in *Proceedings of UIST'2008*. Monterey, CA. October 19-22. pp. 101-110.
- [C.33] Jeffrey Nichols, Tessa Lau. "Mobilization by Demonstration: Using Traces to Re-author Existing Web Sites," In *Proceedings of IUI'2008*. Maspalomas, Gran Canaria, Spain. January 13-16. pp. 149-158
- [C.34] Jeffrey Nichols, Duen Horng Chau, Brad A. Myers. "Demonstrating the Viability of Automatically Generated User Interfaces," In *Proceedings of CHI'2007*. San Jose, CA. April 28-May 3. pp. 1283-1292
- [C.35] Jeffrey Nichols, Brandon Rothrock, Duen Horng Chau, Brad A. Myers. "Huddle: Automatically Generating Interfaces for Systems of Connected Appliances," In *Proceedings of UIST'2006*. October 15-18. Montreux, Switzerland. pp. 279-288
- [C.36] Jeffrey Nichols, Brad A. Myers, Brandon Rothrock. "UNIFORM: Automatically Generating Consistent Remote Control User Interfaces," In *Proceedings of CHI'2006*. April 22-27. Montreal, Canada. pp. 611-620

- [C.37] Jeffrey Nichols, Brad A. Myers, and Kevin Litwack. "Improving Automatic Interface Generation with Smart Templates," In *Proceedings of Intelligent User Interfaces (IUI) 2004*. Funchal, Portugal. January 13-16. pp. 286-288
- [C.38] Jeffrey Nichols and Brad A. Myers. "Studying The Use Of Handhelds to Control Smart Appliances," In *Proceedings of the 23rd International Conference on Distributed Computing Systems Workshops (ICDCS '03)*. Providence, RI. May 19-22, 2003. pp. 274-279
- [C.39] Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris, Roni Rosenfeld, Kevin Litwack. "Personal Universal Controllers: Controlling Complex Appliances With GUIs and Speech," In *Extended Abstracts of CHI'2003*, April 5-10. Ft. Lauderdale, FL. pp. 624-625
- [C.40] Brad A. Myers, Jeffrey Nichols, Jacob O. Wobbrock, Kevin Litwack, Michael Higgins, Joseph Hughes, Thomas K. Harris, Roni Rosenfeld, Mathilde Pignol. "Handheld Devices for Control," in *Human-Computer Interaction Consortium (HCIC'2003)*, Winter Park, CO, Feb 5-9, 2003.
- [C.41] Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris, Roni Rosenfeld, Mathilde Pignol. "Generating Remote Control Interfaces for Complex Appliances," In *Proceedings of UIST'2002*, Paris, France. Oct 27-30. pp. 161-170
- [C.42] Jeffrey Nichols, Brad Myers, Thomas K. Harris, Roni Rosenfeld, Stefanie Shriver, Michael Higgins, Joseph Hughes. "Requirements for Automatically Generating Multi-Modal Interfaces for Complex Appliances," In *Proceedings of the Fourth IEEE International Conference on Multimodal Interfaces*, October 14-16, 2002. Pittsburgh, PA. pp. 377-382
- [C.43] Brad Myers, Robert Malkin, Michael Bett, Alex Waibel, Ben Bostwick, Robert C. Miller, Jie Yang, Matthias Denecke, Edgar Seemann, Jie Zhu, Choon Hong Peck, Dave Kong, Jeffrey Nichols, Bill Scherlis. "Flexi-modal and Multi-Machine User Interfaces," In *Proceedings of the Fourth IEEE International Conference on Multimodal Interfaces*, October 14-16, 2002. Pittsburgh, PA. pp. 343-348
- [C.44] Jeffrey Nichols, Jacob O. Wobbrock, Darren Gergle, and Jodi Forlizzi. "Mediator and Medium: Doors as Interruption Gateways and Aesthetic Displays" In *Proceedings of DIS'2002*, London, UK. June 25-28. pp. 379-386.
- [C.45] Brad A. Myers, Jacob O. Wobbrock, Sunny Yang, Brian Yeung, Jeffrey Nichols, and Robert Miller. "Using Handhelds to Help People with Motor Impairments". In *Proceedings of the ACM SIGCAPH's 5th International Conference on Assistive Technologies (ASSETS '02)*, Edinburgh, Scotland, July 8-10 2002. pp. 89-96
- [C.46] Brad A. Myers, Rishi Bhatnagar, Jeffrey Nichols, Choon Hong Peck, Dave Kong, Robert Miller, and A. Chris Long. "Interacting At a Distance: Measuring the Performance of Laser Pointers and Other Devices". In *Proceedings of CHI'2002*. Minneapolis, MN. April 20-25 pp. 33-40
- [C.47] Brad A. Myers, Choon Hong Peck, Jeffrey Nichols, Dave Kong, and Robert Miller. "Interacting At a Distance Using Semantic Snarfing," In *Proceedings of Ubicomp 2001*. Sept 30-Oct 2, Atlanta, Georgia. pp. 305-314.
- [C.48] Greg J. Badros, Jeffrey Nichols, and Alan Borning. "Scwm: An Extensible Constraint-Enabled Window Manager", In *Proceedings of Freenix track of USENIX Technical Conference*. Boston, June 2001.

- [C.49] Greg Badros, Jeffrey Nichols and Alan Borning, "Scwm--An Intelligent Constraint-Enabled Window Manager", *AAAI Spring Symposium on Smart Graphics*, March 2000

Books

- [B.1] Jeffrey Nichols and Naomi Ramos. *What We Drink: a collection of cocktail recipes*. Snooty Bird. November 15, 2015. ISBN: 978-0-991-40360-8
- [B.2] Allen Cypher, Mira Dontcheva, Tessa Lau, Jeffrey Nichols (editors). *No Code Required: Giving Users Tools to Transform the Web*. Morgan Kaufmann. April 19, 2010. ISBN: 012381541X.

Workshop Papers & Abstracts

- [W.1] Michael Nebeling, Fabio Paternò, Frank Maurer, Jeffrey Nichols. "Systems and tools for cross-device user interfaces," In *Proceedings of the 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS '15)*. Duisberg, Germany. pp. 300-301.
- [W.2] Jalal Mahmud, Jeffrey Nichols, Michelle Zhou, James Caverlee, Yi Zeng, Liang Chen, John O'Donovan. "DUBMOD14 - International Workshop on Data-driven User Behavioral Modeling and Mining from Social Media," In *Proceedings of the 23rd ACM International Conference on Conference on Information and Knowledge Management (CIKM '14)*. Shanghai, China. pp. 2092-2093.
- [W.3] Hernan Badenes, Mateo N. Bengualid, Jilin Chen, Liang Gou, Eben Haber, Jalal Mahmud, Jeffrey Nichols, Aditya Pal, Jerald Schoudt, Barton A. Smith, Ying Xuan, Huahai Yang, Michelle X. Zhou. "System U: automatically deriving personality traits from social media for people recommendation," In *Proceedings of the 8th ACM Conference on Recommender systems (RecSys '14)*. San Francisco, California. pp. 373-374.
- [W.4] Jalal Mahmud, Jeffrey Nichols, Michelle X. Zhou, James Caverlee, John O'Donovan. "DUBMOD13: international workshop on data-driven user behavioral modelling and mining from social media," In *Proceedings of the 22nd ACM international conference on Conference on information & knowledge management (CIKM '13)*. San Francisco, California. pp. 2551-2552.
- [W.5] Jeffrey Nichols. "Using the crowd to understand and adapt user interfaces," In *Proceedings of the 5th ACM SIGCHI symposium on Engineering interactive computing systems (EICS '13)*. London, UK. pp. 1-2.
- [W.6] Jeffrey Nichols. "Using Public Social Media to Find Answers to Questions," in *Proceedings of the CSCW 2013 Workshop on Social Media Question Asking*. February 24, 2013. San Antonio, TX.
- [W.7] Jeffrey Nichols, Jalal Mahmud. "Data Capture with the Crowd: Exploring the Continuum of Implicit to Explicit," in *Proceedings of the CHI 2011 Workshop on Crowdsourcing and Human Computation*. May 8, 2011. Vancouver, British Columbia, Canada.
- [W.8] Allen Cypher, Tessa Lau, Jeffrey Nichols, Mira Dontcheva. "Workshop on End User Programming for the Web," in *Extended Proceedings of CHI'2009*. April 4-9. Boston, MA. pp. 4779-4782.
- [W.9] Kai Richter, Jeffrey Nichols, Krzysztof Gajos, Ahmed Seffah. "The Many Faces of Consistency in Cross-Platform Design" in *Extended Proceedings of CHI'2006*. April 22-23. Montreal, Canada. pp. 1639-1642

- [W.10] Jeffrey Nichols and Andrew Faulring. "Automatic Interface Generation and Future User Interface Tools", In *Proceedings of the Workshop on the Future of User Interface Design Tools at CHI 2005*. April 4. Portland, OR.
- [W.11] Jeffrey Nichols and Brad A. Myers. "Generating Consistent User Interfaces for Appliances", In *Proceedings of the Workshop on Multi-User and Ubiquitous User Interfaces at Intelligent User Interfaces 2005*. January 9. San Diego, CA. pp. 9-10
- [W.12] Jeffrey Nichols, Brad A. Myers, Kevin Litwack, Michael Higgins, Joseph Hughes, Thomas K. Harris. "Describing Appliance User Interfaces Abstractly with XML," In *Workshop on Developing User Interfaces with XML: Advances on User Interface Description Languages*, 2004, 25 May, Gallipoli, Italy. pp. 9-16
- [W.13] Jeffrey Nichols, Brad A. Myers, and Rob Miller. "Personal Interfaces in Ubiquitous Environments," in *Proceedings of the CHI'2001 Workshop on Building the Ubiquitous Computing Experience*. Seattle, WA.

Technical Reports

- [T.1] Brad A. Myers, Jeff Nichols, Rob Miller. "User Interfaces that Span Hand-Held and Fixed Devices" *Workshop on Distributed and Disappearing User Interfaces in Ubiquitous Computing at CHI'2001*, Seattle, WA. Albrecht Schmidt, Peter Ljungstrand, and Anind Dey, editors. University of Karlsruhe Faculty of Information Technical Report 2001-6. ISSN 1432-7864.

Patents

US8893004. *User interface proxy method and system*. Clemens Drews, Jeffrey Nichols. Issued November 18, 2014.

US8078694. *Browser-based proxy server for customization and distribution of existing applications*. John Barton, Zhigang Hua, Jeffrey Nichols. Issued December 13, 2011.

US7899847. *System and method for authoring new lightweight web applications using application traces on existing websites*. Tessa Ann Lau, Jeffrey Nichols. Issued March 1, 2011.

US7664862. *Browser-based proxy server for customization and distribution of existing applications*. John Barton, Zhigang Hua, Jeffrey Nichols. Issued February 16, 2010.

Invited Talks

Rico and Beyond: A Mobile App Dataset for Interaction Mining and Machine Learning
 GVV Center Brown Bag at Georgia Tech
 February 6, 2020

Understanding and Engaging with Social Media Users
 IBM Research – Brazil, Annual Research Colloquium, Opening Keynote
 August 15, 2013

Using the Crowd to Understand and Adapt User Interfaces
 EICS Conference Opening Keynote
 June 25, 2013

Engaging with Users on Public Social Media
 Carnegie Mellon University
 April 24, 2013

Engaging with Users on Public Social Media
 Stanford University
 April 24, 2013

Engaging with Users on Social Media
University of California, San Diego
October 9, 2012

Implicit and Explicit Crowdsourcing Using Social Media
University of Washington
June 6, 2012

Reauthoring User Interfaces
University of Hasselt, Belgium
April 27, 2011

Reauthoring User Interfaces
University of Rochester Computer Science Department
October 1, 2010

Highlight: Mobilizing Existing Web Sites
Massachusetts Institute of Technology HCI Seminar, Boston, MA
October 2, 2009

Highlight: Mobilizing Existing Web Sites
IBM India Research Lab, New Delhi, India
July 8, 2009

Highlight: Mobilizing Existing Web Sites
PARC, Palo Alto, CA
February 5, 2009

Highlight: Mobilizing Existing Web Sites
UC Berkeley, Berkeley Institute of Design Seminar, Palo Alto, CA
December 2, 2008

Highlight: Mobilizing Existing Web Sites
Nokia Palo Alto Research Lab, Palo Alto, CA
June 3, 2008

Huddle and Information Triggers: Helping Users Automate Complex and Temporally-Distant Tasks
UC Berkeley, Berkeley Institute of Design Seminar. Berkeley, CA.
June 14, 2007

Automatically Generating High Quality User Interfaces
Motorola Human Interaction Research (HIR), Schaumburg, IL.
February 24, 2006

The Personal Universal Controller and .NET CF
Microsoft Faculty Summit, Redmond, WA.
July 2003

Professional Activities

Journals

- Editor-in-Chief, Proceedings of the ACM on Human-Computer Interaction (PACMHCI)
August 1, 2020 to Present
- Associate Editor, ACM Transactions on Human-Computer Interaction,
2012-Present

- Information Director, ACM Transactions on Human-Computer Interaction, 2009-2015

Conference Steering Committees

- Engineering Interactive Systems (EICS) Conference, 2016-
- Intelligent User Interfaces (IUI) Conference, 2013- (chair 2019-2021)

Conference Organizing Committees

- General Chair, UIST Conference, 2021
- Sub-Committee Chair for “Interacting Beyond the Individual”, CHI Conference, 2017-2018
- Papers Co-Chair, EICS Conference, 2017-2018
- Proceedings Chair, Ubicomp, 2017
- General Co-Chair, Intelligent User Interfaces (IUI) Conference, 2016
- Sponsorship Chair, UIST Conference, 2015
- Industrial Case Studies Co-Chair, Mobile HCI Conference, 2014
- Program Co-Chair, Intelligent User Interfaces (IUI) Conference, 2013
- Treasurer, VL/HCC Conference, 2013
- Madness Co-Chair, CSCW Conference, 2012
- Workshop, Demos & Posters Co-Chair, VL/HCC Conference, 2011
- Papers Chair, EICS Conference, 2010
- Madness Co-Chair, CHI Conference, 2008-2009
- Co-Organizer, Workshop on “End-User Programming for the Web” at CHI Conference, April 4, 2009
- Proceedings Co-Chair, UIST Conference, 2007-2008
- Co-Organizer, Workshop on "The Many Faces of Consistency in Cross-Platform Design" at CHI Conference, April 22-23, 2006

Conference Program Committees

- Computer-Human Interaction (CHI), 2008, 2010, 2011, 2014, 2019, 2020
- Computer Supported Cooperative Work (CSCW), 2012, 2017, 2019
- User Interface Software & Technology (UIST), 2011, 2012, 2014, 2017
- Human Computation (HCOMP), 2013-2017
- MobileHCI, 2015, 2016
- International Conference on Weblogs and Social Media (ICWSM), 2014
- Engineering Interactive Computing Systems (EICS), 2011-2014
- AAI AI and the Web Track, 2012
- World-Wide Web Conference, User Interface/Rich Interaction Track, 2010
- Intelligent User Interfaces (IUI) Conference, 2007-2010
- Computer-Aided Design of User Interfaces, 2008
- International Journal of Web Engineering and Technology (IJWET), Special Issue on User Interface Description Languages, 2006
- User Interface Software & Technology (UIST) Posters, 2006
- User Interface Software & Technology (UIST) Demos, 2004

Reviewer

- CSCW Conference (Full Papers, Tech Notes), 2008-2020
- UIST Conference (Full Papers, Demonstrations, Posters), 2002-2020
- EICS Conference (Full Papers & Late Breaking Results), 2009-2020
- CHI Conference (Full Papers, Tech Notes, & Late Breaking Results), 2002-2016
- ACM Transactions on Computer-Human Interaction, 2009, 2012
- Software: Practice & Experience, 2010
- HCI Journal, 2009
- Ubicomp Conference (Full Papers, Posters), 2005-2009
- Interacting with Computers Journal, 2004, 2006, 2008-2009
- New Paradigms in Using Computers (NPUC) Poster Coordinator, 2007-2008
- Pervasive Conference (Full Papers & Late Breaking Results), 2007
- IEEE Transactions on Multimedia, 2007
- Computers & Graphics Journal, 2005
- IEE Proceedings Software, 2005
- IEEE Pervasive Computing, 2004
- MobiSys Conference, 2004

Other Service

- Brickyard HOA Board Member, 2019-Present
- Treasurer and Board Member, United States Bartender's Guild, Silicon Valley Chapter, 2017-2022
- CMU HCII Ph.D. Ombudsperson, 2003-2006
Elected by fellow students. Consisted of traditional ombudsperson duties, plus representing the Ph.D. students as a whole to the faculty. This included managing two moves to new office spaces, working with faculty to clarify and improve our speaking requirement, and presenting student criticisms of department courses to the faculty.