Development Consortium:
HCI Across Borders

Neha Kumar
Georgia Tech
neha.kumar@gatech.edu

Susan Dray
Dray & Associates
susan.dray@dray.com

Andy Dearden
Sheffield Hallam University
a.m.dearden@shu.ac.uk

Nicola Dell
Cornell Tech
nixdell@cornell.edu

Melissa Densmore
University of Cape Town
mdensmore@cs.uct.ac.za

Rebecca E. Grinter
Georgia Tech
beki@cc.gatech.edu

Zhengjie Liu
Dalian Maritime University
liuzhj@dlmu.edu.cn

Mario A Moreno Rocha
Univ. Tecnologica de la Mixteca
sirpeto@gmail.com

Anicia Peters
Namibia University of Science &
Technology
anicia.peters@gmail.com

Eunice Sari
UX Indonesia and University of
Western Australia
eunice.sari@acm.org

William Thies
Microsoft Research, India
thies@microsoft.com

Indrani Medhi Thies
Microsoft Research, India
indranim@microsoft.com

William D. Tucker
University of Western Cape
btucker@uwc.ac.za

Elba Valderrama Bahamóndez
Universidad Tecnológica de Panamá
elba.valderrama@utp.ac.pa

Susan Wyche
Michigan State University
spwyche@msu.edu

Abstract

Though every country and context is unique, and much of HCI research aims to design for situatedness, there are lessons to be learned across borders, across contexts. Questions we ask include: What are common themes that tie together different contexts? For instance, could a maternal health project in India benefit from lessons learned from a project in Kenya and vice versa? How can we, as a global HCI4D community, work within countries *and* across them as well? The short-term goal of this event is to link research and practice across disparate HCI4D contexts by creating a forum for conversations where 'HCI4Ders' from across the globe can speak *and* be heard, as they develop themes of common interests, and work on potential projects or proposals to concretely target an action plan they can pursue as collaborators. Our long-term goal is to advance HCI4D research so that, as a community, we can engage more productively in research conversations that focus on learning and collaborating across borders.

Author Keywords

HCI4D; Community-building

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Traditional Human-Computer Interaction (HCI) approaches have focused largely on relatively homogenized groups of users and technology-rich settings. However, with computing technologies becoming increasingly affordable and accessible to larger and more diverse populations across the world, the HCI community has turned towards understanding and including these new, previously under-represented users and developing new design approaches that take into account their diverse backgrounds and needs. This body of work has since been identified (not without debate) as *HCI4D* research, where the 'D' is used for highlighting one of two things - the developing world context where most of this work takes place or the 'development' goals that the work targets. HCI4D is also a community at CHI and with this proposal we target an audience of researchers and practitioners who either self-identify as HCI4D researchers or practitioners, *and also more broadly* – those who are keen to (or keenly) pursue HCI research and practice in these under-served, under-represented, and/or under-resourced contexts.

Every place has a unique set of sociotechnical configurations that researchers or practitioners must appreciate before deploying a project. Today, our community appreciates that a comparison of any two sites across countries such as India and Kenya is complex because of wide disparities in cultures, social structures, and technological infrastructures. What does it mean then to compare a project in India to one in Kenya? How is an HCI researcher/practitioner working in Kenya to draw lessons from a project deployed in India or vice versa? This workshop will provide a venue

for *HCI4Ders*[1] across the globe to connect. It will involve explicitly identifying and acknowledging areas of work that might interest HCI4Ders in different countries and contexts.

The primary objective of this Development Consortium is to 'develop' our community, bringing together HCI4Ders from across the globe to develop themes of common interests and work on potential projects/proposals they can pursue as collaborators. Our secondary, and larger, objective however is to launch a series of such workshops that will help advance towards a richer, stronger, and a fundamentally more cohesive community overall.

Background

HCI4D has grown considerably as both a community of research/practice and a body of work in recent years. HCI4Ders deal with many common challenges in doing their work, such as overcrowded and understaffed conditions, linguistic and sociocultural barriers, insider/outsider biases, among others. Though we typically situate ourselves in a small number of these relatively isolated contexts where we do our work, there is value to be gained from connecting with the larger HCI community that publishes at the same venues as we do, pursue similar research/practice agendas, and/or are ideologically aligned. Community-building efforts are important for any community, but are simultaneously valuable and challenging for HCI4D because the members of this community are widely dispersed, with few opportunities to connect - virtually

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[1] We use the term 'HCI4Ders' in this proposal to refer to researchers and practitioners doing HCI work in under-served, under-represented, and/or under-resourced contexts.

or in person - with their counterparts in other regions. Finding funding to attend conferences such as CHI remains a challenge and even conferences such as ICTD, though often held at venues in say India and South Africa, are not affordable every year.

The first workshop on HCI4D at CHI was organized in 2007 and attracted over 37 participants from 15 countries. SIGCHI and NSF gave grants to cover travel costs for participants from 'developing' countries to participate in a discussion about what was needed and/or desired in this area of work. Several other conferences have since created room (e.g., workshops, panels, and invited talks) for community members to participate in face-to-face interactions. The focus of prior discussions has been on the relevance of HCI4D for the larger HCI community, how community members from different disciplines can build a common understanding, and so on. These are concerns that are characteristic of an emerging area of research.

At this point, however, we have a sizable body of HCI4D work published over the years, a growing community of researchers and practitioners, and a deeper appreciation of the gap that HCI4D work addresses for the larger HCI community. What was discovered in interviews with experienced HCI4Ders in US, India, and other countries [1] was that we lack a strong sense of community. The challenge we address with this workshop or Development Consortium is of *building a globally connected community*.

Organizers

Neha Kumar is an Assistant Professor at Georgia Tech, appointed at the schools of International Affairs and Interactive Computing. She focuses on human-centered computing for global development. She graduated from UC Berkeley's School of Information and was a postdoc at University of Washington Computer Science & Engineering and the Annenberg School of Communication at University of Southern California.

Susan Dray is President of Dray & Associates, Inc., where she provides contextual and ethnographic user research, usability evaluation, and interface design consultation for a wide range of products systems, and applications. She contributed to the founding of ACM SIGCHI, was the 2006 recipient of the SIGCHI Lifetime Service Award, and a recipient of the SIGCHI Lifetime Achievement in Practice Award in 2015. She is an ACM Distinguished Engineer and a Fellow of the Human Factors and Ergonomics Society.

Andy Dearden is a Professor of Interactive Systems Design at Sheffield Hallam University. He has been involved in ICTD research for over 10 years and was the founding chair of IFIP's special interest group on Interaction Design and International Development. He has written extensively about the methods, approaches and ethics in ICTD research.

Nicola Dell is an Assistant Professor of Information Science at Cornell University's Tech campus in New York. She is also in the Jacobs Technion-Cornell Institute. Her research in HCI and ICTD focuses on designing and evaluating systems that improve the lives of underserved populations in low-income regions.

Melissa Densmore is a Senior Lecturer in the Department of Computer Science at University of Cape Town. Prior to UCT, she was a postdoc at Microsoft Research India as part of the Technology for Emerging

Markets group. Her research interests include HCI4D, mobile health, and last-mile networking.

Beki Grinter is a Professor in the School of Interactive Computing at Georgia Tech. Her research lies at the intersection of several research communities including CSCW, HCI, sociology, software engineering and ubiquitous computing.

Zhengjie Liu is a Professor at Dalian Maritime University, China. He has been involved in HCI since 1989 and founded Sino European Usability Center in 2000. He is a pioneer in promoting user experience and user-centered design and innovation in China. He has 15+ years of experience consulting to and training industry including many Fortune 500 multinationals. He has also worked with underserved communities in China including migrant farm workers, low-literate populations and the blind. He is former SIGCHI adjunct chair for developing worlds, Expert Member at IFIP TC.13 HCI Committee, and awardee of IFIP TC13 Pioneers Award.

Anicia Peters is the Dean of the Faculty of Computing and Informatics at the Namibia University of Science and Technology (formerly Polytechnic of Namibia). She is the Chair for the SIGCHI African HCI Community and General Conference Chair of the inaugural Africa HCI conference (AfriCHI '16). Her research interests span the human and technical aspects of interactive system design, development and use. She is passionate about expanding existing HCI research capacity in Africa.

Mario A Moreno Rocha is a professor and researcher in HCI and the leader of UsaLab Laboratorio de Usabilidad in the Institute of Computing at the

Universidad Tecnologica de la Mixteca in Huajuapan de León, Oaxaca, Mexico. He has experience in the development of usability studies, contextual studies, and cross-cultural usability.

Eunice Sari is Co-Founder and Principal UX Consultant at UX Indonesia and a Lecturer at University of Western Australia. Eunice has been working in the field of HCI and UX for the last 15+ years with both academia and industries in Europe, Australia, Asia and United States. She is currently the Chair of Indonesia ACM SIGCHI Chapter, SEA Liaison of ACM SIGCHI Asian Development Committee, Expert Member at IFIP TC.13 HCI Committee, and Western Australia State Representative for the Computer-Human Interaction Special Interest Group (CHISIG) of Human Factors and Ergonomics Society of Australia (HFESA).

William Thies is a Researcher in the Technology for Emerging Markets Group at Microsoft Research India. His research focuses on building appropriate ICTs that contribute to the socio-economic development of low-income communities. This work encompasses HCI, online education, mHealth, crowdsourcing, and other areas. He received his Ph.D. from the MIT in 2009.

Indrani Medhi Thies is a Researcher in the Technology for Emerging Markets Group at Microsoft Research India. Her research interest is in User Experience Design, and Technology for Global Development, particularly User Interfaces for Low-Literate and Novice Technology Users. Indrani has a Masters' degree in Design from the Institute of Design, Illinois Institute of Technology (IIT-ID), Chicago, USA. Currently, she is also writing up her Ph.D. thesis at the Industrial Design Centre, IIT

Bombay, India. In 2010, Indrani received the MIT TR35 '2010 Top Innovators Under 35' award.

William D. Tucker is a Senior Lecturer at the University of Western Cape (UWC), with 30+ years of experience in ICTs, 15 of those years lecturing at UWC. He is founder and director of the Bridging Application and Network Gaps (BANG) research group, which conducts applied socio-technical research in all aspects of ICTD and network design to serve the un-served.

Elba Valderrama Bahamóndez is a Professor in the Faculty of Computer Systems Engineering at the Technological University of Panama where she coordinates research on HCI and Ubiquitous Computing. She has a Ph.D. in HCI from the University of Stuttgart and an M.Sc. in Media Informatics from RWTH Aachen University. Her research interests include HCI4D, ubiquitous learning, user interfaces for mobile devices, accessibility, and tangible interfaces.

Susan Wyche is an Assistant Professor in the Department of Media and Information at Michigan State University. Her research investigates the appropriation of ICTs by individuals and groups in Africa. This work is supported by grants from Google, USAID and the National Science Foundation. Wyche received her Ph.D. in Human-Centered Computing from the Georgia Institute of Technology and MSc from Cornell.

Building Community
To build community, it is not enough to bring HCI4Ders together; they must have *something to do* with each other. Thus, our consortium interleaves the two goals of creating a space (physical and virtual) for HCI4Ders to interact with and get to know each other *and*

discover new and old 'buddies' to work with on projects that cross borders. We will incorporate a mentor-mentee model to facilitate the transfer of wisdom and experience across generations of HCI4Ders.

Website
Our website, http://hci4dacrossborders.wordpress.com, will be used to present information *before the event* - the program and other details, *during the event* - a space for updates to be noted, particularly so that remote participants remain informed even if they are unable to be physically present, and *after the event* - a resource for those who participated in person, virtually, and those who were not able.

Pre-Workshop
We invite participants to submit 2-4 page position papers (to hci4d.across.borders@gmail.com in CHI Extended Abstracts format) that discuss their plan or intent to collaborate across borders on a topic of interest. These submissions will include a description of their area and research questions that the participants can address in collaboration. It is excellent if these partnerships have formed or are in the process of forming. However, we also invite those who are *yet to partner* to propose ideas where they might be seeking collaboration. We will match them with other individuals or teams. If a researcher is studying the impact that gender roles might have on the adoption of mobile phones in South Africa, for example, s/he is welcome to partner with a scholar planning to conduct a similar investigation in Indonesia *or* a practitioner examining gender issues in a more specific, applied context.

We seek participants who are new *and old* to doing cross-border HCI work in resource-constrained

contexts. The experienced members of this HCI4D community will serve as mentors to the more junior researchers/practitioners in this space (or the mentees). We have a growing list of experienced HCI4Ders who have agreed to mentor, including Nic Bidwell, Nithya Sambasivan, Tapan Parikh, Jacki O'Neill, Brian DeRenzi, Kagonya Awori, among others. Our singular focus is to build and engage a community across borders – conceptual, ideological, national, and disciplinary – to address HCI needs of under-served, under-represented, and/or under-resourced communities.

We will be as inclusive as possible, approaching this Consortium with the goal of adding volume to voices in thus far 'less heard' clusters of the community. To maximize participation, we will target every HCI4D mailing list and research/practice network that we have access to across the continents. We already have a diverse group of organizers and people who have voiced a willingness to participate. To further increase participation we plan to do considerable fundraising to sponsor travel for participants otherwise unable to get funding. We also hope it will be possible to arrange for registration fee waivers, and assist with the visa application process for those who need a visa to enter the U.S. The organizers will work hard to prevent logistical barriers from limiting participation.

Further, since we are aware that some HCI4D researchers would like to participate but will not be able to travel to CHI for various reasons, we are planning to organize remote participation hubs - at least in the UK, South Africa, India, and possibly others. These remote participants will also form teams and generate proposals. Though it is optimal for us to meet and

participate in a physical space, it is just as critical that we open this space to those who would like to participate but are physically not able.

Workshop Structure

Our workshop will be held over two days and organized into six sessions. Two days will give both physical and virtual participants room to get to know each other, connect based on their specific interests, and work together so as to leave with a concrete agenda.

Day One	
09.00-09.15	Welcome
09.15-10.30	Introductions
10.30-11.00	Tea/Coffee Break
11.00-12.30	Session 1: Unpacking 'HCI4D'
12.30-14.00	Lunch Break
14.00-15.00	Session 2: Idea Madness
15.00-15.30	Tea/Coffee Break
15.30-17.00	Session 3: Matching with Mentors
Day Two	
09.00-10.30	Session 4: First Drafts
10.30-11.00	Tea/Coffee Break
11.00-12.30	Session 5: Pair, Share, Iterate
12.30-14.00	Lunch Break
14.00-15.00	Session 6: Final Presentations
15.00-15.30	Tea/Coffee Break
15.30-17.00	Closing

Table 1: The weekend schedule

Day 1 will begin with a welcome and introductions. In Session 1, participants will work in small teams to list out what drives them to HCI4D and what pulls them away from it (in "I like, I wish" format), before discussing as a group. In Session 2, participants will

form groups and put together a brief description of their focus area and ideas that they will then share with the others. In Session 3, we will introduce our mentors to the teams. These mentors will have specific areas of expertise and teams will be able to bid for mentors of their choice depending on their area of interest. They will hand these preferences to the organizers before breaking for a social/ice-breaker activity. At the end of this activity, mentors will be assigned to teams and will work with them to further develop their proposals. In Session 4, teams will draft a first version of a 3-page grant proposal to pursue their research idea. In Session 5, they will exchange proposals with 2 other teams, get feedback, and iterate. The final session will consist of 5 minute presentations of research proposals.

Post-Workshop

We will share our discussions and learnings with the larger HCI community - including those who were unable to attend physically or remotely. The outcomes will be actionable research proposals for researchers to work towards fulfilling. Our goal is to invite these contributions to a journal (ITID or ToCHI) special issue titled "HCI Across Borders". If there is sufficient interest, we may target different publication venues that accommodate publishing preferences across disciplines. For example, we could also undertake a book project that features participants' work. In addition, we will share the participants' contributions on our website.

Call for Papers

The HCI community at CHI has expanded its scope in recent years to study technology use in under-served, under-represented, and/or under-resourced regions around the world. This area of work is identified (not

without debate) at CHI as HCI4D*, where the 'D' is used for highlighting the 'developing world' context where much of this work has taken place. To work around the limitations imposed by this term, we invite individuals who identify themselves as HCI4D researchers/practitioners, *and also more broadly –* those who are keen to (or keenly) pursue HCI research and practice in these under-served, under-represented, and/or under-resourced contexts.

Nearly a decade ago, at CHI 2007, the first workshop on user-centered design and international development was held. Since then, we have seen an explosion of work in this area. This has been accompanied by a growth in understanding, methods, approaches, and techniques towards devising solutions to problems seemingly intractable due to logistical and methodological challenges. As the area has grown, it has understandably become harder for us to stay connected with the expanding scope of research and practice *and* the increasing number of people involved. While technological and methodological advances are critical for further development of our field, so too is it important for us to stay connected. We often work in relatively isolated, geographically dispersed contexts and rarely find the opportunity to associate with the larger community.

Why work *across borders*? Although every country and context is unique there are lessons to be learned across borders as well. Questions to ask include: What are common themes that tie together resource-constrained contexts? For instance, could a maternal health project in India benefit from lessons learned from a project in Kenya and vice versa? How can we – as a community – work within countries *and* across them as well?

The primary objective of this event is to bring together HCI voices from across the globe to develop common interests and work on projects/proposals they can pursue together as collaborators. Our secondary, and larger, objective is to launch a series of such workshops that will help advance towards a richer, stronger, and a fundamentally more cohesive community overall.

* Unpacking the term 'HCI4D' will be one of the undertakings of this workshop. Though debated, the term helps us refer to the area that applies human-centered processes and technology design that aspires towards economic, social, and human development.

Our workshop solicits participation from HCI researchers/practitioners across the globe who work with under-served, under-represented, and/or under-resourced communities. We invite participants keen to explore collaborations across borders and geographies. We define "borders" and "geographies" broadly, including national boundaries *and* localized boundaries between cities or different groups *within* a country. We welcome all methodological and ideological leanings. Examples of topics/themes of interest might include, among others, participatory and co-design approaches, factoring cultural sensitivities in the design of new technologies, designing to accommodate power differentials, devising innovative techniques for engaging users, and designing for sustainability.

Examples of projects might include, among others, a study of Facebook use and gender roles in South Africa and Namibia, the design of mobile-based reporting systems for targeted African-American citizens to report police brutality in Atlanta, Minneapolis, and New York, the design of mobile media for maternal and

newborn health in India and Pakistan, a study of IVR use to provide information on agricultural practices in Peru and Ethiopia, and the development of mobile technology-based supports for prenatal care among the Ngabe-Bugle and the Embera in Panama.

Submissions should discuss a plan to collaborate 'across borders', articulating the area of work and research questions. Submissions can be crafted by a set of authors or by a smaller group/individual seeking team members. If additional collaborators are sought, submissions should describe desired expertise/profiles/locations. These submissions will seed discussions at the workshop. All submissions will be reviewed by the organizers and selected according to their potential to contribute to the workshop's goals and foster discussion. Accepted submissions will be available on the website at least two weeks before the conference to allow participants to prepare.

We understand that not everyone who wishes to participate will be able to attend physically due to financial or other constraints. We invite expressions of interest to participate (via email) and will work to accommodate these participants on our 'virtual track' where they will have the chance to work with a mentor and on a team.

References
[1] Nicola Dell and Neha Kumar. 2016. The Ins and Outs of HCI for Development. In *SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*.