IslamicHCI: Designing with and within Muslim Populations

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Abstract

In recent years there has been a growing body of work from the CHI community that looks at designing for inclusivity and for the unique and specific constraints of diverse populations. This has included but is not limited to, work on designing within patriarchal contexts, designing around issues of gender and sexual orientation and designing around literacy. In tandem, local HCI initiatives such as ArabHCI [4] have emerged to address the misrepresentation of these populations in HCI research, highlighting the fact that Western originated design methods would require delicate adaptations to suit non-Western cultural contexts. With the same approach towards inclusivity and co-existence, the aim of this workshop is to bring together HCI researchers and practitioners who engage in studies and interventions within Muslim majority communities around the world. The goal is to understand the Muslim identity and perceptions around it, the unique constraints and limitations within Muslim communities and to identify core issues and concerns within these populations. We will explore the following themes: refugees and islamophobia; Muslim feminism and Digital financial services.

Introduction

Despite the growing literature on inclusive collaborative design, there is little work that explores the use of HCI methodologies for understanding and designing within Mus-

lim communities. Understanding the Muslim identity is particularly important in the current climate where there has been a spotlight on Muslim immigrants, refugees, the Muslim female head covering, and entire political landscapes are being determined by an Islam and Muslim dominated narrative. According to the Pew research center, there are 1.6 billion Muslims around the world, making Islam the world's second-largest religious tradition after Christianity. The center further estimates that by 2050 the number of Muslims worldwide will grow to 2.76 billion, or 29.7% of the world's population. It is then imperative that the HCI community considers the specifics of the Muslim identity and how it relates to design of technologies. Despite the cultural diversity of Muslim populations, Muslims share core values and beliefs that shape their identities no matter where they live. This identity and a core set of beliefs determine how technology is consumed, how it is perceived and who has access to it - regardless of whether we are talking about the developing Muslim countries or Muslim populations in North America and Canada.

In recent years there has been some work that explores social computing paradigms in Muslim majority countries. Most of this research has revealed the challenges and limitations of existing social computing methodologies for Muslim majority countries like Pakistan and Bangladesh [12, 11]. One primary reason for this is the gap between the design of social connectivity paradigms and the core belief systems that comprise the Muslim identity. In this workshop, HCI scholars and practitioners will engage theoretical and methodological approaches in and around HCI and social computing that are problematic in a Muslim context particularly with regards to the role of women in Muslim majority countries and their experiences and beliefs of autonomy, and feminism which are very distinct and different from Western and European notions of female agency and

feminism. We will also explore how current financial structures conflict with core Muslim beliefs and how the current social computing designs fail Muslim populations.

There is also some work that examines how people use technology to support religious practices [15, 16]. Most of this focuses on designing technologies to support specific religious practices and understanding the link between spirituality and ICTs. Given the ways in which religious practices are intimately woven into the fabric of daily life in most parts of the world, it is imperative for HCI researchers and practitioners alike to understand the role these beliefs play in defining user identities and constraints. This is particularly true for the Islamic faith which has a deep impact on users' social and technology practices. This means that Western methodologies and constructs for designing systems collaborative, social systems do not always fit well within these populations. We plan to explore three such themes within this workshop; refugees and Islamophobia, Muslim Feminism and financial practices that determine financial product usage and financial inclusion among Muslim populations.

Author Keywords
Muslim Identity, Design, Feminism

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

Digital Financial Services in the Muslim World
As the world moves towards digitization, financial services are another important sector which requires sociocultural and religious considerations to achieve financial inclusion. Digital Financial Services (DFS) include mobile wallets, mobile-based banking, and digital accounts with a finan-

cial institution through which a customer can be provided services of payments, savings, lending, and insurance [10]. There is a growing interest in designing for emerging markets and include them in the formal financial sector [14]. However financial dealings, like other aspects of Muslims' lives, are informed by religion and its guidelines.

Muslim users' use of financial services is impacted by their religious values as the Islamic religion provides guidelines for life including financial dealings, for example

Design on Islamic Principles - Islamic legal discourse does not allow or encourage charging interest. Thus, while traditional financial processes include interest, most practicing Muslims try to refrain from formal services that build on such practices. This has given the popular rise of Islamic finance.

Islam and Value System - Besides religious teachings, Muslims reference religion as the source for their derived ideas about the family and social, financial, legal dealings. Thus, the socio-cultural norms of Muslim communities are influenced heavily by interpretations of Islam including an understanding of concepts like family and privacy [2]. Islamic law indicates functional roles based on gender [1]. Previous research [8] shows that both Muslim men and women believe that men are responsible for acting as the Head of the Household, earning income, and providing for the family. This interpretation and evolution of gendered roles affect the financial autonomy and mobility of Muslim women as well as the device access and technology ownership [9] needed for Digital Financial Services. Most of the existing system designs, based on the Western concepts of financial dealings and thus exclude Islamic populations by design.

Muslim Feminism

For a long time, HCI research has been focused on various women agenda, including healthcare, work-space discrimination, and women's safety. However, diversities in women's needs often engender ethical dilemma while designing for them. Some of the prominent HCI theories have addressed through design frameworks [6]. For example, Bardzell's feminist-HCI framework calls for attention to the quality of advocacy to address the ethical dilemmas while defining and designing for an improved society. A number of intervention responded to this call and designed for women safety and healthcare [7, 5]. However, many of these works often use Western lenses to grow the perception of women's need and risk sidelining the Islamic values held by Muslim women across the world. Thus, the existing HCI design approaches often fail to address Muslim women's necessities and interests. For example, studies have shown that Muslim rural women in Bangladesh and Pakistan prefer going to receive help midwives and witches than professional online services across the country [3, 13] because the women fail to connect their values to these initiatives. Many of the studies with Muslim women have listed a number of challenges while designing technologies for them address those through design. We categorize the existing Muslim-feminist discourses in three broader types –

Muslim Women Empowerment and Patriarchy - This discussion focuses on how the assumptions of women empowerment often sideline the values held by Muslims women in a patriarchal society.

Muslim Women and Postcolonialism - Here the focus is on how Muslim women often need to go through a negotiation among their multiple beliefs and values in postcolonial settings.

Solidarity Across the Border - This discusses how women from various Muslim communities grow a solidarity based on similarities in beliefs and other agendas.

We argue that many of the Muslim women's needs and agendas are still underrepresented in HCI discourses and designs. Through this workshop, we aim to open discussion on any such agenda.

Refugees and Islamaphobia

Forced migration constitutes one of the major challenges in today's world; and as the needs for the refugees and immigrants turns from immediate to long-term, their cultural and religious identities are becoming increasingly important to be accommodated in. Most of these displaced populations, including, inter alia, the Syrian, Iraqi, Rohingya, and Afghan refugees, are Muslim and/or rooted in Islamic culture. Various designed artifacts are deployed to help assimilate these Muslim refugees in many Western and secular countries, which often fail to address the needs of a Muslim. For example, Sabie and Ahmed recently documented how Muslim refugee women in Canada often struggle to find their privacy in Canadian apartments. They have also reported how Muslim refugee families often complain about the media contents and games that their children are exposed to in their schools. The lack of separate space for women in public transportation in the West also puts a challenge to Muslim women. These barriers often result in non-participation, limited access, and struggle for Muslim communities in a new country. Besides the usual struggles with the designed artifacts, migrated Muslims in the West also often confront Islamophobia, which has a damaging impact on a Muslim, and yer it has not received enough attention in HCI. By making a purposeful association between Islam and terrorism, many politicians and media have created a widespread fear about Muslims that is often manifested by avoidance, misbehavior, harassment, and exclusion of Muslim migrants in various parts of the world. We argue that HCI needs to develop theoretical and methodological tools and innovative technologies to approach these critical problems that impact millions of lives around the world.

Organizers

Maryam Mustafa is an Assistant Professor at the Lahore University of Management Sciences, Pakistan. She earned her PhD from the Technical University of Braunschweig in Germany. Mustafa's current area of research focuses on the gendered design of technologies to promote equitable access for women in Pakistan. She has been working to understand design for maternal health, mental health and connectedness within patriarchal, low-income, low-literate communities in Pakistan.

Shaimaa Lazem is an academic researcher at the City of Scientific Research and Technology Applications (SRTA-City), a research institute in Alexandria, Egypt. She earned her PhD in Computer Science from Virginia Tech, 2012. At SRTA-City she established a research program in human-computer interaction (HCI). Her research interests include participatory design, cross-cultural collaborations, post-colonial computing, and decolonizing HCI. Her previous projects included designing low-cost education and health technologies and applying learner-centered and flexible learning pedagogies for teaching computer science and HCI. Lazem is the Co-founder of the ArabHCI community.

Ebtisam Alabdulqader is a Saudi lecturer in the Information Technology Department at King Saud University and earned her PhD in Human-Computer Interaction from Open Lab at Newcastle University. Ebtisam's current research focuses on HCI aspects of social computing, health informatics, accessibility, and mHealth. Her current work is

investigating strategies to promote the adoption of digital technologies to augment the current healthcare system and introduce new relational healthcare models. She also led STEM initiative to promote computer science careers in Saudi Arabia. Ebtisam has been honored with Teaching and Advising Excellence Award (three times) and the Excellence in Research Award. She is the founder and leader of the ArabHCI initiative and the vice-chair for the ACM SIGCHI chapter for Riyadh Saudi Arabia.

Samia Ibtasam is a Ph.D. student at the Paul G Allen School of Computer Science & Engineering at the University of Washington in Seattle. Her current work focuses on devising tools and frameworks to increase women's technological and financial inclusion. With more than ten years of experience in designing, developing and deploying technologies for emerging markets, she is studying the impact of gender on technological and financial services and the use of consumer training to expand financial inclusion. Before UW, she was a faculty member at Information Technology University in Lahore, Pakistan and was the founding Co-Director of Innovations for Poverty Alleviation Lab (IPAL).

Sharifa Sultana is a PhD student at Cornell University, USA. She conducts research in the intersection of HCI, ICTD, wellbeing, and feminist-HCI. She uses both quantitative and qualitative techniques to study marginalized rural populations in Bangladesh and aims to design computational tools and systems to address the challenges for the rural low-education population while accessing information. She is actively engaged with local NGOs and traditional healthcare support providers in rural Bangladesh. Before coming to Cornell, she served as a faculty member in the Department of Computer Science and Engineering at Independent University, Bangladesh and is currently on leave now.

Syed Ishtiaque Ahmed is an Assistant Professor of Computer Science at University of Toronto. He conducts research in the intersection between Human-Computer Interaction (HCI) and Information and Communication Technology and Development (ICTD). He received his PhD in Information Science from Cornell University in 2017. He established the first HCI research lab in Bangladesh in 2009, and still maintains it. His research work is built around the concept of 'voice' that connects various branches of political philosophy to technology intervention. His current research focuses on the politics of faith and justification in computing.

Kentaro Toyama is W. K. Kellogg Professor of Community Information at the University of Michigan School of Information. He co-founded the International Conference on Information & Communication Technologies and Development and is co-editor-in-chief of the journal Information Technologies and International Development. He has conducted research with Muslim-majority communities in Bangladesh, India, and Pakistan.

Richard Anderson is a Professor in the Department of Computer Science and Engineering at the University of Washington. Previously, as a visiting professor at the IIT, Bangalore, India, he started department's Professional Master's Program and led efforts in Tutored Video Instruction long before MOOC's became popular. As a visiting researcher in the Learning Sciences and Technology group at MSR, he led the development of Classroom Presenter, a tool for delivering presentations from the TabletPC. He worked with the Digital Health Solutions group at PATH, a Seattle based NGO working on health technologies for low resource environments. In 2015 he founded the UW Digital Financial Services research group with support from the BMGF to address challenges in introducing financial technologies in the developing world. Richard's main research

interest is in Computing for the Developing World, with a focus on challenges in global health. He currently has a number of projects developing technology to address challenges in the global distribution of vaccines. He has done a substantial amount of work in educational technology, focusing on the Community Led Video Education model, first in the Digital StudyHall project and later in Projecting Health. Previously, he has worked in the theory and implementation of algorithms, including parallel algorithms, computational geometry, and scientific applications.

PRE-WORKSHOP PLANS

The organizers will reach out to a broad audience (Muslims and non-Muslims, from all backgrounds and genders) who might be interested in participating in this workshop. They will publicize the workshop and distribute the call for participation via appropriate professional mailing lists, workshop website, relevant social media accounts, and the existing research communities. Participants will be asked to submit position papers fitting with the workshop goals. Accepted position papers will be posted on the workshop website as open access before the workshop. We aim to recruit 15-20 participants.

WORKSHOP STRUCTURE

IslamicHCI will be a one day workshop. In the introduction, we will organize an ice-breaking activity so that participants have a chance to share their personal profiles and expertise. Next, the motivations behind creating an IslamicHCI community will be discussed in round tables, where workshop participants will collaboratively define IslamicHCI and share their thoughts. Selected submissions will be presented covering the three proposed themes to contextualize the discussions. Established HCI researchers will be invited to join the discussions and activities. In groups, participants will brainstorm and draft future research agendas and de-

fine action plans. At the end of the workshop, each group will share their agenda for IslamicHCI and receive feedback from peers. Following the workshop, we will share these suggested agendas as well as group action plans for future research on the workshop website.

Workshop Schedule
- 09:00 – 09:30 Welcome and Participants Introduction
- 09:30 – 10:00 Ice Breaking Activity
- 10:00 – 11:30 Why Islamic HCI?
- 11:30 – 12:00 Coffee Break
- 12:00 – 13:30 Participants' Presentations by Themes
- 13:30 – 15:00 Lunch Break
- 15:00 – 16:30 Draft Future Agendas and Action Plans
- 16:30 – 17:00 Coffee Break
- 17:00 – 17:30 Research Agenda Discussion

POST WORKSHOP PLANS

The workshop discussions will result in the development of a report reflecting the action plans and agendas proposed by the workshop participants. In addition to publishing these outcomes and the conducted activities in the workshop website, we aim to publish the workshop outcomes and research agenda in the ACM Interactions magazine. The website will be maintained as a central channel for communication to spread our outcomes for the larger HCI community. Our aim extends well beyond the workshop setting to include the long-term goal of establishing and empowering a community of IslamicHCI researchers.

CALL FOR PARTICIPATION (CFP): CHI 2020 WORK-SHOP ON DESIGNING with MUSLIM POPULATIONS

This workshop will be organized as part of the CHI 2020 conference, on 25 or 26 April 2020.

Important Dates
Early submission deadline: 12 January 2020
Early Notification: 31 January 2020
Final submission deadline: 9 February 2020
Final Notification: 28 February 2020
Reviews Released: 15 March 2020
Camera-Ready Deadline: 30 March 2020

There has been a growing body of work from the CHI community that looks at designing for inclusivity and for the unique and specific constraints of diverse populations including work on designing within patriarchal contexts, designing around issues of gender and sexual orientation and designing around literacy. With the same approach towards inclusivity and co-existence the aim of this workshop is to bring together CHI researchers and practitioners who engage in studies and interventions within Muslim majority communities around the world. The goal is to understand the Muslim identity and perceptions around it, the unique constraints and limitations within Muslim communities and to identify core issues and concerns within these populations. We hope to generate a dialogue to explore the opportunities and challenges of doing HCI research within Muslim populations.

We particularly encourage submissions under the following themes, but we are also excited about and welcome all submissions that addresses various encounters of Muslim communities with Computing.

- Refugees and Islamophobia
- Muslim feminism
- Digital financial services
- Female Intimate and Maternal Health

Submitted position papers must not exceed four pages in the CHI Extended Abstract Format including references and should be sent in PDF format to (islamicHCI@gmail.com). Position papers will be selected based on the contribution to the workshop theme, quality of presentation, and the potential to stimulate discussions. Upon acceptance, at least one of the authors must register for both the workshop and for at least one day of the main conference. All accepted papers will be archived on our workshop's website. For details, please visit: (http://web.lums.edu.pk/ IslamicHCI/)

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