

**School of Electrical and Computer Engineering
Purdue University**

As of June 4, 2022

Name: Alexander J. Quinn

Education:

BS	June 2002	University of Washington
MS	June 2009	University of Maryland
PhD	August 2014	University of Maryland

Professional and Honorary Society Memberships:

Association for Computing Machinery
member, 2006 – present

Association for the Advancement of Artificial Intelligence
member, 2014 – 2015

Honors and Awards

- [1] Outstanding Engineering Graduate Mentor, Purdue College of Engineering, 2017
- [2] Best Paper Award - 2nd Workshop on Human Computation for Image and Video Analysis (GroupSight) at the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2017)

Professional Experience

Sept. 2000 – Dec. 2000	Teaching Assistant, Dept. of Computer Science, University of Washington, Seattle, WA
Mar. 2001 – June 2001	Teaching Assistant, Dept. of Computer Science, University of Washington, Seattle, WA
Sept. 2002 – Dec. 2002	Teaching Assistant, Dept. of Computer Science, University of Washington, Seattle, WA
Dec. 2000 – Oct. 2003	Software developer, part-time, OlympusNet, Port Townsend, WA
May 2002 – Sept. 2003	Research assistant / technical consultant, School of Dentistry, University of Washington, Seattle, WA
July 2003 – July 2004	Programmer Analyst, Inventory Systems Div., Nordstrom, Seattle, WA

July 2004 – July 2006	Assistant Language Teacher, High School of the University of Hyogo, Japan
May 2007 – Sept. 2007	Software development intern, Library of Congress, Washington, D.C.
Aug. 2006 – Aug. 2014	Graduate Research/Teaching Assistant, University of Maryland, College Park, MD
Aug. 2014 – present	Assistant Professor, Purdue University

Research Grants and Contracts Received

- [1] Principle Investigator (with Saurabh Bagchi, PI), Google Faculty Research Award, awarded 2/27/2015, \$52,554 (Prof. Quinn responsible for \$26,277).
- [2] Co-PI (with Karthik Ramani, PI; David Cappelleri Co-PI; James V. Krogmeier Co-PI), Engineering Faculty Conversation Seed Grant, Purdue Research Foundation; awarded 4/15/2018, \$75,000 (Prof. Quinn responsible for \$14,719).
- [3] Co-PI (with Karthik Ramani, PI; Thomas Redick, Co-PI; Shimon Nof, Co-PI; Kylie Peppler, Co-PI; Daron Acemoglu, Co-PI), National Science Foundation, Future of Work at the Human-Technology Frontier (FW-HTF), start date 10/1/2018, \$2,500,000 (Prof. Quinn responsible for \$368,000).
- [4] Co-PI (with Karthik Ramani, PI; Kylie Peppler, Co-PI, Niklas Elmqvist, Co-PI; Thomas Reddick, Co-PI), National Science Foundation, Convergence Accelerator, start date 9/1/2020, \$5,000,000 *Cooperative Agreement* (Funds were central
- [5] Co-PI (with Sanjay Rao, PI; Ramesh Govindan, Co-PI, Antonio Ortega, Co-PI), National Science Foundation, Computer and Information Science and Engineering (CISE) Core Programs – Computer and Network Systems (CNS), start date 10/1/2020, \$1,200,000 (Prof. Quinn responsible for \$300,000).

Professional Society Activities

Organization:	AAAI (Association for the Advancement of Artificial Intelligence)
Activity:	Session Chair, HCOMP 2017-2018
Organization:	AAAI (Association for the Advancement of Artificial Intelligence)

Activity: Workshop Co-organizer, Subjectivity, Ambiguity, and Disagreement at HCOMP 2018.

Organization: ACM SIGCHI (Special Interest Group for Computer-Human Interaction)

Activity: Program Committee, CHI 2018 (17 submissions)

Organization: ACM SIGCHI (Special Interest Group for Computer-Human Interaction)

Activity: Program Committee, Creativity & Cognition 2019

Organization: IEEE (Institute of Electrical and Electronics Engineers)

Activity: Workshop Co-chair. The 3rd IEEE Workshop on Human-in-the-loop Methods and Human Machine Collaboration in BigData (IEEE HMDData 2019)

Organization: The World Wide Web Conference (TheWebConf)

Activity: Workshop Co-organizer, Subjectivity, Ambiguity, and Disagreement at TheWebConf 2019.

Organization: AAI (Association for the Advancement of Artificial Intelligence)

Activity: Program Committee, HCOMP 2018-2020

Organization: IEEE (Institute of Electrical and Electronics Engineers)

Activity: Workshop Co-chair. The 4th IEEE Workshop on Human-in-the-loop Methods and Human Machine Collaboration in BigData (IEEE HMDData 2020)

Organization: AAI (Association for the Advancement of Artificial Intelligence)

Activity: Workshops Co-chair, HCOMP 2021

Organization: IEEE (Institute of Electrical and Electronics Engineers)

Activity: Workshop Co-chair. The 5th IEEE Workshop on Human-in-the-Loop Methods and Future of Work in BigData (IEEE HMDData 2021)

Organization: The World Wide Web Conference (TheWebConf)

Activity: Senior Program Committee, 2022

PhD Thesis Supervision Completed

Meng-Han Wu Jul. 22, 2021. “Task Design For Future Of Work With Crowdsourcing And Augmented Reality” – employed at Google (Mountain View, CA) as Software Engineer

Abdullah Alshaibani Jul 21, 2021. "Privacy-Preserving Face Redaction Using Crowdsourcing" – employed at Kuwait University as Assistant Professor (with tenure)

Gaoping Huang Apr. 21, 2021. "Efficient Human-Machine Work Transfer Through Latent Structure Decomposition" – at Tencent (Shenzhen, China) as Applied Research Engineer

Master's Thesis Supervision Completed

Sylvia T. Carrell Apr. 2018. "SafeguaRDP: An Architecture for Mediated Control of Desktop Applications by Untrusted Crowd Workers" – at Sandia National Labs

Apeksha Kumavat Dec. 2016. "Video annotation by crowd workers with privacy-preserving local disclosure" – hired by Ford in autonomous vehicle development

ECE Project (495, 496, 695, 696, 697) Supervision Completed

Jordan Huffaker Dec. 2016. "Relay: Interface support for list-making by crowds." – conference paper submitted

Vipul Vishnu Bhat May 2016. Experimental apparatus for comparing redaction power of several methods of redacting sensitive information in images

Master's and PhD Thesis Students Currently Being Supervised

Seunggeun Chi	PhD (first year)
Mohammed Metwaly	PhD (first year)
V. K. Chaithanya Manam	PhD (seventh year)
Yuetling Wong	PhD (ninth year; continuing for Niklas Elmqvist)

Courses Developed

ECE 695	Human-Computer Interaction – introduced in Spring 2016
ECE 264	Advanced C Programming – major changes in Fall 2015
ECE 695	Crowd-Powered Systems – introduced in Spring 2015

School Committee Activities

Committee:	Graduate Committee
Activity:	Member, 2014-2016

Committee: Computer Engineering Area Committee
Activity: Member, 2014-present

Committee: Curriculum Committee
Activity: Member, 2016-2018

Serial Journal Articles

- [1] E. Bonsignore, A. J. Quinn, A. Druin, B. B. Bederson. "Sharing stories in 'in the wild': A mobile storytelling case study using StoryKit." *ACM Transactions on Computer-Human Interaction (TOCHI)*. 20, 3, Article 18 (July 2013), 38 pages.
- [2] P. Resnik, O. Buzek, Y. Kronrod, C. Hu, A. J. Quinn, B. B. Bederson. "Using Targeted Paraphrasing and Monolingual Crowdsourcing to Improve Translation." *ACM Transactions on Intelligent Systems and Technology (TIST)*. 4, 3, Article 38 (July 2013). 21 pages.
- [3] B. B. Bederson, G. Jin, P. Leslie, A. J. Quinn, B. Zou. "Incomplete disclosure: evidence of signaling and countersignaling." *American Economic Journal: Microeconomics*. February 2018. 41 pages.

Conference Proceedings and Presentations

- [1] A. Quinn. "An Interrogative Approach to Novice Programming." Proceedings of the IEEE 2002 Symposia on Human Centric Computing Languages and Environments (HCC 2002). 83-85, 3 pages.
- [2] T. D. Wang, C. Plaisant, A. J. Quinn, R. Stanchak, S. Murphy, B. Shneiderman. "Aligning temporal data by sentinel events: discovering patterns in electronic health records." Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2008). 457-466, 10 pages. [Acceptance rate: 22%]
- [3] A. J. Quinn, C. Hu, T. Arisaka, A. Rose, B. B. Bederson. "Readability of scanned books in digital libraries." Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2008). 705-714, 10 pages. [Acceptance rate: 22%]
- [4] B. B. Bederson, A. Quinn, A. Druin. "Designing the reading experience for scanned multi-lingual picture books on mobile phones." Proceedings of the 9th ACM/IEEE-CS joint conference on Digital libraries (JCDL 2009). 305-308, 4 pages. [Acceptance rate: 32%]

- [5] A. Druin, B. B. Bederson, Quinn, A. "Designing intergenerational mobile storytelling." Proceedings of the 8th International Conference on Interaction Design and Children (IDC 2009). 325-328, 4 pages. [Acceptance rate: 32%]
- [6] P. Resnik, O. Buzek, C. Hu, Y. Kronrod, A. Quinn, B. B. Bederson. "Improving translation via targeted paraphrasing." Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing (EMNLP 2010). 127-137, 11 pages. [Acceptance rate: 25%]
- [7] B. B. Bederson, A. J. Quinn. "Web workers unite! addressing challenges of online laborers." CHI 2011 Extended Abstracts on Human Factors in Computing Systems alt.chi (CHI EA 2011). 97-106, 10 pages. [Acceptance rate: 59%]
- [8] A. J. Quinn, B. B. Bederson. "Human computation: a survey and taxonomy of a growing field." Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2011). 1403-1412, 10 pages. [Acceptance rate: 27%]
- [9] A. J. Quinn, B. B. Bederson, "AskSheet: Efficient Human Computation for Decision Making with Spreadsheets." Proceedings of ACM Conference on Computer Supported Cooperative Work (CSCW 2014). 11 pages. [Acceptance rate: 27%]
- [10] G. Huang, A. J. Quinn, "BlueSky: Charting entire idea spaces through iterative refinement." AAI Conference on Human Computation and Crowdsourcing (HCOMP 2015). 2 pages (abstract accompanying live demonstration and poster).
- [11] A. Kumavat, A. J. Quinn. "Show Me More! Worker-guided Privacy Filtering for Crowd Video Annotation." In the 1st Workshop on Human Computation for Image and Video Analysis (GroupSight) at the AAI Conference on Human Computation and Crowdsourcing (HCOMP 2016). 4 pages.
- [12] G. Huang, A. J. Quinn. "BlueSky: Crowd-Powered Uniform Sampling of Idea Spaces." In *Proceedings of the 11th ACM Conference on Creativity & Cognition (C&C 2017)*. 12 pages. [Acceptance rate: 28.9%, 28/97]
- [13] A. Alshaibani, A. J. Quinn. "IntoFocus: Privacy-preserving Crowd-powered Image Redaction." In the 2nd Workshop on Human Computation for Image and Video Analysis (GroupSight) at the AAI Conference on Human Computation and Crowdsourcing (HCOMP 2017). 4 pages. Best paper.

- [14] M. Wu, A. J. Quinn. "Confusing the crowd: Task instruction quality on Amazon Mechanical Turk." In the 6th AAI Conference on Human Computation and Crowdsourcing (HCOMP 2017). 10 pages. [Acceptance rate: 28.9%, 24/83]
- [15] V. K. C. Manam, A. J. Quinn. "WingIt: Efficient Refinement of Unclear Task Instructions". In the 7th AAI Conf. on Human Computation and Crowdsourcing (HCOMP 2018). 11 pages. [Acceptance rate: 29.3%, 22/75]
- [16] V. K. C. Manam, D. Jampani, M. Zaim, M. Wu, A. J. Quinn. 2019. "TaskMate: A Mechanism to Improve the Quality of Instructions in Crowdsourcing." In Companion Proceedings of the 2019 World Wide Web Conference (WWW '19 Companion), May 13–17, 2019, San Francisco, CA, USA. ACM, New York, NY, USA 10 Pages.
- [17] P. O. Dusadeerungsikul, M. Sreeram, X. He, A. Nair, K. Ramani, A. J. Quinn, S. Y. Nof. 2019. Collaboration Requirement Planning Protocol for HUB-CI in Factories of the Future. 25th International Conference on Production Research 2019.
- [18] G. Huang, P. S. Rao, M. Wu, M. Wadhawan, S. Y. Nof, S. Chandrasegaran, K. Ramani, A. J. Quinn. Vipo: Spatial-Visual Programming with Functions for Robot-IoT Workflows. In the Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020). [Acceptance rate: 24.3%, 760/3126].
- [19] A. Alshaibani, S. Carrell, L. Tseng, J. Shin, A. J. Quinn. Privacy-Preserving Face Redaction Using Crowdsourcing. In the 8th AAI Conf. on Human Computation and Crowdsourcing (HCOMP 2020) [Acceptance rate: 27%, 15/55].
- [20] G. Huang, M. Wu, A. J. Quinn. Task Design for Crowdsourcing Complex Cognitive Skills. In the 2021 CHI Conference on Human Factors in Computing Systems Extended Abstracts Case Studies (CHI EA 2021) [Acceptance rate: 21%].
- [21] G. Huang, X. Qian, T. Wang, F. Patel, M. Sreeram, Y. Cao, K. Ramani, A. J. Quinn. AdapTutor: An Adaptive Tutoring System for Machine Tasks in Augmented Reality. In the Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI 2021). [Acceptance rate: 26.3%, 749/2844].
- [22] A. Alshaibani, A. J. Quinn. Pterodactyl: Two-Step Redaction of Images for Robust Face Deidentification. In the 9th AAI Conf. on Human Computation and Crowdsourcing (HCOMP 2021) [Acceptance rate: 27.6%, 16/58].

Working papers

- [1] "Incomplete disclosure: evidence of signaling and countersignaling." National Bureau of Economic Research (NBER) Working Paper No. w22710. 41 pages. (This is superseded by a revision to be published in American Economic Journal: Microeconomics in Feb. 2018.)

Invited Lectures

- [1] "Human computation" Johns Hopkins University, for undergraduate crowdsourcing course (given remotely). Baltimore, MD. Spring 2013.
- [2] "Querying Crowds" University of Pennsylvania, for graduate crowdsourcing course. Philadelphia, PA. Fall 2013.
- [3] "Beating AI at its own game with human computation." Dawn Or Doom 2016. West Lafayette, IN. 10/4/2016.
- [4] "Fair pay for crowd-powered list-making." Crowdsourcing and Collective Intelligence workshop of the Ninth International Conference on Complex Systems (ICCS). 7/23/2018.
- [5] "Crowdsourcing and usability". Carleton University; Collaborative Learning of Usability Experiences (CLUE), 11/28/2018.

Technical Reports

- [1] A. J. Quinn, B. B. Bederson, T. Yeh, A. Quinn, B. B. Bederson. "CrowdFlow: Integrating Machine Learning with Mechanical Turk for Speed-Cost-Quality Flexibility." HCIL-2010-09, Human-Computer Interaction Lab, University of Maryland, 2010. 8 pages.
- [2] A. J. Quinn, B. B. Bederson. "A Taxonomy of distributed human computation." HCIL-2009-23, Human-Computer Interaction Lab, University of Maryland, 2009. 10 pages.

Pending Publications

- [1] M. Wu, A. J. Quinn. "Curve payments: guiding crowd workers to the tasks they can do best." 9 pages.
Status: Rejected Jan. 2019 by 28th The Web Conference (TheWebConf)
<https://engineering.purdue.edu/~aq/submitted/www2019-aptitude.pdf>

- [2] G. Huang, A. J. Quinn. "CoStory: Efficient Collaboration on Interaction Design Storyboards." 12 pages. Submitted to ACM Conference on Human Factors in Computing Systems (CHI 2019; 23.7% acceptance overall).
Status: Rejected Dec. 2018.
<https://engineering.purdue.edu/~aq/submitted/chi2019-costory.pdf>
- [3] J. Huffaker, A. J. Quinn. "Relay: Interface Support For List-Making By Crowds." Submitted to 30th Annual ACM Symposium on User Interface Software and Technology (CHI 2019; 23.7% acceptance). 12 pages.
Status: Rejected Dec. 2018
<https://engineering.purdue.edu/~aq/submitted/chi2019-relay.pdf>
- [4] A. Kumavat, A. J. Quinn. "Fovea: Privacy-Preserving Video Coding With Crowds Through Region Selectivity." Submitted to ACM CHI Conference on Human Factors in Computing Systems. 11 pages.
Status: Rejected Dec. 2016
<http://engineering.purdue.edu/~aq/submitted/chi2017-fovea.pdf>

Patents Approved and Patent Applications

1. K. Ramani, G. Huang, A. J. Quinn, Y. Cao, T. Wang, X. Qian, "Adaptive Tutoring System for Machine Tasks in Augmented Reality," U. S. Patent Application No. 17/517,949 filed November 3, 2021.

Activities as a Referee

2012	ACM Transactions on Intelligent Systems and Technology (TIST), 2012
2012	AAAI Human Computation Workshop
2012	IEEE Internet Computing
2012	Journal of the American Society for Information Science and Technology (JASIST)
2015	The Knowledge Engineering Review
2013-2015	ACM Computer Supported Cooperative Work (CSCW)
2012, 2016	Journal of the Association for Information Science and Technology (JASIST)
2017	ACM Transactions on Computer-Human Interaction (TOCHI)
2015,2018	ACM Symposium on User Interface Software and Technology
2019	AAAI Conference
2016-2021	The Web Conference, Crowd Track (TheWebConf; fka WWW).
2011-2021	ACM Human Factors in Computing Systems (CHI) 2017: associate chair (17 submissions)
2019-2021	ACM Creativity & Cognition (C&C)
2016-2022	AAAI Conference on Human Computation and Crowdsourcing (HCOMP)

2022

The Web Conference, Social Web Track (TheWebConf; fka WWW): senior program committee.

Other activities

- [1] PhD thesis committee or advisory committee member:
- a. Abdullah Alshaibani
 - b. Yuanzhi Cao (mechanical engineering)
 - c. Tommy Y. Chang
 - d. Seunggeun Chi
 - e. Subramanian Chidambaram (mechanical engineering)
 - f. Runlin Duan (mechanical engineering)
 - g. Terrell K. Glenn (mechanical engineering)
 - h. Nadra Guizani
 - i. Fengming He
 - j. Xiyun Hu (mechanical engineering)
 - k. Gaoping Huang
 - l. Ke Huo (mechanical engineering)
 - m. Ananya Ipsita
 - n. Sujin Jang (mechanical engineering)
 - o. Mosab Abdulaziz Khayat
 - p. Sang-Pil Kim
 - q. Ziyi Liu
 - r. V. K. Chaithanya Manam
 - s. Juan Sebastian Martinez Carvajal
 - t. Mohammed Metwaly
 - u. Luis R Paredes Ayala

- v. Cecil Piya (mechanical engineering)
 - w. Constantine Roros
 - x. Jingyu Shi (mechanical engineering)
 - y. Xun Qian
 - z. Rohan Sarkar
 - aa. Guizhen Wang
 - bb. Tianyi Wang (mechanical engineering)
 - cc. Meng-Han Wu
 - dd. Calvin Yau
 - ee. Sang Ho Yoon (mechanical engineering)
 - ff. Jiawei Zhang
 - gg. Jieqiong Zhao
- [2] MS thesis committee member:
- a. Ali Baigelenov (computer graphics technology)
 - b. Gina Marie Clepper
 - c. Apeksha Dipak Kumavat
 - d. Sachin Kumarswamy (CGT)
 - e. Sai Swarup Reddy (mechanical engineering)
 - f. William ("Trey") Pierce Maxam
- [3] MSECE advisory committees:
- a. Ali Baigelenov
 - b. Emily Fredette
 - c. Frederico Marcolino Quintao Severgnini
 - d. Hang Huang
 - e. Hanye Xu

- f. Juan Sebastian Martinez Carvajal
- g. Li-Hsin Tseng
- h. Luis R. Paredes Ayala
- i. Mosab Abdulaziz Khayat
- j. Richard M. Marcus
- k. Pachin Raja
- l. Vedapalle Sri S Reddy
- m. Joseph Divyan Thomas
- n. Nathan B. Ankomah-Mensah
- o. Sang-Won Shim
- p. Weichang Tang
- q. Yi-Ling Chen