
The Future of Child-Computer Interaction

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Abstract

In this panel, academic, non-profit, and industry professionals will ask, what does the future hold for “child-computer interaction?” Panelists will explore such issues as how new mobile, social, and ubiquitous technologies change children’s future patterns of searching, exploration, and expression of information; how learning environments will be ever-changing because of new technologies; and the challenges and opportunities of designing for child-computer interaction.

Keywords

Children, mobile technologies, educational applications, third-world countries, mobile phones, micro-laptops, Children’s information access, search, in-home technology use, at-school technology use.

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms: Human Factors**Introduction**

As mobile phones, netbooks, hand-held games, and MP3 players become as common as teddy bears and

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picture books, *anytime, anywhere computing* is becoming a reality for children [1, 4, 6]. From homes to schools, technology plays an important role in how children live, learn, and play. The question of how to design for children who expect social media, find mobile devices common-place, and have been born searching online suggests the need for new approaches to design and evaluation [3, 6, 7].

Educators, parents, and researchers have frequently reported their concerns about the quality of mobile learning experiences [6], the privacy of online social experiences [3], the lack of skill in information retrieval and the lack of focus multi-tasking brings our children [2]. What is most challenging is the speed with which new technologies are being adopted and new solutions need to be addressed. Even just a few years ago, texting, “tweeting,” and “googling” were not commonplace for children, 10, 11, 12 years old [5].

Therefore, the question remains with all of these rapid changes, what has remained the same in children’s lives? Are there parts of being a child that still need to be supported and enhanced with computation? Or has so much changed that the old questions concerning storytelling, self-expression, concrete computation don’t matter?

The Panel Format

The panel will begin with a short introduction to the panel topics by the moderator. The notion of “child-computer interaction” will be defined, and our understanding of “children” will be specified (ages 1-13). Panel participants will be introduced. The President of Sesame Workshop, Gary Knell, a leader of children’s learning through media will discuss what the

world of children may be like through the eyes of Grover to Big Bird; what children need and how technology has become an important part of their lives will also be discussed. Video/live muppetry will be incorporated into Gary’s talk. The goal during this time will be to ground the panel in “what is” for children.

Then a panel of four Human-Computer Interaction professionals will be asked to join Gary Knell on stage to respond to his vision of childhood. Each participant will offer their point of view in 5 minutes. Each will end their presentation by posing a question to the panel about the “future of child-computer-interaction.” (e.g., how might children search for information in the future? Why are mobile technologies important for the world of children? How is learning going to change in the future?). There will then be another 5 minutes for the panelists to respond to this question and then we will move on to the next panelist’s thoughts and question. Throughout these discussions and questions, audience members will be encouraged to ask their own questions and respond to what they hear. The session will end with open questions from the audience, from the moderator, or from the panelists themselves.

Panel Outcome

It is the panelists’ hopes that audience members will come away from this panel with a better understanding of trends in child-computer interaction. Future research directions will be suggested; diverse perspectives and real-world challenges will be offered. Audience members will be able to expand their point of view for their own work in this fast-moving area of research.

The Panelists

The following panelists have been chosen for their diverse perspectives in how they approach new technologies and children. A balance of academic, industry, and non-profit professionals was sought with an eye to representing both male and female perspectives. What follows is a short background summary for each panelist:

Allison Druin- Panel Organizer/Moderator, University of Maryland

Allison Druin is the Associate Dean for Research at the University of Maryland's College of Information Studies and the Director of the Human-Computer Interaction Lab (HCIL). She has worked for over two decades developing new technologies for children with children as her co-design partners.

Gary Knell- Keynote Panelist, Sesame Workshop

Gary Knell is President and Chief Executive Officer of Sesame Workshop where he leads the nonprofit organization to maximize the power of diverse educational media to help children reach their potential. He has been instrumental in bringing *Sesame Street* global with co-productions in South Africa, India, Northern Ireland, and Egypt.

Elliot Soloway- Panelist, University of Michigan

Elliot Soloway is an Arthur F. Thurnau Professor and has appointments in the Dept of EECS, College of Engineering, the School of Education, and the School of Information, at the University of Michigan. For over 25 years, he and his colleagues in the Center for Highly Interactive Computing in Education (HI-CE) have been exploring the ways in which computing and communications technologies can support inquiry-based

pedagogy in K-12 science classrooms, with a recent focus on the use of mobile technologies in transforming teaching and learning, 24/7. He is also a co-founder of GoKnow, Inc., and is its Chief Strategy Officer.

Dan Russell- Panelist, Google

Dan Russell is a Research Scientist at Google where he works in the area of search quality, with a focus on understanding what makes Google users happy in their use of web search. He is sometimes called a "search anthropologist." In recent years he has spent a great deal of time teaching classes to K-12 teachers, parents, and teenagers on how to use Google search more effectively.

Elizabeth Mynett- Panelist, Georgia Institute of Technology

Elizabeth Mynett is the Executive Director of the Institute for People and Technology, and a Professor in the College of Computing at the Georgia Institute of Technology. There, she directs the research program in Everyday Computing— examining the human-computer interface implications of having computation continuously present in many aspects of everyday life. is one of the principal researchers in the Aware Home Research Initiative; investigating the design of future home technologies,

Yvonne Rogers- Panelist, Open University

Yvonne Rogers is a professor of Human-Computer Interaction in the Computing Department at the Open University, where she directs the Pervasive Interaction Lab. Her research focuses on augmenting and extending everyday learning and work activities with a diversity of interactive and novel technologies. This involves designing enhanced and engaging user

experiences through using a diversity of technologies, including mobile, wireless, handheld and pervasive computing.

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Citations

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