Crossroads
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Introduction

by **Joshua B. Gross**, *Guest Editor*

This issue of Crossroads deals with Human-Computer Interaction (HCI). HCI is a young branch of our discipline, and sometimes misunderstood. It is the sincere hope of the editorial staff that this issue not only contributes relevant and high-quality research to the field, but also to broaden perspectives on the nature of HCI, its foundations, and the contributions it makes to the larger discipline of computer science.

Often, HCI is misunderstood to represent human-computer interface; there are those who imagine HCI is a science of building form-based user interfaces. This limiting (and largely inaccurate) perspective does not represent what HCI can do and what it can contribute. HCI researchers consider the problems of how technology can contribute to the human endeavor, and how computing can integrate with and expand human physical, intellectual, and social abilities.

The articles contained within are representative of much of the breadth of methods used and problems tackled within HCI. Kibum Kim's "Challenges in HCI: The Digital Divide," explores the national and international impact that limited computing access brings about for already-marginalized groups, but also offers ideas for addressing that

gap. Hossein Mobahi and Karrie G. Karhalios´ "HCI potential for aiding children with mental disabilities," addresses how cutting edge technology (such as facial expression recognition) can be integrated into software designed to help children struggling with health problems ranging from autism to bipolar disorder.

Not all of our articles deal with marginalized groups. Kayre Hilton, Mary Beth Rosson, John M. Carroll, and Craig Ganoe explore using information feeds as a means of maintaining activity awareness, integrating their work into a collaborative learning and work environment, in "When News is More than What Makes Headlines." Elke Moritz, Thomas Wischgoll, and Joerg Meyer also take a technology focus, comparing different input devices for manipulating data in VR environments in "Multiple Degree-of-Freedom Input Devices and Displays for Virtual Reality in Protein Visualization."

Finally, Umer Farooq offers a view of the far ends of human computing in "Eureka: Past, present, and future of creativity research in HCI." This article has significant power; it shows that the goal of HCI is not only to optimize performance, but to aid in those processes that define human intellectual and social behavior. In reading these articles, we hope that you will not only gain a deeper appreciation of HCI research, but also to generate ideas about how your own work can consider the complex and exciting human side of computing.

Biography

Joshua B. Gross (**jgross@ist.psu.edu**) is currently a PhD candidate in the School of Information Sciences and Technology at the Pennsylvania State University, studying HCI, artificial intelligence, and programming languages. He holds an MS in software engineering from the University of St. Thomas in St. Paul, Minnesota. He spends his limited free time with his wife, Danielle.