ALEX C. WILLIAMS

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CURRICULUM VITAE

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CURRENT POSITION	**Assistant Professor**, University of Tennessee, Knoxville *Min H. Kao Department of Electrical Engineering and Computer Science*

EDUCATION

University of Waterloo, Waterloo, ON, Canada *2015 − 2020*
Doctorate of Philosophy (Ph.D), Computer Science
Thesis: *Systems for Managing Work-Related Transitions*
Advisors: Edith Law and Edward Lank

Middle Tennessee State University, Murfreesboro, TN, USA *2013 - 2015*
Master's of Science (MS), Computer Science
Thesis: *Computationally Accelerated Papyrology*
Advisors: Hyrum Carroll and John Wallin

Middle Tennessee State University, Murfreesboro, TN, USA *2008 - 2013*
Bachelor's of Science (BS), Computer Science

RESEARCH EXPERIENCE

University of California, Irvine *Winter 2020, Summer 2020*
Postdoctoral Researcher, School of Info. & Computer Sciences
with: Gloria Mark

Mozilla Research, Mountain View, CA, USA *Fall 2019*
HCI Research Intern, Emerging Technologies Group
with: Jofish Kaye and Janice Tsai

Microsoft Research, Redmond, WA, USA *Summer 2019*
Research Intern, Knowledge Tech. and Intelligent Experiences Group
with: Ryen White and Shamsi Iqbal

Microsoft Research, Redmond, WA, USA *Summer 2018*
Research Intern, Information and Data Sciences Group
with: Shamsi Iqbal, Adam Fourney, and Ryen White

Microsoft Research, Redmond, WA, USA *Summer 2017*
Research Intern, Productivity Group
with: Jaime Teevan and Shamsi Iqbal

University of Oxford, Oxford, UK *Summer 2014, Winter 2015*
Research Scientist, Faculty of Classics
with: James Brusuelas

Oak Ridge National Laboratory, Oak Ridge, TN, USA *Summer 2013*
Research Intern, Computational Sciences and Engineering
with: Georgia Tourassi

Oak Ridge National Laboratory, Oak Ridge, TN, USA *Summer 2012*
Research Intern, Computational Sciences and Engineering
with: Georgia Tourassi

Middle Tennessee State University, Murfreesboro, TN, USA *Winter 2012*
Undergraduate Research Assistant, Computational Science
with: Hyrum Carroll

PUBLICATIONS

Peer-Reviewed Conference Proceedings Peer-Reviewed Conference Proceedings

[C.1] H. Kaur, **A.C. Williams**, D. McDuff, K. Rowan, M. Czerwinski, W. Lasecki, J. Teevan, and S. Iqbal. Optimizing for Happiness and Productivity: Modeling Opportune Moments for Transitions and Breaks at Work. In *Proceedings of the 2020 Conference on Human Factors in Computing*. Honolulu, HI. 2020. (*To Appear*)

[C.2] **A.C. Williams**, H. Kaur, J. Teevan, R. White, S. Iqbal, and A. Fourney. Mercury: Empowering Programmers' Mobile Work Practices with Microproductivity. In *Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology*, 2019. New Orleans, LA, USA.

[C.3] **A.C. Williams**, H. Kaur, G. Mark, A. Thompson, S. Iqbal and J. Teevan. Supporting Workplace Detachment and Reattachment with Conversational Intelligence. In *Proceedings of the 2018 Conference on Human Factors in Computing*. Montreal, Canada.

[C.4] **A.C. Williams**, J. Goh, C.G. Willis, J. Brusuelas, A. Ellison, C. Davis, and E. Law. Deja Vu: Characterizing Worker Consistency Using Task Consistency. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2017)*. Quebec City, Canada.

[C.5] E. Law, K. Gajos, A. Wiggins, M. Gray, and **A.C. Williams**. Crowdsourcing as a Tool for Research : Implications of Uncertainty. In *Proceedings of the 20th ACM Conference on Computer Supported Cooperative Work & Social Computing*, 2017. Portland, OR.

[C.6] T. Tse, J. Salamon, **A.C. Williams**, H. Jiang, and E. Law. Ensemble: A Hybrid Human-Machine System for Generating Melody Scores from Audio. In *Proceedings of ISMIR 2016*, 2016. New York, NY.

[C.7] **A.C. Williams**, A.Santarsiero, C.Meccariello, G. Verhasselt, H.D. Carroll, J.F. Wallin, D. Obbink, and J.H. Brusuelas. Proteus: A Platform for Born Digital Editions of Literary Papyri. In *Proceedings of the 2015 International Congress on Digital Cultural Heritage*, 2015. Grenada, Spain.

[C.8] **A.C. Williams**, J.F. Wallin, H. Yu, M. Perale, H.D. Carroll, A. Lamblin, L. Fortson, D. Obbink, C.J. Lintott, and J.H. Brusuelas. A Computational Pipeline for Crowdsourced Transcriptions of Ancient Greek Papyrus Fragments. In *Proceedings of the 2014 IEEE International Conference on Big Data*, 2014. Washington D.C., USA.

[C.9] **A.C. Williams**, H.D. Carroll, J.F. Wallin, J. Bruseulas, L. Fortson, A. Lamblin, and H. Yu. Identification of Ancient Greek Papyrus Fragments Using Genetic Sequence Alignment Algorithms. In *Proceedings of the 2014 IEEE International Conference on e-Science*, Guaruja, Brazil.

[C.10] H.D. Carroll, **A.C. Williams**, A.G. Davis, and J.L. Spouge. False Discovery Rate for Homology Searches. In *Proceedings of the 8th Brazilian Symposium on Bioinformatics, pp 194-201*, 2013.

[C.11] **A.C. Williams**, A. Hitt, S. Viosin, and G. Tourassi. Automated Assessment of Bilateral Breast Volume Asymmetry as a Breast Cancer Biomarker during Mammographic Screening. In *SPIE Medical Imaging*, 2013.

Peer-Reviewed Journal Publications

[J.1] **A.C. Williams**, J. Kiseleva, S. Iqbal, R. White. "Life Is Not Siloed These Days": Negotiating the Work-Life Boundary with Task Management Tools. (*Under Review*)

[J.2] **A.C. Williams**, G. Mark, K. Milland, E. Lank, and E. Law. The Perpetual Work Life of Crowdworkers: How Tooling Practices Increase Fragmentation in Crowdwork. In *Proceedings of the ACM on Human-Computer Interaction 3*. CSCW (November 2019).

[J.3] H. Kaur, **A.C. Williams**, A. Loomis-Thompson, W. Lasecki, S. Iqbal, and J. Teevan. Creating Better Action Plans for Writing Tasks via Vocabulary-Based Planning. In *Proceedings of the ACM on Human-Computer Interaction 2*. CSCW (November 2018).

[J.4] C. Willis, E. Law, **A.C. Williams**, B. Franzone, R. Bernardos, L. Bruno, C. Hopkins, C. Schorn, E. Weber, D. Park and C. Davis. CrowdCurio: a crowdsourcing platform to facilitate climate change studies using herbarium specimens. *New Phytologist*. 2017.

[J.5] H.D. Carroll, **A.C. Williams**, A.G. Davis, and J.L. Spouge. Improving retrieval efficacy in homology search using the false discovery rate. In *ACM/IEEE Transactions on Computional Biology and Bioinformatics*. 2014.

Peer-Reviewed Workshop and Position Papers

[P.1] **A.C. Williams**, H. Kaur, E. Lank, E. Law. Guiding Attention with Tasks and Emotions in Conversational Agents. *In "Conversational Agents: Constructing Action Plans from a Wave of Research and Development" at the 2019 ACM Conference on Human Factors in Computing* . 2019.

[P.2] H. Kaur, **A.C. Williams**, W. Lasecki. Building Shared Mental Models between Humans and AI for Effective Collaboration. *In "Where is the Human? Bridging the Gap Between AI and HCI" at the 2019 ACM Conference on Human Factors in Computing.* 2019.

[P.3] **A.C. Williams**, A. Vtyurina, E. Lank, and E. Law. Designing Voice Interfaces for Accessible Crowdwork. *The 1st Workshop on Accessible Voice Interfaces at the 21st ACM Conference on Computer Supported Cooperative Work & Social Computing.* 2018.

[P.4] **A.C. Williams**, J. Bradshaw, M. Schaekermann, T. Tse, W. Callaghan, and E. Law. The Big Picture: Preserving Context in the Decomposition of Complex Expert Tasks. *The 1st Workshop on Microproductivity at the 2016 ACM Conference on Human Factors in Computing (CHI'16)*, 2016.

[P.5] M. Schaekermann, E. Law, **A.C. Williams**, and W. Callaghan. Resolvable vs. Irresolvable Ambiguity: A New Hybrid Framework for Dealing with Uncertain Ground Truth. *The 1st Workshop on Human-Centered Machine Learning at the 2016 ACM Conference on Human Factors in Computing (CHI'16)*, 2016.

HONORS AND AWARDS	**Vanier Graduate Scholarship Competition**, *National Finalist*	*2016*
	CSST Summer Research Institute, *Selected Ph.D. Participant*	*2016*
	Cheriton Type II Scholarship, University of Waterloo	*2017 - 2020*
	International Doctoral Student Award, University of Waterloo	*2015 - 2020*
	GO-Bell Scholarship, University of Waterloo	*2016*
	Paul Hutcheson Outstanding Graduate Student Scholarship, MTSU	*2015*
	Chester and Mary Martin Graduate Scholarship, MTSU	*2013*
	1st Place, Deloitte's HCI + Mobile Application Design Competition	*2013*
	3rd Place, MTSU ACM Programming Competition	*2013*
	3rd Place, MTSU Scholar's Week Poster Session	*2013*

OUTREACH AND PUBLICITY

ACM TechNews: "*Ph.D. Student Leads Research on Tool That Lets Programmers Pick Up Work on Mobile Devices*". 2019.

University of Waterloo: "*Ph.D. Student Alex Williams Leads Research on Tool That Lets Programmers Pick Up Work on Mobile Devices*". 2019.

Exchange Magazine: "*New tool lets programmers pick up work on mobile devices*". 2019.

CIO Dive: "*How Microsoft is using bots and AI for its workers*". 2018.

Windows Weekly Podcast: "*CODENAME PICK: SwitchBot from Microsoft*". 2018.

ZDNet: "*Microsoft looks to bots to make employees more productive*". 2018.

The Independent: "*Ancient Egypt: Citizen scientists reveal tales of tragedy unearthed from centuries-old rubbish dump.*" 2016.

SciStarter: "*Uncovering 'Ancient Lives' with Citizen Science.*" 2014.

Murfreesboro Post: "*MTSU's Computer Science makes impact.*" 2014.

FUNDING

Waterloo Citizen Science Laboratory: Infrastructure Project Funding (2016)
Worked with E. Law & M. Schaekermann on a grant to provide infrastructure for scientific crowdsourcing studies. *$144,703 awarded via Canadian Foundation for Innovation.*

Fragmentary Papyrus Identification Using Sequence Alignment Algorithms (2013)
Worked with Hyrum Carroll on an internal grant to fund my undergraduate research assistantship at MTSU. *$7,800 awarded via Middle Tennessee State University FRCAC Grant.*

STUDENT ADVISING	Stefanie Mikloska (Waterloo), Helga Jiang (Waterloo), Clare Ng (Waterloo), Jarvis Xie (Waterloo), Yansong Ke (Waterloo), Mark Martinez (Waterloo), Sophia Guo (Waterloo).

TEACHING

Instructor

CS 798: AI, Ethics, and Law, University of Waterloo & York University *Fall 2017,*
co-taught with: Maura Grossman. 30 graduate students per term. *Fall 2018*

CS 349: User Interfaces, University of Waterloo *Winter 2018*
co-taught with: Jeff Avery. 180 undergraduate students.

CSCI 3130: Computer Architecture, Middle Tenn. State University *Fall 2013*
co-taught with: Anthony Mills. 30 undergraduate students per term. *Spring 2014*

CSCI 1150: Computer Orientation, Middle Tenn. State University *Spring 2015*
taught independently. 30 undergraduate students.

Guest Lecturer

CS 492: Social Implications of Computing, University of Waterloo *Fall 2018*
with: Robin Cohen. 30 graduate students per term.

Teaching Assistant

CS 349: User Interfaces, University of Waterloo *Winter 2016, Summer 2016,*
with: Jeff Avery, Edward Lank, Byron Becker *Fall 2016, Winter 2017, Fall 2019*
Terms ranged from 60 to 280 undergraduate students.

SERVICE

Co-Organizer

Co-Organizer, HCOMP 2019: CrowdCamp – A Hack-a-thon for Human-AI Collaboration
Co-Organizer, CSCW 2017: The Science of Citizen Science Workshop
Co-Organizer, CHI 2017: Designing for Curiosity Workshop

Organizing / Program Committee

Committee Member, CSCW 2020. *Workshops Co-Chair*
Committee Member, WWW 2020. *Crowdsourcing and Human Computation Track*
Committee Member, HCOMP 2017: Workshop on Human Comp. for Image & Video Analysis

Reviewer

CHI, CSCW, TOCHI, IUI, UIST, WWW, Citizen Science Association.

Faculty Search Committee

Graduate Representative, Computer Science, University of Waterloo *2018*
Undergraduate Representative, Computer Science, Middle Tenn. State University *2013*

REFERENCES

Edith Law, PhD co-supervisor
Associate Professor, Computer Science, University of Waterloo
Email: edith.law@uwaterloo.ca

Jaime Teevan, Internship Mentor
Chief Scientist, Experiences and Devices, Microsoft
Email: teevan@microsoft.com

Shamsi Iqbal, Internship Mentor
Senior Researcher, Information and Data Sciences, Microsoft Research + AI
Email: shamsi@microsoft.com

Gloria Mark, Collaborator
Full Professor, Computer and Information Sciences, University of California at Irvine
Email: gmark@uci.edu