

## Emma Dixon

PhD Candidate in Human Computer Interaction  
Human Computer Interaction Lab (HCIL) | Trace Research and Development Center  
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### Research Interests:

Human-computer Interaction (HCI); Mixed Methods Analysis; Accessibility; Socio-technical Systems.

My research interests are to explore the design of socio-technical systems which empower people to improve their own health and well-being. I take a human-centered design approach, grounding my work deeply in situated understanding of people's experiences.

### Education:

Aug. '18 – May '22 Doctor of Philosophy	University of Maryland, College Park Information Studies: Focus, Human-computer Interaction Advisor: Dr. Amanda Lazar
Aug. '14 – May '18 Bachelor of Science	Clemson University Industrial Engineering: Focus, Human Factors Engineering Advisor: Dr. Kapil Chalil Madathil

### Skills:

Research	Contextual inquiry, participatory action research, usability testing, co-design workshops, ethnography, heuristic evaluation, content analysis, experimental design qualitative and quantitative analysis (R, SPSS, Minitab)
Design	Prototyping: Adobe XD, Figma Drawing and Simulation Programs: Google Jamboards, Solidworks, Arena
Programming	Matlab, Visual Basic, Javascript, HTML, CSS
Certifications	Lean Six Sigma Green Belt

### Experience:

Aug '20 – Current	<b>National Science Foundation Graduate Research Fellowship</b> The Trace Research and Development Center, HCIL, University of Maryland, College Park. Advisor: Dr. Amanda Lazar
Aug '18 – Aug'20	<b>Graduate Research Assistant</b> The Trace Research and Development Center, HCIL, University of Maryland, College Park. Advisor: Dr. Amanda Lazar
Aug '16 – Aug '18	<b>Undergraduate Research Assistant</b> Human System Integration Lab, Clemson University, Advisor: Dr. Kapil Chalil Madathil
May 17'– Aug'17	<b>NSF Research Experience for Undergraduates</b> Human System Integration Lab, Clemson University, Advisor: Dr. Kapil Chalil Madathil

### Publications:

[9] Wood, R., **Dixon, E.**, Elsayed-Ali, S., Shokeen, E., Lazar, A., Lazar, J. (2021). "Investigating Best Practices for Remote

<sup>1</sup> CHI and CSCW are premiere conference venues in human-computer interaction, are highly selective and comparable to or exceed many HCI journals in terms of visibility and impact.

<sup>2</sup> Formerly Emma Scharett

Summative Usability Testing with People with Mild to Moderate Dementia”. ACM Transactions on Accessible Computing (TACCESS).

[8] **Dixon, E.**, Piper, A., Lazar, A. (2021). ““Taking care of myself as long as I can”: How People with Dementia Configure Self-Management Systems”. Accepted in the Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI).

[7] **Dixon, E.**, Lazar, A. (2020). “The Role of Sensory Changes in Everyday Technology use by People with Mild to Moderate Dementia”. Proceedings of the 2020 ACM SIGACCESS Conference on Computers and Accessibility (ASSETS).

**Best Paper Nominee.**

[6] **Dixon E.**, Lazar, A. (2020). “Approach Matters: Linking Practitioner Approaches to Technology Design for People with Dementia”. Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI).

[5] Khasawneh, A., Madathil, K.C., **Dixon, E.**, Wisniewski, P., Zinzow, H., Roth R., (2020). “Examining the Self-harm and Suicide Contagion Effects of the Blue Whale Challenge on YouTube and Twitter: Qualitative Study”. JMIR Mental Health.

[4] Lazar, A., **Dixon, E.** “Safe Enough to Share: Setting the Dementia Agenda Online”. (2019) Proceedings of the ACM: Human Computer Interaction (PACM HCI 2019), CSCW. **Honorable Mention Award**

[3] Narasimha S., **Dixon E.**, Bertrand J. & Madathil K.C. (2019). “An Empirical Study to Investigate the Efficacy of Collaborative Immersive Virtual Reality Systems for Designing Information Architecture of Software Systems”. Applied Ergonomics.

[2] Narasimha S., Wilson M., **Dixon E.**, Davis N., Madathil K.C. (2019). “An Investigation of the Interaction Patterns of Peer Patrons on an Online Peer-Support Portal for Informal Caregivers of Alzheimer’s Patients”. Journal of Consumer Health on the Internet.

[1] **Scharett E.**<sup>2</sup>, Madathil K.C., Lopes S., Rogers H., Agnisarman S., Narasimha S., Dye C. (2017). “An investigation of the information sought by caregivers of Alzheimer’s patients on online peer support groups”. Cyberpsychology, Behavior, and Social Networking.

#### **Extended Abstracts, Late Breaking Work, Case Studies, Posters and Presentations (Peer Reviewed):**

[11] Chopra S., **Dixon E.**, Ganesh K., Pradhan A., Radnofsky M., Lazar A. (2021) “Designing for and with People with Dementia using a Human Rights-Based Approach”. In Case Studies of the 2021 Conference on Human Factors in Computing Systems - CHI ’21. Virtual.

[10] **Dixon E.**, Shetty A., Pimento S., and Lazar A. (2021) “Lessons Learned from Remote User-Centered Design with People with Dementia.” Springer series, *Design for Inclusion*. Proceedings of the 2021 Dementia Lab Conference.

[9] **Dixon E.**, Lazar A. (2020). “Utilizing a Participatory Action Research Method to Investigate the Trustworthiness of Online Dementia Health Information.” Workshop on Interactive Systems in Healthcare (AMIA)

[8] Maddali, T., **Dixon E.**, Pradhan A., and Lazar A. “Supporting Remote Participation When Designing with People with Dementia.” In Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing, 335–340. CSCW ’20

[7] **Dixon E.**, Lazar A., (2020). “The Perspectives of People with Dementia on End of Life Care Planning”. Workshop on HCI at End of Life and Beyond at the ACM Conference on Human Factors and Computing Systems (CHI).

[6] **Dixon E.** (2019). “Understanding the Occupational Therapists Method to Inform the Design of Technologies for People with Dementia.” In Extended Abstracts of the 2019 Conference on Human Factors in Computing Systems - CHI ’19, 1–6. Glasgow, Scotland UK.

[5] Khasawneh A., Madathil K.C., **Dixon E.**, Wisniewski P., Zinzow H., Roth, R. (2019), “An Investigation on the Portrayal of Blue Whale Challenge on YouTube and Twitter”. Proceedings of the 2019 Human Factors and Ergonomics Society Annual Meeting, Seattle, WA.

[4] **Scharett E.**<sup>2</sup>, Narasimha S., Madathil K.C., Wilson M., Davis N. & Dye C. (2018). “Informational needs of urinary

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incontinent patients on online peer support groups- a pilot study”. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Philadelphia, PA.

[3] Narasimha S., **Scharett E.**<sup>2</sup>, Bertrand J., & Madathil, K.C. (2018). “WeRSort: Preliminary results from a new method of remote collaboration facilitated by fully immersive virtual reality”. Proceedings of the 2018 Human Factors and Ergonomics Society Annual Meeting, Philadelphia, PA. **Best Student Paper Award.**

[2] **Scharett E.**<sup>2</sup>, Lopes S., Rogers H., Bhargave A., Dye C. & Madathil, K.C. (2017). “An Investigation of Information Sought by Caregivers of Alzheimer’s Patients on Online Peer-Support Groups through a Content Analysis of ALZConnected.org – A Pilot Study.” Proceedings of Human Factors and Ergonomics Society’s International Annual Meeting, Austin, TX.

[1] **Scharett E.**<sup>2</sup>, Rogers H., (2017). Identifying Information Sought by Alzheimer's Caregivers using a Content Analysis of ALZConnected.org. Presented at the 2017 South Carolina Aging Research Network Conference. **First Prize in Research Presentations.**

### Awards & Honors:

2020	ASSETS Best Paper Nominee
2020	National Science Foundation Graduate Research Program Fellowship
2020	Deans Fellowship
2019	CSCW Honorable Mention Award
2019	Technica Best Presentation in Tech + Research
2018	Human Factors and Ergonomics Society Best Student Paper Award
2018	Outstanding Undergraduate Researcher Award for the College of Engineering, Computing and Applied Sciences; Clemson University
2018	Elizabeth D. and Delbert L. Kimbler Undergraduate Research Award, Department of Industrial Engineering; Clemson University
2017	SC Aging Research Conference First Prize in Research Presentations

### Services and Mentorship

**Mentoring Undergraduate Student Researchers Assistants** (Summer 2019- till date).

- InfoSci major: Jesse Anderson, Justin Kallungal, Simone Liao
- CS major: Simrat Bhandari

### Volunteer with the World Wide Web Consortium’s Cognitive Accessibility Task Force

Worked to develop web content cognitive accessibility guidelines that include the needs of people with dementia.

### Paper reviewer

Conferences: CHI 2019 - 2021; CSCW 2020, 2021

### Research workshop at Technica—largest all-women hackathon, 2018, 2019, 2020

University of Maryland, College Park [Event organizer: Maryland Center for Women in Computing]  
Designed and either led or co-led workshops on user-centered design (supervised by Dr. Amanda Lazar), in the research track of Technica, geared towards providing hands-on research experience to undergraduate women interested in Human-Computer Interaction research.

### Student member- Association for Computing Machinery (ACM) and SICHI

### Teaching Experience

#### Guest Lecture, Spring 2021

Designing patient-centered Technology, INST 408

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Gave a guest lecture on co-design methods, including an active co-design activity with people with dementia.

### **Talks, Fall 2020**

Gave talks to the Google MAUI team and Dementia Friendly America to inform their understanding of the cognitive accessibility needs of people living with dementia and the potential of technology use for this user group.

### **Individual Teaching Experience, Spring 2021**

Information User Needs and Assessment, INST 352

Created grading rubrics, graded assignments, taught a module of classes, created surveys to get student feedback to improve the class assignments for future classes, analyzed the survey results and developed ways to improve the class based on this feedback.

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