

# EDWARD CUTRELL

Microsoft Research  
1 Microsoft Way  
Redmond, WA 98052, USA

+1 (425) 706-1990  
cutrell@microsoft.com  
<http://aka.ms/cutrell>

---

## EDUCATION

### **University of Oregon** (1993–1999)

Eugene, OR

M.Sc., Cognitive Psychology

Thesis: Towards a neurophysiologic basis for obsessive compulsive disorder

Ph.D., Cognitive Psychology (Neuroscience focus)

Thesis: Electrical microstimulation of posterior parietal orienting systems in rhesus macaques.

Committee: Richard Marrocco (advisor), Michael Posner, Barbara Gordon-Lickey, Nathan Tublitz

### **Rice University** (1988–1992)

Houston, TX

B.A., Psychology, Cognitive Science

## PROFESSIONAL EXPERIENCE

### **Microsoft Research**, Redmond, WA

Principal Researcher, Social Technologies group (2016–present)

### **Microsoft Research India**, Bangalore, India

Senior Research Manager, Technology for Emerging Markets group (2010–2016)

### **University of North Carolina, Charlotte**, Charlotte, NC

Associate Faculty, Department of Software Information Systems (2014–present)

### **University of Washington**, Seattle, WA

Affiliate Associate Professor, Information School (2009–present)

### **Microsoft Research**, Redmond, WA

Researcher, Adaptive Systems and Interaction group (2000–2010)

### **University of Texas Health Sciences Center**, Houston, TX

Research Associate (Spring 1990–Fall 1993)

### **Rice University**, Houston, TX

Research Assistant (Summer 1989–Spring 1992)

## PROFESSIONAL SERVICE

### ***Boards & advising***

Board Chair, UN University – Computing & Society (Macau)

Steering Committee, CHERISH-DE Centre, Swansea University  
Advisory Board, Action for India  
External Reviewer, ICT4D Centre at the University of Cape Town

### ***Conferences and Professional Societies***

#### **Offices & Conference Committees**

Papers Co-Chair, CHI 2018  
Chief panelist, ProSPER.Net 2013 Young Scientist Award for 'ICT for Sustainable Development'  
Technical Co-Chair, ACM APCHI 2013  
Chair, *pro tem*, ICT4D Community in ACM SIGCHI 2012  
General Conference Co-Chair, ACM DEV 2012  
Industrial Liaison, Mobile HCI 2012  
Chief panelist, ProSPER.Net 2011 Young Scientist Award for 'ICT for Sustainable Development'  
Executive Committee Adjunct Chair for Volunteers, ACM SIGCHI (2004–2008)  
Notes Co-Chair, CHI 2006

#### **Program Committees**

ACM COMPASS 2018  
ICTD 2018, Senior PC  
CHI 2017  
CSCW 2017  
ACM DEV 7 (2017)  
ICTD 2017, Senior PC  
CHI 2016  
CSCW 2016  
ICTD 2016, Senior PC  
ACM DEV 6  
ICTD 2015, Senior PC  
Learning@Scale 2015  
CHI 2015  
CSCW 2015  
India HCI 2014  
MobileHCI 2014  
Learning@Scale 2014  
CSCW 2014  
ICTD 2013, Senior PC  
ACM DEV 4  
INTERACT 2013  
CSCW 2013  
Group 2012  
CSCW 2012  
ICTD 2012  
ACM DEV 2012  
CHI 2011  
iConf 2011  
ICTD 2010  
ACM DEV 2010  
UIST 2010

HCIR 2010  
WWW 2010  
SIGIR 2010 workshop for Desktop Search  
JCDL/ICADL 2010 DL-DEV workshop  
CHI 2009  
ETRA 2008  
CHI 2007  
UIST 2006  
WWW 2006 workshop for Collaborative Tagging  
SIGIR 2006 workshop for Exploratory Search  
SIGIR 2006 workshop for Faceted Search

## **Reviewing**

### **Journals:**

ACM Transactions on Applied Perception (TOAP)  
ACM Transactions on Computer-Human Interaction (TOCHI)  
ACM Transactions on Information Systems (TOIS)  
Communications of the ACM (CACM)  
Foundations and Trends in Human Computer Interactions  
Human-Computer Interaction (HCI)  
IEEE Transactions on Visualization & Computer Graphics (TVCG)  
Interacting with Computers  
International Journal of Human-Computing Studies (IJHCS)  
Journal of the American Society for Information Science and Technology (JASIST)  
User Modeling and User Adapted Interaction (UMUIA)

### **Conferences:**

ACM Conference on Human Factors and Computing Systems (CHI)  
ACM Conference on Computer Supported Cooperative Work (CSCW)  
ACM Conference on Research and Development in Information Retrieval (SIGIR)  
ACM Conference on Learning at Scale (L@S)  
ACM International Conference on Computer Graphics and Interactive Technologies (SIGGRAPH)  
ACM International Conference on Intelligent User Interfaces (IUI)  
ACM International Conference on Ubiquitous Computing (UbiComp)  
ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)  
ACM Symposium on User Interface Software and Technology (UIST)  
ACM Symposium on Eye Tracking Research and Applications (ETRA)  
ACM Symposium on Computing for Development (DEV)  
Augmented Cognition International Conference (ACI)  
Graphics Interface (GI)  
Human Computing and Information Retrieval (HCIR)  
IEEE Symposium on Information Visualization (InfoVis)  
ACM/IEEE Conference on Information and Communication Technologies and Development (ICTD)  
IFIP TC13 Conference in Human-Computer Interaction (INTERACT)  
International Conference on Pervasive Computing (Pervasive)  
International World Wide Web Conference (WWW)

## PUBLICATIONS

### Refereed Journals

Jones, M., Robinson, S., Pearson, J., Joshin, M., Raju, D., Mbogo, C.C., Wangari, S., Joshi, A., Cutrell, E., & Harper, R. (2016). Beyond "yesterday's tomorrow": future-focused mobile interaction design by and for emergent users. In *Personal and Ubiquitous Computing*, Springer. 21 Nov. 2016

Corrigan-Gibbs, H., Gupta, N., Northcutt, C., Cutrell, E., & Thies, W. (2015). Deterring cheating in online environments. *ACM Transactions on Computer-Human Interaction*, **22**(6), Article 28 (September 2015), 23 pages.

McCarthy, T., Pal, J. & Cutrell, E. (2013). The "voice" has it: Screen reader adoption and switching behavior among vision impaired persons in India. *Assistive Technology: The official Journal of RESNA*, **25**(4), 222-229.

Rangaswamy, N. & Cutrell, E. (2012). Re-resourceful networks: Notes from a mobile social networking platform in India. *Pacific Affairs*, **85**(3), 587-606.

Medhi, I., Menon, R. S., Cutrell, E., & Toyama, K. (2012). Correlation between limited education and transfer of learning. *Information Technology & International Development*, **8**(2), 51-65.

Cutrell, E., & Dumais, S. T. (2006). Exploring personal information. In *Communications of the ACM (Special Issue: Supporting exploratory search)*, **49**(4), 50-51.

Cutrell, E., Dumais, S. T., & Teevan, J. (2006). Searching to eliminate personal information management. In *Communications of the ACM (Special Issue: Personal information management)*, **49**(1), 58-64.

Cutrell, E. B., & Marrocco, R. T. (2002). Electrical microstimulation of primate posterior parietal cortex initiates orienting and alerting components of covert attention. *Exp Brain Res*. **144** (1): 103-13.

Davidson, M. C., Cutrell, E. B., & Marrocco, R. T. (1999). Scopolamine slows the orienting of attention in primates to cued visual targets. *Psychopharmacology*. **142**, 1-8.

Macenski, M. J., Cutrell, E. B., & Meisch, R. A. (1993). Concurrent pentobarbital- and saccharin-maintained responding: Effects of saccharin concentration and schedule conditions. *Psychopharmacology*. **112**, 204-210.

Meisch, R. A., Lemaire, G. A., & Cutrell, E. B. (1992). Oral self-administration of pentobarbital by rhesus monkeys: relative reinforcing effects under concurrent signalled DRL schedules. *Drug and Alcohol Dependence*. **30**, 215-225.

### Refereed Conferences

#### 2018

Bennett, C., E, J., Mott, M., Cutrell, E., & Morris, M.R. (2018). How teens with visual impairments take, edit and share photos on social media. In *Proceedings of CHI 2018, Human Factors in Computing Systems*, (Montreal) ACM press.

Guinness, D., Cutrell, E., Morris, M.R. (2018). Caption Crawler: Enabling reusable alternative text descriptions using reverse image search. In *Proceedings of CHI 2018, Human Factors in Computing Systems* (Montreal), ACM press. **(Best of CHI honorable mention)**

Morris, M.R., Johnson, J., Bennett, C., & Cutrell, E. (2018). Rich representations of visual content for screen reader users. In *Proceedings of CHI 2018, Human Factors in Computing Systems* (Montreal), ACM press.

Mott, M., E, J., Bennett, C., Cutrell, E., & Morris, M.R. (2018). Understanding the accessibility of smartphone photography for people with motor impairments. In *Proceedings of CHI 2018, Human Factors in Computing Systems* (Montreal), ACM press.

Thieme, A., Bennett, C., Morrison, C., Cutrell, E., & Taylor, A.S. (2018). "I can do everything but see!" – How people with vision impairments negotiate their abilities in social contexts. In *Proceedings of CHI 2018, Human Factors in Computing Systems* (Montreal), ACM press.

Zhao, Y., Bennett, C., Benko, H., Cutrell, E., Holz, C., Morris, M.R., & Sinclair, M. (2018). Enabling people with visual impairments to navigate virtual reality with a haptic and auditory cane simulation. In *Proceedings of CHI 2018, Human Factors in Computing Systems* (Montreal), ACM press.

#### 2017

Morrison, C., Cutrell, E., Dhareshwar, A., Doherty, K., Thieme, A., & Taylor, A. (2017). Imagining artificial intelligence applications with people with visual disabilities using tactile ideation. In *Proceedings of ASSETS 2017, ACM SIGACCESS Conference on Computers and Accessibility* (Baltimore, MD) ACM press.

MacLeod, H., Bennett, C.L., Morris, M.R., & Cutrell, E. (2017). Understanding blind people's experiences with computer-generated captions of social media images. In *Proceedings of CHI 2017, Human Factors in Computing Systems* (Denver), ACM press. **(Best of CHI honorable mention)**

Sobel, K., Fiannaca, A., Campbell, J., Kulkarni, H., Paradiso, A., Cutrell, E., & Morris, M.R. (2017). Exploring the design space of AAC awareness displays. In *Proceedings of CHI 2017, Human Factors in Computing Systems* (Denver), ACM press. **(Best of CHI honorable mention)**

Sobel, K., Kovacs, G., McQuillen, G., Cross, A., Chandrasekaran, N., Riche, N.H., Cutrell, E., & Morris, M.R. (2017). EduFeed: A social feed to engage preliterate children in educational activities. In *Proceedings of CSCW 2017, Computer Supported Cooperative Work* (Portland), ACM press.

#### 2016

Garg, S., Tripathi, A., & Cutrell, E. (2016). Accurate eye center localization using snakuscul. In *Proceedings of WACV 2016, IEEE Winter Conference on Applications of Computer Vision*, (Lake Placid, NY), IEEE Conference Publications

#### 2015

Vashistha, A., Cutrell, E., Dell, N., & Anderson, R. (2015). Social media platforms for low-income blind people in India. In *Proceedings of ASSETS 2015, ACM SIGACCESS Conference on Computers and Accessibility*, (Lisbon), ACM press. **(ASSETS Best Student Paper Award)**

Vashistha, A., Vaish, R., Cutrell, E., & Thies, W. (2015). The Whodunit Challenge: Mobilizing the crowd in India. In *Proceedings of Human-Computer Interaction INTERACT 2015*, (Bamberg, Germany, 2015).

Vashistha, A., Cutrell, E., Borriello, G., & Thies, W. (2015). Sangeet Swara: A community-moderated voice forum in rural India. In *Proceedings of CHI 2015, Human Factors in Computing Systems*, (Seoul), ACM press. **(Best of CHI Award)**

Cutrell, E., O'Neill, J., Bala, S., Nitish, B., Cross, A., Gupta, N., Kumar, V., & Thies, W. (2015). Blended learning in Indian colleges with Massively Empowered Classroom. In *Proceedings of Learning at Scale 2015* (Vancouver), ACM press.

Medhi-Thies, I., Ferreira, P., Gupta, N., O'Neill, J., & Cutrell, E. (2015). KrishiPustak: A social networking system for low-literate farmers. In *Proceedings of CSCW 2015, Computer Supported Cooperative Work* (Vancouver), ACM press. (**Best of CSCW honorable mention**)

Vashistha, A., Cutrell, E., & Thies, W. (2015). Increasing the reach of snowball sampling: The impact of fixed versus lottery incentives. In *Proceedings of CSCW 2015, Computer Supported Cooperative Work* (Vancouver), ACM press.

#### **2014**

Vashistha, A., Brady, E., Thies, W., & Cutrell, E. (2014). Educational content creation and sharing by low-income visually impaired people in India. In *Fifth Symposium on Computing for Development (DEV 2014)* (San Jose, USA), ACM Press.

Cross, A., Bayyapunedi, M., Ravindran, D., Cutrell, E. & Thies, W. (2014). VidWiki: Enabling the crowd to improve the legibility of online educational videos. In *Proceedings of CSCW, Computer Supported Cooperative Work* (Baltimore), ACM press.

#### **2013**

Mohan, A., Cutrell, E. & Parthasarathy, B. (2013). Instituting credibility, accountability and transparency in local service delivery? The Helpline and Aasthi in Karnataka, India. In *Proceedings of ICTD 2013, the 6th International Conference on Information and Communication Technologies and Development* (Cape Town), ACM press.

Pai, N., Supe, P., Kore, S., Nandanwar, Y.S., Hegde, A., Cutrell, E. & Thies, W. (2013). Using automated voice calls to improve adherence to iron supplements during pregnancy: A pilot study. In *Proceedings of ICTD 2013, the 6th International Conference on Information and Communication Technologies and Development* (Cape Town), ACM press.

Schwartz, A., Bhavsar, M., Cutrell, E., Donner, J. & Densmore, M. (2013). Balancing burden and benefit: Non-prescribed use of employer-issued mobile devices. In *Proceedings of ICTD 2013, the 6th International Conference on Information and Communication Technologies and Development* (Cape Town), ACM press.

Cross, A., Bayyapunedi, M., Cutrell, E., Agarwal, A. & Thies, W. (2013). TypeRighting: Combining the benefits of handwriting and typeface in online educational videos. In *Proceedings of CHI 2013, Human Factors in Computing Systems*, (Paris), ACM press.

Cuendet, S., Medhi, I., Bali, K. & Cutrell, E. (2013). VideoKheti: Making video content accessible to low-literate and novice users. In *Proceedings of CHI 2013, Human Factors in Computing Systems*, (Paris), ACM press.

Medhi, I., Lakshmanan, M., Toyama, K. & Cutrell, E. (2013). Some evidence for the impact of limited education on hierarchical user interface navigation. In *Proceedings of CHI 2013, Human Factors in Computing Systems*, (Paris), ACM press.

Rangaswamy, N., Challugulla, G., Young, M. & Cutrell, E. (2013). Local Pocket Internet and Global Social Media. Bridging the Digital Gap: Facebook and Youth Sub-Stratum in Urban India. In *IFIP*

WG9.4: *12th International Conference on Social Implications of Computers in Developing Countries*, (Ocho Rios, Jamaica).

Chakraborty, D., Medhi, I., Cutrell, E. & Thies, W. (2013). Man versus Machine: Evaluating IVR versus a Live Operator for Phone Surveys in India. In *Proceedings of ACM Symposium on Computing for Development (DEV 2013)*, (Bangalore), ACM Press.

Sen, R., Cross, A., Vashistha, A. Padmanabhan, V., Cutrell, E. & Thies, W. (2013). Accurate Speed and Density Measurement for Road Traffic in India. In *Proceedings of ACM Symposium on Computing for Development (DEV 2013)*, (Bangalore), ACM Press.

## 2012

Cross, A., Cutrell, E. & Thies, B. (2012). Low-cost audience polling using computer vision. In *UIST 2012: 25th Annual ACM symposium on User Interface Software and Technology*, Cambridge, MA.

Oeldorf-Hirsch, A., Donner, J. & Cutrell, E. (2012). How bad is good enough? Exploring mobile video quality trade-offs for bandwidth-constrained consumers. In *NordiCHI '12: Proceedings of the 9th Nordic conference on human-computer interaction*, Copenhagen.

Medhi, I., Jain, M., Tewari, A., Bhavsar, M., Matheke-Fischer, M. & Cutrell, E. (2012). Combating rural child malnutrition through inexpensive mobile phones. In *NordiCHI '12: Proceedings of the 9th Nordic conference on human-computer interaction*, Copenhagen.

Dell, N., Vaidyanathan, V., Medhi, I., Cutrell, E. & Thies, W. (2012). "Yours is better!" Participant response bias in HCI. In *Proceedings of CHI 2012, Human Factors in Computing Systems*, (Austin), ACM press.

Gupta, A., Thies, W., Cutrell, E. & Balakrishnan, R. (2012). mClerk: Enabling mobile crowdsourcing in developing regions. In *Proceedings of CHI 2012, Human Factors in Computing Systems*, (Austin), ACM press.

Sambasivan, N. & Cutrell, E. (2012). Understanding negotiation in airtime sharing in low-income microenterprises. In *Proceedings of CHI 2012, Human Factors in Computing Systems*, (Austin), ACM press. **(Best of CHI honorable mention)**

Rangaswamy, N. & Cutrell, E. (2012). Anthropology, development and ICTs: Slums, youth and the mobile internet in urban India. In *Proceedings of ICTD 2012, the 5th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (Atlanta), IEEE press.

McCarthy, T., Pal, J., Cutrell, E. & Marballi, T. (2012). An analysis of screen reader use in India. In *Proceedings of ICTD 2012, the 5th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (Atlanta), IEEE press.

## 2011

Jain, M., Birnholtz, J., Cutrell, E. & Balakrishnan, R. (2011). Exploring display techniques for mobile collaborative learning in developing regions. In *MobileHCI 2011: 13th International Conference on Human-Computer Interaction with Mobile Devices and Services*, (Stockholm), ACM press.

Mathur, A., Ramachandran, D., Cutrell, E., & Balakrishnan, R. (2011). An exploratory study on the use of camera phones and pico projectors in rural India. In *MobileHCI 2011: 13th International*

*Conference on Human-Computer Interaction with Mobile Devices and Services*, (Stockholm), ACM press.

Panjwani, S., Uppal, A., & Cutrell, E. (2011). Script-agnostic reflow of text in document images. In *MobileHCI 2011: 13th International Conference on Human-Computer Interaction with Mobile Devices and Services*, (Stockholm), ACM press.

Reda, A., Cutrell, E. & Noble, B. (2011). Towards improved web acceleration: leveraging the personal web. In *NSDR: The ACM Workshop on Networked Systems for Developing Regions*, (Washington, D.C.), ACM press.

Reda, A., Panjwani, S. & Cutrell, E. (2011). Hyke: A low-cost remote attendance tracking system for developing regions. In *NSDR: The ACM Workshop on Networked Systems for Developing Regions*, (Washington, D.C.), ACM press.

Cutrell, E. (2011). Technology for Emerging Markets at MSR India. In *Proceedings of CSCW, Computer Supported Cooperative Work*, (Hangzhou, China), ACM press, 9-16.

Sambasivan, N. & Cutrell, E. (2011). Designing a phone broadcasting system for urban sex workers in India. In *Proceedings of CHI 2011, Human Factors in Computing Systems*, (Vancouver), ACM press. **(Best of CHI honorable mention)**

#### 2010

Buscher, G., Dumais, S., & Cutrell, E. (2010). The good, the bad, and the random: An eye-tracking study of ad quality in Web search. In *Proceedings of SIGIR 2010*, (Geneva), ACM press.

Dumais, S., Buscher, G., & Cutrell, E. (2010). Individual differences in gaze patterns for Web search. In *Proceedings of IliX 2010, Information Interaction in Context*, (New Brunswick), ACM press.

Hutchful, D. & Cutrell, E. (2010). Cloze: An authoring tool for teachers with low computer proficiency. In *Proceedings of ICTD 2010, the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (London), IEEE.

Ladeira, I. & Cutrell, E. (2010). Teaching with storytelling: An investigation of narrative videos for skills training. In *Proceedings of ICTD 2010, the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (London), IEEE.

Medhi, I., Cutrell, E. & Toyama, K. (2010). It's not just illiteracy. In *Proceedings of India HCI 2010/ Interaction Design & International Development 2010* (Mumbai), BCS Electronic Workshops in Computing (eWiC), <http://www.bcs.org/ewic/ihci2010>.

Medhi, I, Menon, R., Cutrell, E. & Toyama, K. (2010). Beyond strict illiteracy: Abstracted learning among low-literate users. In *Proceedings of ICTD 2010, the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (London), IEEE.

Morawczynski, O., Hutchful, D., Rangaswamy, N., & Cutrell, E. (2010). The bank account is not enough: Examining strategies for financial inclusion in India. In *Proceedings of ICTD 2010, the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (London), IEEE.

Panjwani, S. & Cutrell, E. (2010). Usably secure, low-cost authentication for mobile banking. In *Proceedings of SOUPS 2010, Symposium on Usable Privacy and Security*, (Seattle), ACM press, .



Panjwani, S., Samdaria, N., Gupta, A., Cutrell, E. & Toyama, K. (2010). Collage: A presentation tool for school teachers. In *Proceedings of ICTD 2010, the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*, (London), IEEE.

Ramachandran, D., Canny, J., Das, P.D. & Cutrell, E. (2010). Mobile-izing health workers in rural India. In *Proceedings of CHI 2010, Human Factors in Computing Systems*, (Atlanta), ACM press, 1889-1898. (**Best of CHI Award**)

Sambasivan, N., Cutrell, E., Toyama, K. & Nardi, B. (2010). Intermediated technology use in developing communities. In *Proceedings of CHI 2010, Human Factors in Computing Systems*, (Atlanta), ACM press, 2583-2592. (**Best of CHI honorable mention**)

Sambasivan, N., Cutrell, E. & Toyama, K. (2010). ViralVCD: Tracing information-diffusion paths with low cost media in developing communities. In *Proceedings of CHI 2010, Human Factors in Computing Systems*, (Atlanta), ACM press, 2607-2610.

## 2009

André, P., Cutrell, E., Tan, D.S. & Smith, G. (2009). Designing Novel Image Search Interfaces by Understanding Unique Characteristics and Usage. In Gulliksen & Oestreicher *Human-Computer Interaction INTERACT '09*, (Uppsala, Sweden 2009), Springer (for IFIP), 340-353.

Bergman, O., Tucker, S., Beyth-Marom, R., Cutrell, E., & Whittaker, S. (2009). It's not that important: Demoting personal information of low subjective importance using GrayArea. In *Proceedings of CHI'09, Human Factors in Computing Systems*, (Boston), ACM Press, 269-278.

Buscher, G., Cutrell, E., & Morris, M. (2009). What do you see when you're surfing? Using eye tracking to predict salient regions of Web pages. In *Proceedings of CHI'09, Human Factors in Computing Systems*, (Boston), ACM Press, 21-30.

Moraveji, N., Inkpen, K., Cutrell, E., & Balakrishnan, R. (2009). A mischief of mice: Examining children's performance in single display groupware systems with 1 to 32 mice. In *Proceedings of CHI'09, Human Factors in Computing Systems*, (Boston), ACM Press, 2157-2166.

Sambasivan, N., Rangaswamy, N., Cutrell, E., & Nardi, B. (2009). UbiComp4D: Infrastructure and Interaction for International Development-- the Case of Urban Indian Slums. *11th International Conference on Ubiquitous Computing, UbiComp 2009*, (Orlando), ACM press, 155-164.

Teevan, J., Cutrell, E., Fisher, D., Drucker, S., Ramos, G., André, P., & Hu, C (2009). Visual snippets: Summarizing Web pages for search and revisitation. In *Proceedings of CHI'09, Human Factors in Computing Systems*, (Boston), ACM Press, 2023-2032.

## 2008

Baudisch, P., Zotov, A., Cutrell, E., & Hinckley, K. (2008). Starburst: A target expansion algorithm for non-uniform target distributions. In *Proceedings of AVI 2008*, Napoli, Italy, May 28-30, pp. 129-137.

Wobbrock, J. O., Cutrell, E., Harada, S., & MacKenzie, I. S. (2008). An Error Model for Pointing Based on Fitts' Law. In *Proceedings of CHI '08, Human Factors in Computing Systems*, (Florence), ACM Press, 1613-1622. (**Best of CHI Award**)

#### 2007

Cutrell, E., & Guan, Z. (2007). What are you looking for? An eye-tracking study of information usage in Web Search. In *Proceedings of CHI'07, Human Factors in Computing Systems*, (San Jose, April 2007), ACM Press, 407–416. (**Best of CHI honorable mention**)

Hinckley, K., Zhao, S., Sarin, R., Baudisch, P., Cutrell, E., Shilman, M., and Tan, D. (2007). InkSeine: *In situ* search for active note taking. In *Proceedings of CHI'07, Human Factors in Computing Systems*, (San Jose, April 2007), ACM Press, 251-260.

Guan, Z., & Cutrell, E. (2007). An eye-tracking study of the effect of target rank on Web search. In *Proceedings of CHI'07, Human Factors in Computing Systems*, (San Jose, April 2007), ACM Press, 417–420.

#### 2006

Cutrell, E., Robbins, D. C., Dumais, S. T. & Sarin, R. (2006). Fast, flexible filtering with Phlat – Personal search and organization made easy. In *Proceedings of CHI'06, Human Factors in Computing Systems*, (Montréal, April 2006), ACM Press, 261–270. (**Best of CHI honorable mention**)

Hinckley, K., Guimbretiere, F., Baudisch, P., Sarin, R., Agrawala, M., & Cutrell, E. (2006). The springboard: Multiple modes in one spring-loaded control. In *Proceedings of CHI'06, Human Factors in Computing Systems*, (Montréal, April 2006), ACM Press, 181–190.

#### 2005

Baudisch, P., Cutrell, E., Hinckley, K., & Eversole, A. (2005). Snap-and-go: Helping users align objects without the modality of traditional snapping. In *Proceedings of CHI '05, Human Factors in Computing Systems*, (Portland, April 2005), ACM Press, 301–310.

Wilson, A., & Cutrell, E. (2005). FlowMouse: A computer vision-based pointing and gesture input device. In *Francesca Costabile, M. & Paternò, F. (Eds.), Human-Computer Interaction INTERACT '05*, (Rome, September 2005), Springer (for IFIP), 565–578.

#### 2004

Robbins, D. C., Cutrell, E., Sarin, R., & Horvitz, E. (2004). Advancing interaction: ZoneZoom: Map navigation for smartphones with recursive view segmentation. In *Proceedings of the working conference on advanced visual interfaces (AVI '04)*, (Gallipoli, May 2004), ACM Press, 231–234.

#### 2003

Dumais, S., Cutrell, E., Cadiz, J. J., Jancke, G., Sarin, R., & Robbins, D. C. (2003). Stuff I've Seen: A system for personal information retrieval and re-use. In *Proceedings of SIGIR '03, Research and Development in Information Retrieval* (Toronto), pp. 72–79.

Baudisch, P., Cutrell, E., Robbins, D., Czerwinski, M., Tandler, P., Bederson, B., & Zierlinger, A. (2003). Drag-and-Pop and Drag-and-Pick: Techniques for accessing remote screen content on touch- and pen-operated systems. In *Rauterberg, M., Menozzi, M., & Wesson, J. (Eds.), Human-Computer Interaction INTERACT '03*, (Zürich, September 2003), IOS Press (for IFIP), 57–64.

Baudisch, P., Cutrell, E., & Robertson, G. (2003). High-density cursor: A visualization technique that helps users keep track of fast-moving mouse cursors. In *Rauterberg, M., Menozzi, M., & Wesson, J.*

(Eds.), *Human-Computer Interaction INTERACT '03*, (Zürich, September 2003), IOS Press (for IFIP), 236–243.

McLoone, H., Hinckley, K., & Cutrell, E. (2003). Bimanual Interaction on the Microsoft Office Keyboard. In *Rauterberg, M., Menozzi, M., & Wesson, J. (Eds.), Human-Computer Interaction INTERACT '03*, (Zürich, September 2003), IOS Press (for IFIP), 49–56.

Ringel, M., Cutrell, E., Dumais, S., & Horvitz, E. (2003). Milestones in Time: The Value of Landmarks in Retrieving Information from Personal Stores. In *Rauterberg, M., Menozzi, M., & Wesson, J. (Eds.), Human-Computer Interaction INTERACT '03*, (Zürich, September 2003), IOS Press (for IFIP), 184–191.

#### **2002**

Hinckley, K., Cutrell, E., Bathiche, S., & Muss, T. (2002). Quantitative Analysis of Scrolling Techniques. In *Proceedings of CHI '02, Human Factors in Computing Systems*, (Minneapolis, April 2002), ACM Press, 65–72.

#### **2001**

Cutrell, E., Czerwinski, M., & Horvitz, E. (2001). Notification, Disruption and Memory: Effects of Messaging Interruptions on Memory and Performance. In *Hirose, Michitaka (Ed.), Human-Computer Interaction INTERACT '01*, (Tokyo, July 9–13), IOS Press (for IFIP), 263–269.

Czerwinski, M., Horvitz, E., & Cutrell, E. (2001). Subjective Duration Assessment: An Implicit Probe for Software Usability. In *Proceedings of IHM-HCI 2001 Conference, Volume 2*, (September, 2001, Lille, France), p. 167–170.

Dumais, S. T., Cutrell, E., & Chen, H. (2001). Optimizing search by showing results in context. In *Proceedings of CHI '01, Human Factors in Computing Systems*, (Seattle, April 2001), ACM Press, 277–284.

LeeTiernan, S., Cutrell, E., & Czerwinski, M., & Hoffman, H. (2001). Effective Notification Systems Depend on User Trust. In *Hirose, Michitaka (Ed.), Human-Computer Interaction INTERACT '01*, (Tokyo, July 9–13), IOS Press (for IFIP), 684–685.

Rademacher, P., Lengyel, J., Cutrell, E., & Whitted, T. (2001). Measuring the perception of visual realism in images. In *Rendering Techniques 2001: Proceedings of the Eurographics Workshop* (London), 235–248.

#### **2000**

Czerwinski, M., Cutrell, E., & Horvitz, E. (2000). Instant Messaging and Interruption: Influence of Task Type on Performance. In *Paris, C., Ozkan, N., Howard, S. and Lu, S. (Eds.), OZCHI 2000 Conference Proceedings*, (Sydney, Australia, Dec. 4–8), 356–361.

Czerwinski, M., Cutrell, E., & Horvitz, E. (2000). Instant Messaging: Effects of Relevance and Time. In *S. Turner, P. Turner (Eds.), People and Computers XIV: Proceedings of HCI 2000*, Vol. 2, British Computer Society, 71–76.

#### **1994**

Czerwinski, M.P., Feldman, E.M., & Cutrell, E. (1994). The influence of stimulus dimensions and training on visual search performance. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, October 1994, **38**(19), 1266-1270.

### Other publications

Schwartz, A., Bhavsar, M., Cutrell, E., Donner, J., & Densmore, M. (2014). Optimizing mobile deployments. *Microsoft Research Technical Report*, no. MSR-TR-2014-45.

Cutrell, E., Bala, S., Bansal, C., Cross, A., Datha, N., John, A., Kumar, R., Parthasarathy, M., Prakash, S., Rajamani, S., & Thies, W. (2013). Massively Empowered Classroom: Enhancing technical education in India. *Microsoft Research Technical Report*, no. MSR-TR-2013-127.

Medhi, I., Tewari, A., Jain, M. & Cutrell, E. (2012). "The fate of a digital slate: Unexpected issues with deployment in rural India". In *User Experience Magazine*, **11**(2), pp 10-11,22.

Marsden, G., Cutrell, E., Jones, M., Nanavati, A. A., & Rajput, N. (2012). "Making technology invisible in the developing world. In *Computer*, **45** (4), pp 82-85.

Cutrell, E. (2011). Context and design in ICT for global development. In *UN Chronicle. United Nations in a united world.*, Vol. XLVIII, No. 3.

Cutrell, E., & Guan, Z. (2007). An eye-tracking study of information usage in Web search: Variations in target position and contextual snippet length. *Microsoft Research Technical Report*, no. MSR-TR-2007-01.

Baudisch, P., Cutrell, E., Hinckley, K., & Gruen, R. (2004). Mouse ether: Accelerating the acquisition of targets across multi-monitor displays. In *Extended Abstracts of CHI '04, Human Factors in Computing Systems*, (Vienna, April 2004), ACM Press, 1379–1382.

Dumais, S., Cutrell, E., Sarin, R., & Horvitz, E. (2004). Implicit Queries (IQ) for contextualized Search. In *Poster Session in Proceedings of SIGIR '04*, (Sheffield, UK, July 2004), ACM Press, 594.

Cutrell, E., Czerwinski, M., & Horvitz, E. (2000). Effects of Instant Messaging Interruptions on Computing Tasks. In *Extended Abstracts of CHI 2000, Human Factors in Computing Systems*, (The Hague, April 1–6, 2000), ACM Press, 99–100.

Dumais, S. T., Cutrell, E., & Chen, H. (2000). Classified displays of web search results. Invited presentation at ASIS&T SIG/CR Classification Research Workshop, Nov. 12, 2000, pp. 87–90.

### U.S. PATENTS

7,162,473 Method and system for usage analyzer that determines user accessed sources, indexes data subsets, and associated metadata, processing implicit queries based on potential interest to users

7,173,637 Distance-based accelerated scrolling

7,225,187 Systems and methods for performing background queries from content and activity

7,317,449 Key-based advanced navigation techniques

7,327,349 Advanced navigation techniques for portable devices

7,557,774 Displaying visually correct pointer movements on a multi-monitor display system

7,692,629 Operating touch screen interfaces

7,693,842 In situ search for active note taking

7,703,040 Local search engine user interface

7,730,430 High density cursor system and method  
8,196,042 Self-revelation aids for interfaces  
8,660,244 Machine translation in instant messaging applications  
8,907,886 Advanced navigation techniques for portable devices

9 inventions patent pending

## INVITED PRESENTATIONS

- Dec 2015 *10 years of TEM: What can we learn from a decade of ICT(4)D Research?*  
Keynote address, ACM DEV 2015, London, UK
- Sep 2015 *Social media platforms for low-income blind people in India*  
Keynote address, Indo-US Workshop on Emerging Accessibility Technologies for the Blind and Visually Impaired (BVI), Delhi, India
- Jul 2015 *Innovating for ICTD*  
Guest lecture, IIT Bangalore, Digital Society class, Bangalore, India
- Mar 2015 *Fundamentals of user studies*  
Guest lecture, IIT Delhi, Masters HCI class, Delhi, India
- Nov 2014 *Phones for Farmers and Apps for Activists: Designing Mobile Applications for Rural Indians*  
Invited talk, DUB, University of Washington, USA
- Jun 2014 *Innovating in India: Designing for constraint, computing for inclusion*  
Keynote address, CHASE/ICPC workshops at ICSE 2014, Hyderabad, India
- Apr 2014 Panel moderator, *Can you do good and do well? Exploring HCI careers in development*  
CHI 2014, Toronto, Canada
- Apr 2014 *MOOCs in the developing world: Lessons from India*  
Invited talk, Berkeley Inst. of Design, UC Berkeley, USA
- Mar 2014 *MOOCs in the developing world: Lessons from India*  
(with Bill Thies) Invited talk, ACM Conference on Learning at Scale, Atlanta, USA
- Feb 2014 *Fundamentals of user studies*  
Guest lecture, IIT Delhi, Masters HCI class, Delhi, India
- Jan 2014 Panelist, *Research aimed at broader societal impact*  
COMSNETS 2014, Bangalore, India
- Oct 2013 Panelist, *Technology-based interventions for low health literacy*  
5<sup>th</sup> Annual Health Literacy Research Conference, Washington, D.C., USA
- Mar 2013 *Online education for a global audience*  
Guest lecture, EPFL, Personal interaction studio course, Lausanne, Switzerland
- Oct 2012 *Innovating in India: Disruptive technology for the developing world*  
Keynote address, Digital Futures 2012, Aberdeen, UK
- Oct 2012 Panelist, *Future designs: Making sense of the emerging sociotech ecology*  
NordiCHI 2012, Copenhagen, Denmark
- Sept 2012 Panel Moderator, *Mobile Technology: An Agent for Social Innovation & Development*  
USID 2012, Bangalore, India

- Sept 2012 *Fundamentals of user studies*  
Guest lecture, IIIT Delhi, Masters HCI class, Delhi, India
- Oct 2011 *Innovations in computing for global development*  
USID 2011, Auroville, India
- Apr 2011 Panel Moderator, *User interactions design beyond desktop and mobile*  
India HCI 2011, Bangalore, India
- Apr 2011 Panelist, *Connecting the next billion Web users*  
WWW 2011, Hyderabad, India
- Apr 2010 Panelist, *Computing technology in international development: Who, what, where, when, why and how?*  
CHI 2010, Atlanta, USA.
- Mar 2010 *Computing for socio-economic development at Microsoft Research India*  
Keynote, IDID/India HCI 2010, IIT Bombay, India.
- Nov 2009 *Computing for human development at Microsoft Research India*  
International Conference on Emergent Business Models, Indian Business Academy, Bangalore, India.
- May 2009 *Making a better Web snippet*  
International School of Information Management, University of Mysore, India.
- Aug 2008 *Eye movements in usability and HCI research*  
Course presented at GACIT summer school, University of Tampere, Finland.
- May 2008 *Augmenting usability with eye movement process metrics: Hands-on training*  
All-day course presented at CHI 2008 with Amy Alberts and Andrew Duchowski
- Jan 2007 *Eye tracking studies of information usage in Web search*  
Human Computer Interaction Consortium, Winter Park, Colorado
- Jul 2005 *Phlat: Phast & phlexible personal search and organization*  
MSR "Cool Talk" series
- May 2005 *User studies in a nutshell*  
Talk at MSR India
- Mar 2005 *BCIs and the evolution of the user interface*  
University of Oregon, Neuroinformatics Center and EGI (Electrical Geodesics, Inc.)
- Sep 2004 *Stuff I've Seen and SIS IQ*  
Talk at MSR Cambridge lecture series
- July 2003 *Studies of real users: Toward understanding designs for input and interaction*  
DARPA Augmented Cognition Meeting
- Jan 2003 *Usability Engineering*  
Seattle Pacific University guest lecture for Information Systems Management Class
- Jun 2001 *Advanced User Interfaces at Microsoft Research*  
Usability training for Microsoft interns

## **PROFESSIONAL AFFILIATIONS**

Association for Computing Machinery (ACM) – Senior Member  
ACM Special Interest Group on Computer-Human Interaction (SIGCHI)  
ACM Special Interest Group on Information Retrieval (SIGIR)  
Human Factors and Ergonomics Society (HFES)

## **AWARDS AND HONORS**

SIGIR Test of Time Award (2015)  
ASSETS Best Paper (2015)  
CHI Best Paper (2015)  
CSCW Best Paper, Honorable Mention (2015)  
CHI Best Paper, Honorable Mention (2012)  
CHI Best Paper, Honorable Mention (2011)  
CHI Best Paper (2010)  
CHI Best Paper, Honorable Mention (2010)  
CHI Best Paper (2008)  
CHI Best Paper, Honorable Mention (2007)  
CHI Best Paper, Honorable Mention (2006)