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GUEST EDITORIAL

Human computer-interaction in Latin America

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1 Introduction and motivation

Human Computer Interaction (HCI) research has been traditionally carried out with users in upper income countries in industrialized nations. However, there is a growing need to deepen the understanding of relatively underserved communities and their interaction with computing technologies. This is the case of Latin America (LATAM), a region that has a unique set of sociotechnical characteristics and a unique set of challenges and problems. This represents an interesting opportunity for researchers and practitioners to study this geo-cultural region that has been sometimes neglected by the wider HCI community. There are some significant efforts from the HCI community in Latin America, notably efforts such as the Latin American conference on HCI [6], HCI education in Brazil [8], CSCW workshops [11], the Mexican conference on HCI [15], meetings at CHI [1], and a series of recent webinars on HCI [9].

Latin America is home to more than 600 million people, mostly native speakers of Spanish and Portuguese languages, and includes a mixture of indigenous cultures and religions along with socio-cultural practices mainly from Europe interwoven into the fabric of everyday life. This theme issue aims to open a space for HCI research communities to share ideas, methods, approaches and techniques for designing interactive user experiences in Latin American contexts. The issue also aims to provide another forum for researchers who come together as part of The Latin American Conference on Human Computer Interaction (CLIHC), managed by the SIGCHI Latin American HCI Community (LAIHC). CLIHC is a premier conference that brings together the Latin American and international HCI research communities to discuss and exchange ideas, methods, approaches and techniques for designing interactive user experiences and encourages intercultural exchange and cooperation between people with different backgrounds and needs. Since the first even in 2003 [6], CLIHC has been held in different locations throughout Latin America such Rio de Janeiro, Brazil (2003, 2007), Cuernavaca, Mexico (2005), Merida, Mexico (2009), Porto de Galinhas, Brazil (2011), Guanacaste, Costa Rica (2013), Córdoba, Argentina (2015), Antigua, Guatemala (2017), and Panama City, Panama (2019). This year, due to the COVID-19 pandemic, CLIHC will be a virtual conference.

2 Submission and summary of contributions

We launched an open call for papers in September 2019. We started receiving submissions in November 2019. The entire review process was somehow disrupted due to the COVID-19

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pandemic, which caused additional workload for our reviewers and guest editors.

The review process was single-blind peer review. We received 21 high-quality submissions, from which 20 went to the peer-review process. Each paper received three rigorous reviews from HCI experts from the Americas, Europe, Asia, and Oceania. Out of 134 invited potential reviewers, 59 reviewers accepted and submitted their reviews. In the end, 10 manuscripts were accepted. With no doubt, the valuable support from our distinguished reviewers helped strengthen the manuscripts. We believe that the works presented in the special issue can help illustrate the type of work that is being carried out related to the LATAM region.

First, we have a series of articles, in which most of the academic work and field work was carried out in Brazil. The first article entitled "The Cost Structure of Influencers' Posts: the risk of losing followers" by Oliveira et al. [13], presents an exploratory study based on interviews and questionnaires, aimed at understanding social media influencers' posting behavior. They find four factors that explain the cost-structure behavior of influencers when posting civic-themed content. The influencers will: (1) acquire information about the cause they will promote, (2) consider the thematic distance between usual posts and the specific topic, (3) consider the effects of a post on the influencer's followers, and (4) review the credibility of the shared information. This work was conducted in Brazil, providing a view of how influencers may be engaged to promote participation in Brazilian digital participation platforms.

The second article "Design and evaluation of a mobile smart home interactive system with elderly users in Brazil" by Tsuchiya et al. [16] presents a smart home control system evaluation with ten elderly people over 60 years old. The indicators to evaluate were success rates in the execution of activities, difficulty levels in carrying out activities, satisfaction, motivation, and control feelings. The study showed promising results with the applied tests, and raised the importance of avoiding confusion to improve the interaction between intelligent home systems for older people.

The third article presents the work of de Almeida Neris et al. [5], entitled "Addressing Brazilian diversity in personal computing systems with a tailoring-based approach." This work proposes a novel framework for implementation and deployment of tailorable inclusive social systems, particularly in contexts of highly unbalanced access to computing technology. This work was carried out in Brazil and included a combination of participatory design practices and organizational semiotics artifacts. Their two contributions are (1) proposing a design approach for tailorable inclusive social networks. This approach is supported by PLuRaL and FAN frameworks, which are integrated in a development life cycle; and (2) presenting the application of this approach in the design, implementation, and evaluation of the Vila na Rede SNS. The results suggest that the adopted solutions satisfied users with various interaction profiles.

The fourth article presents the work of Motti et al. [12], and focuses on an analysis of Instagram imagery related to microcephaly in Spanish and Portuguese language. In particular, the analysis focuses on users' behaviors when using Instagram to communicate about microcephaly. In this work, the authors also discuss the benefits and drawbacks that social media entails for imagery of medical information, from a caregiver perspective. Some of the key findings of this work are that (1) most users who communicate about microcephaly are female, young adults, mothers of patients. Also, (2) most posts include a picture of one child during day-to-day activities for documentation and to celebrate a milestone. Moreover, (3) posts are generally positive, focusing on raising awareness about the condition and providing social support. Finally, (4) most users seem unconcerned about privacy and use Instagram to communicate about microcephaly as well as to raise funds for medical treatments.

The following five articles carried out studies involving Mexican individuals. On the fifth article of this special issue, the work of Rodríguez et al. [14], entitled "Assisting older adults with medication reminders through an audio-based activity recognition system," proposes an audio-based system to recognize daily activities associated with medication-taking, providing reminders in case a medicine has not been taken. The system was developed based on a 30-day in-depth study conducted in Mexico with two older adults to understand medication behaviors. The solution was designed to be low-cost, which would help its possible adoption in developing countries. This initial system must still be improved to increase activity detection accuracy, and other aspects, such as privacy, need to be further explored.

The sixth article presents the work of Flores-Saviaga and Savage [7] titled "Fighting Disaster Misinformation in Latin America: The #19s Mexican Earthquake Case Study". This article presents a study of social media use in the aftermath of the 7.1-magnitude earthquake that hit Mexico on September 19th, 2017 (the #19S earthquake). This work offers a multi-platform view on user behavior to coordinate relief efforts, reduce the spread of misinformation, and deal with obsolete information which seems to have been essential to helping in the coordination and efficiency of relief efforts. Additionally, the authors make recommendations for the technology design of social media use during crisis response efforts.

The seventh article presents "Serious Games for Basic Learnings Mechanisms: reinforcing Mexican children's gross motor skills and attention" by Cornejo et al. [4]. In this work, the authors conducted a field study to better understand the practices that therapists do to support children with learning and motor disabilities. Based on their findings the authors propose an exergame to support children to get the Basic Learning Mechanisms, reinforcing balance, visual-motor, memory, attention, and spatial awareness.

The eighth manuscript presents "Interactive sonification to assist children with severe autism during motor therapeutic interventions" by Cibrian et al. [3]. In this work, the authors study the use of interactive sonification in supporting children with severe autism who have motor impairments in Northern Mexico. Specifically, two user studies were conducted, implementing the Go-with-flow framework to sonify movements. As results of the studies, some design implications on how to use interactive sonification with children with autism were outlined.

The ninth paper presents a project conducted in Mexico by Camarillo-Abad et al. [2]. The work is entitled "An environment for motor skill transfer based on wearable haptic communication", proposing an environment for assisting in the transfer of motor skills by supporting nonverbal communication with wearable haptic technology that comprises a human expert and several learners. In this work, they present tactile communication as the basis for the interaction to help users who cannot rely on other senses relevant to most motor skill-related tasks, such as sight and hearing. The results provide a roadmap for building an environment for skill transfer using nonverbal communication based on wearable haptic devices.

Lastly, the work of Gutierrez & Ochoa [10] entitled "Making visible the invisible: understanding the nuances of computer-supported cooperative work on informal elderly caregiving in Southern Cone families," shows the design implications for computer-supported caregiving technology in the context of three countries in Latin America southern cone (Chile, Argentina, and Uruguay). The authors conducted a localized multi-method study involving shadowing, contextual inquiry, and semi-structured interviews with informal elderly caregivers. Their outcomes will permit researchers to better understand the intricacy of informal elderly caregiving in the South of Latin America and subsequently identify plausible solutions that would improve user experience and the viability of computer-supported mediation strategies in this specific context.

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