

Tawanna Dillahunt

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RESEARCH INTERESTS

I design, build, enhance and deploy innovative technologies that solve real-world problems, particularly in underserved communities. My research interests span human-computer interaction, ubiquitous computing, and social computing.

EDUCATION

- 2012 **Ph.D. in Human-Computer Interaction**, Carnegie Mellon University
Area: HCI, Ubicomp, Social Computing; Advisor: Dr. Jennifer Mankoff
Thesis Topic: *Using Social Technologies to Increase Sharing and Communication around Household Energy Consumption in Low-Income and Rental Communities*
- 2011 **M.S., Human-Computer Interaction**, Carnegie Mellon University
- 2005 **M.S., Computer Science, Human-Computer Interfaces**, Oregon Graduate Institute at the Oregon Health and Science University
- 2000 **B.S., Computer Engineering**, North Carolina State University, Magna Cum Laude

HONORS AND AWARDS

- 2015 Kavli Fellow, National Academy of Sciences
- 2015 Consortium for the Science of Sociotechnical Systems (CSST) Fellow
- 2013, 2014 Richard Tapia Scholarship Recipient
- 2012 Ford Fellowship Dissertation Competition, Honorable Mention
- 2011, 2012 IBM Ph.D. Fellowship Recipient
- 2011 Fran Allen IBM Ph.D. Fellowship
- 2009-2012 Xerox Technical Minority Scholarship recipient
- 2007-2008 National GEM Fellowship (Sponsored by Intel)
- 2005 Intel Business Client Group Division Recognition Award (DRA)
- 2001 Intel Desktop Platform Group DRA
- 1999-2000 National Society of Black Engineers Fellow
- 1999 Eta Kappa Nu Electrical and Computer Engineering Honor Society of the IEEE
- 1997-2000 NACME scholarship recipient (Sponsored by GE and IBM)

EMPLOYMENT

- 9/2014–present **Assistant Professor**, School of Information, University of Michigan

- 6/2014–9/2014 **Visiting Professor**, School of Information, University of Michigan
- 1/2013–6/2014 **Presidential Postdoctoral Fellow**, School of Information, University of Michigan; Mentor: Dr. Paul Resnick
- 6/2011-12/2013 **Chief Technology Officer, Product Lead, Product Developer**, *EEme, Pittsburgh, PA*
- 2007-2012 **Carnegie Mellon University**, *Human-Computer Interaction Institute, School of Computer Science, Pittsburgh, PA*
Graduate Researcher
- Summer 2010 **IBM TJ Watson Research**, *Social Computing Group, Hawthorne, NY*
Research Intern
- 2006-2007 **Intel Corporation**, *LAN Access Division, Hillsboro, OR*
Network Software Engineer
- 2000-2006 **Intel Corporation**, *Desktop Boards Division, Hillsboro, OR*
Software Engineer, Software Validation Lead (2006)
- Summer 1999 **General Electric Lighting**, *Global Infrastructure, Nela Park, OH*
Network Summer Intern
- Summer 1996-1998 **IBM**, *Networking Hardware Division (1998); Networking Software Division (1997-1997), Research Triangle Park, NC*
Inroads Intern

HEAVILY-REVIEWED JOURNAL PROCEEDINGS (Underline indicates students at the time of publication)

- [J.1] **Dillahunt, T.**, Wang, Z., Teasley, S.D. Democratizing Higher Education: Exploring MOOC Use Among Those Who Cannot Afford a Formal Education, *The International Review of Research in Open and Distance Learning (IRRODL)*, Vol. 15, No 5 (2014): Special Issue: Research into Massive Open Online Courses.

HEAVILY-REVIEWED CONFERENCE PROCEEDINGS

- [C.13] **Dillahunt, T.R.**, Kameswaran, V., Li, L., Rosenblat, T. (2017). Uncovering the Values and Constraints of Real-time Ridesharing for Low-resourced Populations. *The Promise of the Sharing Economy among Disadvantaged Communities. Proceedings of the ACM 34th international conference on Human factors in computing systems (CHI)*, 2017 (to appear) [Acceptance rate: 25%].

- [C.12] Hsiao, C.Y., **Dillahunt, T.R.** (2017). People-Nearby Applications: How Newcomers Move Their Relationships Offline and Develop Social and

Cultural Capital. Proceedings of the 18th international conference of the Computer Supported Cooperative Work and Social Computing Conference (CSCW), 2017 (to appear) [Acceptance rate: 34%].

[C.11] **Dillahunt, T.**, Bose, N., Diwan, S., Chen-Phang, A. Designing for Disadvantaged Job Seekers: Insights from Early Investigations. (2016). In Proceedings of the 2016 ACM Conference on Designing Interactive Systems, 2016 [Acceptance rate: 26%].

[C.10] **Dillahunt, T.**, Ng, S., Fiesta, M., Wang, Z. (2016). Do Massive Open Online Course Platforms Support Employability? Proceedings of the 17th international conference of the Computer Supported Cooperative Work and Social Computing Conference (CSCW), 2016 [Acceptance rate: 25%].

[C.9] Wyche, S., **Dillahunt, T.**, (2015). “If God Gives me the Chance I will Design my Own Phone”: Exploring Mobile Phone Repair and Postcolonial Approaches to Design in Rural Kenya. The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2015 **honorable mention**, [Acceptance rate: 23.6%].

[C.8] **Dillahunt, T.**, and Malone, A.R. (2015). The Promise of the Sharing Economy among Disadvantaged Communities. Proceedings of the ACM 32nd international conference on Human factors in computing systems (CHI), 2015 [Acceptance rate: 23%].

[C.7] **Dillahunt, T.R.**, Fostering Social Capital in Economically Distressed Communities. Proceedings of the 33rd international conference international on Human factors in computing systems, 2014. [Acceptance rate: 22.8%]

[C.6] **Dillahunt, T.**, Mankoff, J. Understanding factors of successful engagement around energy consumption between and among households. Proceedings of the 17th international conference of the Computer Supported Cooperative Work and Social Computing Conference, 2014. [Acceptance rate: 27%]

[C.5] Shrinivasan, Y., Jain, M., Seetharam, D., Choudhary, A., Huang, E., **Dillahunt, T.**, Mankoff, J. Deep Conservation in Urban India and its Implications for the Design of Conservation Technologies. Proceedings of the 31st international conference on Human factors in computing systems, 2013. [Acceptance rate: 20%]

[C.4] **Dillahunt, T.**, Mankoff, J., Paulos, E. Understanding conflict between landlords and tenants: Implications for energy sensing and feedback. Proceedings of the 11th international conference on Ubiquitous computing, 2010. [Acceptance rate: 19.3%]

[C.3] Mankoff, J., Fussell, S., **Dillahunt, T.**, Glaves, R., Grevet, C., Johnson, M., Matthews, D., Matthews, H.S., McGuire, R., Thompson, R. StepGreen.org: Increasing energy saving behaviors via social networks. International AAAI Conference on Weblogs and Social Media (ICWSM) 2010. [Acceptance rate: 19%]

[C.2] **Dillahunt, T.**, Mankoff, J., Paulos, E., Fussell, S. It's not all about green: energy use in low-income communities. Proceedings of the 11th international conference on Ubiquitous computing, 2009. [Acceptance rate: 12.9%]

[C.1] Froehlich, J., **Dillahunt, T.**, Klansja, P., Mankoff, J., Consolvo, S., Harrison, B., Landay, J. UbiGreen: investigating a mobile tool for tracking and supporting green transportation habits. Proceedings of the 27th international conference on Human factors in computing systems, 2009. [Acceptance rate: 24%]

WORKSHOPS (LIGHTLY REVIEWED)

[W.1] **Dillahunt, T.R.**, Erete, S., Galusca, R., Israni, A., Nacu, D., Sengers, P. (2017). Proceedings of the 20th international conference of the Computer Supported Cooperative Work and Social Computing (CSCW) Conference Workshop: Reflections on design methods for underserved communities.

WORKSHOP POSITION PAPERS (LIGHTLY REVIEWED)

[WPP.5] Kameswaran, V., Marathe, M., **Dillahunt, T.**, Pal, Joyojeet, Reinecke, K., and Toyama, K. Project boost: Addressing the "socio" in a socio-technical system to improve income-earning opportunities in urban America. In Proceedings of the 33rd international conference on Human factors in computing systems (CHI'16). Workshop: Development Consortium 2016: HCI Across Borders.

[WPP.4] **Dillahunt, T.** Creating resilient communities for post-sustainable times, In Proceedings of the 31st international conference on Human factors in computing systems (CHI' 13), Workshop: Post-Sustainability, 2013.

[WPP.3] Jain, M., Shrinivasan, Y., **Dillahunt, T.** Replicating Residential Sustainability Study in Urban India. In Proceedings of the 31st international conference on Human factors in computing systems (CHI '13), Workshop: Replication 2013.

[WPP.2] **Dillahunt, T.** Mankoff, J., Forlizzi, J. A proposed framework for assessing environmental sustainability in the HCI community. In Proceedings of the 29th international conference on Human factors in computing systems (CHI '10), Workshop: Examining appropriation, reuse, and maintenance.

[WPP.1] **Dillahunt, T.**, Becker, G., Mankoff, J., Kraut, R. Motivating

environmentally sustainable behavior changes with a virtual polar bear. In *Pervasive 2008 Workshop Proceedings*. Workshop: Pervasive Persuasive Technology and Environmental Sustainability.

EXTENDED ABSTRACTS / POSTERS (LIGHTLY REVIEWED)

[E.7] Hsiao, C.Y., **Dillahunt, T.R.** (2017). People-nearby applications: How newcomers move their relationships offline and develop social and cultural capital. Proceedings of the 34th international conference on Human factors in computing systems (CHI '17). Late Breaking Work, Extended Abstracts on Human factors in computing systems.

[E.6] Wheeler, E., **Dillahunt, T.R.**, Rieh, S.Y. (2017). Opportunities to address Information poverty with social search. Proceedings of the 34th international conference on Human factors in computing systems (CHI '17). Late Breaking Work, Extended Abstracts on Human factors in computing systems.

[E.5] **Dillahunt, T.**, Brooks, C., Gulati, S. (2015). Detecting and Visualizing Filter Bubbles in Google and Bing. Extended Abstracts on Human factors in computing systems, 2015.

[E.4] Brooks, C., Stalburg, C., **Dillahunt, T.**, Robert, L. 2015. Learn with Friends: The Effects of Student Face-to-Face Collaborations on Massive Open Online Course Activities. Extended Abstracts, Learning at Scale 2015.

[E.3] Jen, B., Kaur, J., De Heus, J., **Dillahunt, T.** Analyzing Employment Technologies for Economically Distressed Individuals. Extended abstracts on Human factors in computing systems, 2014.

[E.2] **Dillahunt, T.**, Chen, B., Teasley, S. Model Thinking: Demographics and Performance of Students Unable to Afford a Formal Education. Extended abstracts on Learning @ Scale, 2014.

[E.1] Lee, M., **Dillahunt, T.**, Pendleton, B., Kraut, R., Kiesler, S. Tailoring websites to increase contributions to online communities. Extended abstracts on Human factors in computing systems (CHI, 2009).

PEER-REVIEWED ARTICLES

[A.3] Silberman, M.S., Nathan, L., Knowles, B., Bendor, R., Clear, A., Håkansson, **Dillahunt, T.**, Mankoff, J. Next steps for sustainable HCI. *Interactions*, September – October 2014.

INVITED ARTICLES

[A.2] **Dillahunt, T.** (forthcoming). Technology for Underserved Communities. *acmqueue Research for Practice: Expert-curated guides to the best of CS research.*

[A.1] **Dillahunt, T.** (2011). In the dark, out in the cold. XRDS: Crossroads, The ACM Magazine for Students. Vol(17:4, p. 39-41).

TECHNICAL REPORT

[TR.1] **Dillahunt, T.**, Mankoff, J. (2012). Design implications for social-energy applications. CMU-HCII-12-100, SCS, Carnegie Mellon University, Human-Computer Interaction Institute Collection.

PH.D. COMMITTEES

KyungMin Lee, Dissertation Committee Member, 2016
Youyang Hou, Prelim proposal and Dissertation Committee Member, 2015-2017
Yu-Jen Lin, Pre-candidate proposal and Prelim proposal Committee Member, 2015-16
Chuan-Che Huang, Pre-candidate proposal and Prelim proposal Committee Member, 2015-2016
Jasmine Jones, Prelim proposal Committee Member, 2013
Rayoung Yang, Prelim proposal Committee Member, 2013

PATENTS

United States Patent: 20,130,006,802
Title: Generating a Location-Aware Preference and Restriction-Based Customized Menu
Inventors: **Tawanna Dillahunt**, Peter Malkin, Mark N. Wegman
Assignee: IBM Research

United States Patent: 20,120,253,660
Title: Dynamic Routing Via Intelligent Mapping System
Inventors: **Tawanna Dillahunt**, Peter Malkin
Assignee: IBM Research

United States Patent: 20,120,244,843
Title: Data Session Preferences (Adaptive Mobile Messaging)
Inventors: **Tawanna Dillahunt**, Jason B. Ellis, Robert G. Farrell
Assignee: IBM Research

PROFESSIONAL ACTIVITIES/SERVICE

University of Michigan School of Information Doctoral Committee, 2016-present, 2014-2015; Faculty Search Committee, 2014-2015; Dean's Advisory Committee Member (Elected), 2015-2016; Michigan Interactive and Social Computing (MISC), Faculty Coordinator, 2013-2014

NSF NSF Review Panelist 2013

JOURNAL AND
CONFERENCE
REVIEWING

ACM CSCW, 2013-2017
INTERACT 2017
ACM Mobile HCI, 2014
ACM DIS, 2014
ACM CHI, 2008-2016
IEEE Pervasive Computing, 2009, 2010, 2013, 2017
ACM UbiComp, 2014-2016
Oxford University Press Community Development Journal, 2013
ACM User Interface Software and Technology (UIST), 2013
IEEE Information and Visualization (InfoVis), 2009
International Journal of Hospitality Management, 2016

Program
Committee

ACM Human Factors in Computing Systems (CHI), AC, 2015, 2017; ACM Designing Interactive Systems (DIS), AC, 2017; ACM Conference on Supporting Group Work (GROUP), AC, 2016; ACM ICT for Sustainability (ICT4S), AC, 2015, 2016; Florida Artificial Intelligence Research Society (FLAIRS), AC, 2011

Carnegie Mellon
University (CMU)

CMU's "A Celebration of Diversity in Science, Technology, Engineering, and Math (STEM)" panelist, 2012; CMU's Fusion Forum Panelist for undergraduates. Program for underrepresented minorities interested in graduate school, 2007-2010
Housing Authority of the City of Pittsburgh Clean Slate Panelist, 2009
Volunteer for Fostering Academic and Social Achievement (F.A.S.A.) Summer Media Technology Project, 2009

Student Volunteer

ACM Human Factors in Computing Systems (CHI), 2008, 2011