

# The Future of Care Work: Towards a Radical Politics of Care in CSCW Research and Practice

NAVEENA KARUSALA\*, University of Washington, USA

AZRA ISMAIL\*, Georgia Institute of Technology, USA

KARTHIK BHAT, Georgia Institute of Technology, USA

AAKASH GAUTAM, Virginia Tech, USA

SACHIN PENDSE, Georgia Institute of Technology, USA

NEHA KUMAR, Georgia Institute of Technology, USA

RICHARD ANDERSON, University of Washington, USA

MADELINE BALAAM, KTH Royal Institute of Technology, Sweden

SHAOWEN BARDZELL, Pennsylvania State University, USA

NICOLA J BIDWELL, International University of Management, Namibia

MELISSA DENSMORE, University of Cape Town, South Africa

ELIZABETH KAZIUNAS, AI Now, USA

ANNE MARIE PIPER, University of California, Irvine, USA

NOOPUR RAVAL, New York University, USA

PUSHPENDRA SINGH, IIIT-Delhi, India

AUSTIN TOOMBS, Purdue University, USA

NERVO VERDEZOTO, Cardiff University, UK

DING WANG, Google AI, Singapore

Computer-Supported Cooperative Work (CSCW) and Human-Computer Interaction (HCI) have long studied how technology can support material and relational aspects of care work, typically in clinical healthcare settings. More recently, we see increasing recognition of care work such as informal healthcare provision, child and elderly care, organizing and advocacy, domestic work, and service work. However, the COVID-19 pandemic has underscored long-present tensions between the deep necessity and simultaneous devaluation of our care infrastructures. This highlights the need to attend to the broader social, political, and economic systems that shape care work and the emerging technologies being used in care work. This leads us to ask several critical questions: *What counts as care work and why? How is care work (de)valued, (un)supported, or coerced under capitalism and to what end? What narratives drive the push for technology in care work and whom does it benefit? How does care work resist or build resilience against and within oppressive systems? And how can we as researchers advocate for and with care and caregivers?* In this one-day workshop, we will bring together

---

\*Both authors contributed equally to this workshop proposal.

---

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from [permissions@acm.org](mailto:permissions@acm.org).

© 2018 Association for Computing Machinery.

Manuscript submitted to ACM

researchers from academia, industry, and community-based organizations to reflect on these questions and extend conversations on the future of technology for care work.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**.

Additional Key Words and Phrases: care work, social reproduction, feminist political economy

#### ACM Reference Format:

Naveena Karusala, Azra Ismail, Karthik Bhat, Aakash Gautam, Sachin Pendse, Neha Kumar, Richard Anderson, Madeline Balaam, Shaowen Bardzell, Nicola J Bidwell, Melissa Densmore, Elizabeth Kaziunas, Anne Marie Piper, Noopur Raval, Pushpendra Singh, Austin Toombs, Nervo Verdezoto, and Ding Wang. 2018. The Future of Care Work: Towards a Radical Politics of Care in CSCW Research and Practice. In *Woodstock '18: ACM Symposium on Neural Gaze Detection, June 03–05, 2018, Woodstock, NY*. ACM, New York, NY, USA, 8 pages. <https://doi.org/10.1145/1122445.1122456>

## 1 INTRODUCTION

Care work can broadly be defined as the maintenance of people, environments, and communities [12]. CSCW and HCI have long focused on how this labor is carried out—by, with, and for whom, challenges that arise in the process, and how it might be supported. Much of this work has taken place in the domain of health, looking at nurses, medical teams [11], and more community-based or long-term care, such as community health [14, 32], family caregiving [5, 6, 13, 22, 25], living facilities [4, 17], and the multi-faceted response to disasters [28]. Prior workshops have proposed to expand the sites of care work we study in CSCW and HCI [7, 20, 29, 31]. Park et al. suggest looking at care *networks* in health, past narrow dyads such as patient-clinician [20]. Toombs and colleagues encourage us to look beyond care within formal or siloed contexts, such as the hospital or self-care, to study *everyday care* that is always taking place within communities and how this can inform CSCW research and design [29, 31].

We extend these prior conversations to engage with feminist political economy, which in addition to studying the material and relational aspects of care work, also analyzes how care work reproduces (or resists) larger systems that organize society [2]. Scholars and activists such as Silvia Federici, Dorothy Roberts, and Vandana Shiva have analyzed how the many care infrastructures we are deeply embedded in are foundational to and serve to stabilize capitalism and colonialism [10, 24, 27]. This includes the institution of marriage and the heteronormative nuclear family, state welfare, control of women’s reproduction, and the coercion and devaluation of caring labor through gender, race, and colonialism. At the same time, when theorized from the positions of marginalized communities, we find a radical politics of care in which care labor works towards survival (which is itself resistance) and changing the conditions that produce oppression (e.g., [9, 18]). For CSCW and HCI, this body of work implies that the power structures that shape care work in turn shape the political consequences of technology for care work. Wagner, for example, in early work on technology in nursing, describes how even when tools are designed by and for care workers, they are still subverted into management tools, making it necessary to relate “the local, immediate and personal... to more global views and demands” to understand care work [33]. This workshop aims to bring this analysis to care labor beyond formal healthcare as well, looking at unpaid work in the home, domestic work, teaching, service work, wellness work, organizing, social work, and more.

This workshop is timely due to the increasing intensity of the technological gaze on care work. In recent years, CSCW and HCI have engaged with rapid changes in the technologies used in or for care work—for example, gig work platforms, AI tools, self-tracking, intelligent assistive technologies, mobile money, and fabrication tools and spaces (e.g., [1, 15, 16, 21, 23, 30]). Raval and Pal describe the platformization of beauty work in Bengaluru, India, describing how it

offers women workers modes of respectable work, while also taking advantage of their vulnerabilities and desire to earn to get them to take on risk [23]. Kaziunas et al. offer the concept of precarious intervention to describe how contexts of systemic health disparities require navigating infrastructural brokenness and multiple social worlds, combating neoliberal logics of care as an individualized problem solvable by information transfer or AI tools for behavior change [16]. More recently, Mateescu and Eubanks discuss how algorithms and surveillance mechanisms are emerging as a band-aid for chronic under-investment in care, but undermine the autonomy of carers and those being cared for [19]. These studies are just a few examples of how novel technologies are reproducing the logics that devalue caring labor and justify the lack of care infrastructures for marginalized communities.

There is also potential for a more radical politics of care to inform research and design, the complexities of which we aim to further explore in this workshop. For example, Sciannamblo et al. argue that designing with care and "commoning"—or relations based on cooperation, sharing, and responsibility towards one another and the environment—could resist labor precarity [26]. However, care relations and careful acts within capitalist systems and societies are also often contaminated and marked by individual and communal limits and norms that inform the design and distribution of care in sociotechnical systems. For example, commoning also creates exclusions and "uncommon" relations—Bidwell finds that technology configurations in rural community-based telecommunications endeavors marginalize the tempo, spatiality, and relations created in women's commoning work [3]. Not all care is automatically radical. It is thus vital to recognize the contexts and contours of care-giving in order to realize alternative politics of care.

An analysis of the politics of care work requires practice in asking critical questions of care and methodologies for doing so. It also requires drawing connections between different sites of care work that we study. It would also benefit from a transnational perspective as capitalism works along with colonialism, imperialism, and other forms of domination that shape ideology, culture, and flows of labor. Attending to feminist political economy produces an understanding of complex structural problems that, for many, raise the question of what we can do as researchers to advocate for care workers and support care work that resists oppressive systems. Thus, this workshop aims to bring together researchers studying care work in contexts across the world to draw the connections required for relating one's own work to critical perspectives on care, and advocating for and imagining a just future of care work.

## 2 WORKSHOP THEMES

By providing a space to share a wide range of experiences in seeking to understand and support care work, the workshop will allow us to develop and propose a research agenda for thinking comprehensively about the politics of care work. Our goal is to explore the following three related themes:

- **Critical Perspectives on Care Work.** This theme is intended to encourage participants to draw connections between one another's work and feminist political economy. Questions we reflect on through this theme include: What counts as care work? How do the cultural meanings, forms of control over, and economic and political contributions of care work change depending on the context? How has/does technology fit into these meanings and mechanisms? What methods are useful for comprehensively answering these questions and how can researchers and designers enable a critical reflection on complexities surrounding care work?
- **Design For and With a Radical Politics of Care.** The goal of this theme is to understand the role that design can play to meaningfully support care work that resists systems of oppression, advocacy for and by caregivers, and sociopolitical means of valuing care work. As part of this theme, we will ask: What are the continuities between participatory research and design and other design justice agendas (e.g., [8]) and care-focused research?

How can we learn from a radical politics of care rooted in, for example, mutual aid or commoning? What is the potential for speculative design as a way of understanding how to design with a radical politics of care?

- **The Future of Care Work.** Through this theme, we will explore forthcoming trends in the use of technology in care work, taking a broad view of what counts as work. We will discuss how this positionality could inform future of work discourse in CSCW and HCI, including avenues for policy change and workplace organizing. This theme also offers the opportunity to consider on a meta-level the ways that researchers do (often unpaid) care work in research and within our workplaces to create safer environments, and introspect on doing more going forward.

### 3 WORKSHOP LOGISTICS

#### 3.1 Online Spaces

The workshop will be entirely virtual. We will engage over a video-conference platform such as Zoom, but will offer participants multiple modes of interaction to ease collaboration and allow for small group, one-on-one, and extended conversations before and beyond the workshop.

- A website which serves as the main resource with information and links for the workshop and pre- and post-workshop activities. This includes links to the workshop proposal, submission instructions and deadlines, workshop agenda, and relevant podcasts (with transcripts), zines, readings, and other media on the topics of discussion.
- A Discord server to enable one-on-one chats and parallel discussions before, during, and after the workshop. This will also be used as an additional channel to coordinate workshop activities asynchronously.
- A Miro board to provide a shared virtual workspace to enable group activities during the workshop. It will be used to help participants explore and annotate workshop submissions, form groups based on shared interests, brainstorm and record notes during their group conversations, and share notes with the other groups. Throughout workshop activities, we will have designated note-takers to support any attendees who cannot or do not wish to interact with Miro directly. We will also utilize alternative collaborative documents such as Google Docs, which can be integrated with Miro.
- A video-conferencing platform such as Zoom to enable synchronous communication. During the workshop, it will support conversations, information delivery, and creation of breakout groups. Before and after the workshop, we will use the platform to arrange coffee hours to enable participants to socialize in a relaxed environment.

#### 3.2 Recruiting Participants

We will recruit 20-25 participants (not including the organizers) broadly interested in care work and workers, advocacy and the practice of care in their own work, and the future of care work. We believe this would be of interest to a broad range of researchers and practitioners, including those working in the domains of informal healthcare provision, child and elderly care, organizing and advocacy work, domestic work, teaching, service work, and more.

We will promote our workshop through online channels like social media and mailing lists. We will reach out to researchers and practitioners as well as regional professional groups to reach diverse audiences. Participants interested in attending the workshop will be asked to submit a two-page position paper that describes their ongoing, past, or planned research around care work. This could include research on care workers and care practices, theoretical

perspectives and design methods, and more vision-driven pieces on the future of work in this space. These may advocate for, problematize, or extend critical care perspectives in CSCW.

Once participants are accepted, they will be provided a manageable list of recommended podcasts, zines, or readings on care to create a shared understanding as a starting point for discussion. They will also be asked to skim through the other submissions so that they can make the most of the four synchronous hours of workshop time.

## 4 WORKSHOP STRUCTURE

In addition to the synchronous workshop session, we will keep participants engaged before and after the workshop through optional asynchronous activities. This will help build community while also accommodating participants depending on their timezone, schedule, and capacity to engage. The workshop itself will be focused on putting together a collective vision and research agenda for the future of technology for care work at CSCW.

### 4.1 Pre-workshop

The pre-workshop activities will be focused on socializing, answering queries about the workshop, and getting participant feedback on the activities planned. We will hold two coffee hours and will share two prompts on Discord before the event to facilitate reflection and discussions. We will also share the accepted submissions on Miro and the website which will be grouped either based on domain or workshop theme. During the coffee hours, participants will be invited to casually browse the submissions and share additional discussion points. They will also be encouraged to annotate submissions that they resonate with, would like to engage more deeply with, or have questions about. We will also share participant bios on Google Slides and Miro, where participants will have the opportunity to provide a fun and provocative intro before the workshop.

### 4.2 Workshop

The four-hour synchronous workshop will take place on Zoom as follows (detailed schedule in Table 1):

*Opening and introductions:* We will first introduce the workshop motivation, agenda, and the organizers. This will be followed by a few rounds of speed dating where participants will be randomly put into breakout rooms to get to know each other, their research, and their expectations from the workshop. Participants will then be given some time to review the workshop submissions and comments they may have received on theirs from the pre-workshop activities. They will form groups based on the themes or domains that emerge from this process. We will actively facilitate this process by putting together initial groups based on the submissions and pre-workshop materials.

*Breakout groups:* The groups will then be organized into breakout rooms for most of the workshop. At least one organizer will join each of these groups and serve as facilitator and note-taker to record the conversation on Miro. The groups will be provided discussion points based on workshop conversations and themes to stimulate conversation. They will also be asked to develop plans of action for future work in this space at a personal and collective level. This period will be bookended by two breaks.

*Whole group discussion and closing remarks:* The groups will share out their reflections and discussion points with others, also naming future questions they are interested in discussing. Those from other groups will be encouraged to ask questions to encourage further conversations beyond the workshop as well.

Table 1: Workshop Schedule

Duration	Activity
1 hour	Opening and introductions
10 minutes	Break
1 hour 30 minutes	Breakout group discussions
10 minutes	Break
1 hour 10 minutes	Whole group discussion and closing remarks

### 4.3 Post-Workshop

The discussions taking place during the workshop will be documented on the Miro board through text, images, and links. These notes will be organized and shared after the workshop with the participants, along with next steps that are identified during the workshop. We will summarize and share the discussion with the broader CSCW community through Medium blog posts, on Twitter, on the website, and potentially through an article in the Interactions magazine. We will also keep the Discord space available for those interested in connecting after the workshop. We also intend to share this space with attendees of prior workshops on care to create a larger community.

## 5 ORGANIZERS

The organizing team consists of scholars in academia and industry working in the fields of CSCW and HCI. We study and design for diverse forms of care work, spanning domains of health, wellness work, advocacy work, and maintenance of communities. We see caring labor as critical to understanding and supporting social change, and aim to always foreground how axes of identity, such as gender, race, class, and their specificities in contexts across the world, shape the politics of care work. These are the diverse perspectives and shared commitments we bring as we aim to create a space to understand how CSCW and HCI can work towards a radical politics of care.

- **Naveena Karusala** is a PhD student at the University of Washington. Her work focuses on why and how technologies to support caregiving in the home are being used to shape the gendered division of labor around maternal and newborn health in rural India.
- **Azra Ismail** is a PhD student at Georgia Tech. Her research focuses on women frontline health workers in urban India who operate on the margins of the government healthcare system, and examines how technology might recognize and legitimize (rather than exploit) their knowledges and underpaid care work.
- **Karthik Bhat** is a PhD student at Georgia Tech. He works on designing technologies that facilitate constructive, and socioculturally situated engagement with health data in resource- and infrastructure-constrained contexts.
- **Aakash Gautam** is a PhD student at Virginia Tech. A part of his research examines the complexities surrounding care practices in anti-trafficking organizations in Nepal.
- **Sachin Pendse** is a PhD student in Human-Centered Computing at Georgia Tech. His work is centered around better understanding how our identities influence how we express and experience our mental health, towards designing safer and more inclusive (technology-mediated) mental health spaces.
- **Neha Kumar** is an associate professor at Georgia Tech. She conducts research at the intersection of human-centered computing and global development; matters of care are central to much of this research.
- **Richard Anderson** is a professor in the School of Computer Science and Engineering at the University of Washington. He works in computing and global development, focusing on on healthcare and previously, education.

- **Madeline Balaam** is an Associate Professor at KTH Royal Institute of Technology in Sweden. Madeline designs novel interactions and interaction techniques that invoke new forms of care for the body and bodily processes. Her work is grounded in feminist theories and perspectives.
- **Shaowen Bardzell** (sbardzell@psu.edu) is a professor at the Pennsylvania State University's College of Information Sciences and Technology. Her research explores the contributions of design, feminism, and social science to support technology's role in social change. She is co-author of *Humanistic HCI* (Morgan Claypool, 2015) and co-editor of *Critical Theory and Interaction Design* (MIT Press, 2018).
- **Nicola Bidwell** has worked with rural dwellers and indigenous people for nearly 20 years, particularly in Africa. Recent work studies the social and gender impacts of community networks, and predictive logics in the Kalahari for purposes of AI design. She is an adjunct professor at the International University of Management, Namibia.
- **Melissa Densmore** is an associate professor at the University of Cape Town in South Africa. Her research explores community-based innovation with bandwidth-constrained users. Her work in maternal and child health seeks to empower mothers, fathers, and other caregivers as co-designers of appropriate digital interventions.
- **Elizabeth Kaziunas** is the Research Lead of the Algorithmic Care Project at AI Now, where she investigates the social impacts of AI in healthcare. Her research examines the social and organizational contexts of health information systems and lived experiences of health datafication.
- **Anne Marie Piper** is an associate professor at the University of California, Irvine. Her work aims to create more equitable and inclusive digital experiences for people of all ages and abilities.
- **Noopur Raval** is a postdoctoral researcher at New York University. She studies the histories and current implications of emergent technologies with a focus on the Global South.
- **Pushpendra Singh** is a professor at IIIT-Delhi. His research is at the intersection of mobile computing and HCI with a focus on technologies for low-resource settings, especially in the context of public health.
- **Austin Toombs** is an Assistant Professor at Purdue University. He studies the impact that digital technologies have on how communities develop, are maintained, and foster (or not) strong interpersonal relationships between community participants.
- **Nervo Verdezoto** is a Lecturer at Cardiff University. His work has investigated invisible care work in the home, hospital, and community health. His recent work explores how care infrastructures and sociotechnical and cultural practices influence maternal and child health in the Global South.
- **Ding Wang** is a senior HCI researcher from Google AI India and People AI Research team. Her research focuses on the practices, processes and organisations of work (e.g. the collection, annotation and documentation) on data that is essential to ML and AI systems.

## REFERENCES

- [1] Cynthia L Bennett, Daniela K Rosner, and Alex S Taylor. 2020. The care work of access. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–15.
- [2] Tithi Bhattacharya. 2017. Social reproduction theory: Remapping class, recentering oppression. (2017).
- [3] Nicola J Bidwell. 2021. Rural Un-commoning: Women, Community Networks and the Enclosure of Life. In *Transactions on Computer-Human Interaction (TOCHI), Special Issue on Rural Computing and HCI*.
- [4] Claus Bossen and Erik Grönvall. 2015. Collaboration in-between: The care hotel and designing for flexible use. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*. 1289–1301.
- [5] Tone Bratteteig and Ina Wagner. 2013. Moving healthcare to the home: The work to make homecare work. In *ECSCW 2013: Proceedings of the 13th European Conference on Computer Supported Cooperative Work, 21-25 September 2013, Paphos, Cyprus*. Springer, 143–162.
- [6] Yunan Chen, Victor Ngo, and Sun Young Park. 2013. Caring for caregivers: designing for integrality. In *Proceedings of the 2013 conference on Computer supported cooperative work*. 91–102.



- [7] Yunan Chen, Nervo Verdezoto, Xinning Gui, Xiaojuan Ma, Claus Bossen, Naveen Bagalkot, Valeria Herskovic, and Bernd Ploderer. 2019. Unpacking the infrastructuring work of patients and caregivers around the world. In *Extended abstracts of the 2019 CHI conference on human factors in computing systems*. 1–8.
- [8] Sasha Costanza-Chock. 2018. Design justice: Towards an intersectional feminist framework for design theory and practice. *Proceedings of the Design Research Society* (2018).
- [9] Angela Davis. 1981. Reflections on the Black Woman's Role in the Community of Slaves. *The Black Scholar* 12, 6 (1981), 2–15.
- [10] Silvia Federici. 2004. *Caliban and the Witch*. Autonomedia.
- [11] Geraldine Fitzpatrick and Gunnar Ellingsen. 2013. A review of 25 years of CSCW research in healthcare: contributions, challenges and future agendas. *Computer Supported Cooperative Work (CSCW)* 22, 4 (2013), 609–665.
- [12] Evelyn Nakano Glenn. 2010. *Forced to care: Coercion and caregiving in America*. Harvard University Press.
- [13] Francisco J Gutierrez, Sergio F Ochoa, and Julita Vassileva. 2016. Identifying opportunities to support family caregiving in Chile. In *Proceedings of the 2016 chi conference extended abstracts on human factors in computing systems*. 2112–2118.
- [14] Azra Ismail, Naveena Karusala, and Neha Kumar. 2018. Bridging disconnected knowledges for community health. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 1–27.
- [15] Naveena Karusala, Isaac Holeman, and Richard Anderson. 2019. Engaging Identity, Assets, and Constraints in Designing for Resilience. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–23.
- [16] Elizabeth Kaziunas, Michael S Klinkman, and Mark S Ackerman. 2019. Precarious Interventions: Designing for Ecologies of Care. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–27.
- [17] Amanda Lazar, Caroline Edasis, and Anne Marie Piper. 2017. A critical lens on dementia and design in HCI. In *CHI*. 2175–2188.
- [18] Hil Malatino. 2020. *Trans Care*. U of Minnesota Press.
- [19] Alexandra Mateescu and Virginia Eubanks. 2021. 'Care bots' are on the rise and replacing human caregivers. <https://www.theguardian.com/us-news/2021/jun/03/care-bots-on-the-rise-elder-care>
- [20] Sun Young Park, Francisco Nunes, Andrew Berry, Ayse Büyüktür, Luigi De Russis, Mary Czerwinski, and Woosuk Seo. 2019. Who cares? Exploring the concept of care networks for designing healthcare technologies. In *Proceedings of 17th European Conference on Computer-Supported Cooperative Work-Workshops*. European Society for Socially Embedded Technologies (EUSSET).
- [21] Justin Petelka, Lucy Van Kleunen, Liam Albright, Elizabeth Murnane, Stephen Volda, and Jaime Snyder. 2020. Being (In) Visible: Privacy, Transparency, and Disclosure in the Self-Management of Bipolar Disorder. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–14.
- [22] Laura R Pina, Sang-Wha Sien, Teresa Ward, Jason C Yip, Sean A Munson, James Fogarty, and Julie A Kientz. 2017. From personal informatics to family informatics: Understanding family practices around health monitoring. In *Proceedings of the 2017 acm conference on computer supported cooperative work and social computing*. 2300–2315.
- [23] Noopur Raval and Joyojeet Pal. 2019. Making a "Pro": 'professionalism' after platforms in beauty-work. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–17.
- [24] Dorothy E Roberts. 1999. *Killing the black body: Race, reproduction, and the meaning of liberty*. Vintage.
- [25] Marén Schorch, Lin Wan, David William Randall, and Volker Wulf. 2016. Designing for those who are overlooked: Insider perspectives on care practices and cooperative work of elderly informal caregivers. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. 787–799.
- [26] Mariacristina Sciannamblo, Marisa Leavitt Cohn, Peter Lyle, and Maurizio Teli. 2021. Caring and Commoning as Cooperative Work: A Case Study in Europe. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–26.
- [27] Vandana Shiva. 2016. *Staying alive: Women, ecology, and development*. North Atlantic Books.
- [28] Robert Soden and Leysia Palen. 2018. Informing crisis: Expanding critical perspectives in crisis informatics. *Proceedings of the ACM on human-computer interaction* 2, CSCW (2018), 1–22.
- [29] Austin Toombs, Laura Devendorf, Patrick Shih, Elizabeth Kaziunas, David Nemer, Helena Mentis, and Laura Forlano. 2018. Sociotechnical Systems of Care. In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing*. 479–485.
- [30] Austin L Toombs, Shaowen Bardzell, and Jeffrey Bardzell. 2015. The proper care and feeding of hackerspaces: Care ethics and cultures of making. In *Proceedings of the 33rd annual ACM conference on human factors in computing systems*. 629–638.
- [31] Austin L. Toombs, Andy Dow, John Vines, Colin M. Gray, Barbara Dennis, Rachel Clarke, and Ann Light. 2018. Designing for Everyday Care in Communities. In *Proceedings of the 2018 ACM Conference Companion Publication on Designing Interactive Systems (Hong Kong, China) (DIS '18 Companion)*. Association for Computing Machinery, New York, NY, USA, 391–394. <https://doi.org/10.1145/3197391.3197394>
- [32] Nervo Verdezoto, Naveen Bagalkot, Syeda Zainab Akbar, Swati Sharma, Nicola Mackintosh, Deirdre Harrington, and Paula Griffiths. 2021. The Invisible Work of Maintenance in Community Health: Challenges and Opportunities for Digital Health to Support Frontline Health Workers in Karnataka, South India. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–31.
- [33] Ina Wagner. 1995. The Politics of Women's Work in Computerized Environments. *European Journal of Women's Studies* 2, 3 (1995), 295–314.