



# AIS SIGHCI Newsletter

Association for Information Systems  
Special Interest Group on Human-Computer Interaction

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Dr. Na "Lina" Li

## New Chair's Remarks – Dr. Na "Lina" Li

Dear fellow SIGHCI members,

It is a great honor to start my term as the chair of AIS SIGHCI. First of all, I would like to thank Richard Johnson and Soussan Djamasbi, the outgoing and past chairs of AIS SIGHCI, for their outstanding leadership and helping me prepare for this new role.

Being involved with SIGHCI in multiple aspects for many years, I am constantly impressed by the dedication and enthusiasm of the SIGHCI advisory board members, officers, chairs, reviewers, authors, and active participants. Because of your efforts and contributions, our SIG remains one of the largest and most active AIS SIGs. We have considerable international impacts. We sponsor tracks/sessions at premier IS conferences such as ICIS, AMCIS, ECIS, PACIS, and HICSS on a regular base. We also organize the Pre-ICIS HCI/MIS Workshop annually. I would like to take this opportunity to express my sincere appreciation to all of you for contributing to the success of SIGHCI.

During my term as the Chair of SIGHCI, I will be supporting the SIG's current initiatives and developing new ones to maintain and enhance the visibility and impact of SIGHCI. Expanding our membership base will continue to be a primary focus, along with providing an environment that fosters high-quality scholarship. I look forward to working with SIGHCI advisors, officers, and members. If you have any questions, suggestions or comments regarding SIGHCI, please feel free to contact me ([nli01@baker.edu](mailto:nli01@baker.edu)) or any other SIGHCI officer. You are also welcome to visit our frequently updated website at <http://sighci.org> to learn more about SIGHCI and various SIGHCI activities.

If you are not a member of SIGHCI, please consider joining this dynamic and active group. If you are a member, please renew your membership. Both can be easily accomplished at the AIS membership webpage (<http://aisnet.org/?MembershipBenefits>).

I look forward to meeting you at SIGHCI events!

Best wishes,  
Na "Lina" Li  
AIS SIGHCI Chair



# AIS SIGHCI One-Year Report: 7/2013 - 6/2014

**Richard Johnson, SIGHCI Chair (2013-2014)**

with assistance of SIGHCI advisors and officers

July 1, 2014

<http://www.sighci.org/>

SIGHCI is the Special Interest Group on Human-Computer Interaction affiliated with the Association for Information Systems (AIS). The SIG was approved by the AIS council in Spring 2001 and was one of the first six SIGs announced on ISWorld in July 2001.

## 1. MISSION & TOPICS

SIGHCI provides a forum for AIS members to discuss, develop, and promote a range of issues related to the history, reference disciplines, theories, practice, methodologies and techniques, new developments, and applications of the interaction between humans, information, technologies, and tasks, especially in the business, managerial, organizational, social, and cultural contexts.

SIGHCI's mission is twofold:

2. To facilitate the exchange, development, communication, and dissemination of information among AIS members;
3. To promote research related to human-computer interaction within business, managerial, and organizational contexts among AIS members and to the larger community of practitioners and scholars.

To fulfill our mission, SIGHCI is involved in several conferences and workshops. In the past year, SIGHCI has organized HCI tracks or mini-tracks at AMCIS, ECIS, HCII, HICSS, ICIS, and PACIS, and has sponsored the Pre-ICIS Workshop on HCI in MIS.

## 2. OFFICERS, GOVERNANCE, AND BYLAWS

The officers serving from July 2013 to June 2014 were as follows:

### Advisory Board

Izak Benbasat, University of British Columbia  
Jane Carey, Arizona State University West  
Fiona Nah, Missouri University of Science and Technology  
Dennis Galletta, University of Pittsburgh  
Traci Hess, University of Massachusetts, Amherst  
Weiyin Hong, University of Nevada – Las Vegas  
Khawaja Saeed, Wichita State University  
Scott McCoy, College of William and Mary  
Joe Valacich, University of Arizona  
Dezhi Wu, Southern Utah University  
Ping Zhang, Syracuse University  
Dianne Cyr, Simon Fraser University

### Chair

Richard Johnson, University at Albany

### Past Chair

Soussan Djasmasbi, Worcester Polytechnic Institute

### Chair-Elect

Na "Lina" Li, Baker College

### Secretary and Treasurer

Miguel Aguirre-Urreta, DePaul University

### Vice Chair for Membership

Claudia Brauer, Vienna University of Business Administration and Economics

### Vice Chair for Research Resources

Younghwa Lee, Miami University

### Vice Chair for Sponsorship

Nick Lockwood, Missouri University of Science and Technology

### Vice Chair for Teaching Resources

Wietske van Osch, Michigan State University

### Vice Chair for Marketing

Constantinos Coursaris, Michigan State University

### Student Ambassador

Michael J. Scialdone, Syracuse University

### Newsletter Editor

Greg Moody, University of Nevada – Las Vegas

### Conf. Planning Chair: pre-ICIS HCI Workshop 2013

Richard Johnson, University at Albany

Soussan Djasmasbi, Worcester Polytechnic Institute

### Track Chairs: ICIS 2013

Susanna Ho, Australian National University

Choon Ling Sia, City University of Hong Kong

### Conf. Planning Chair: AMCIS 2014

Na "Lina" Li, Baker College

Khawaja Saeed, Wichita State University

Dezhi Wu, Southern Utah University

### Conf. Planning Chairs: PACIS 2014

Fiona Nah, Missouri University of Science and Technology

Hong Sheng, Missouri University of Science and Technology

### Conf. Planning Chair: ECIS 2014

Torkil Chemmensen, Copenhagen Business School

Noam Tractinsky, Ben-Gurion University of the Negev

Volker Wulf, University of Siegen

Ping Zhang, Syracuse University

### Conf. Planning Chairs for HICSS 2014

Christoph Schneider, City University of Hong Kong

Angelika Dimoka, Temple University

Joe Valacich, University of Arizona

### Webmaster

Yi "Jenny" Zhang, California State University, Fullerton

### Listserv Manager

Ping Zhang, Syracuse University

## 3. ACTIVITIES & ACCOMPLISHMENTS

Due to the high level of interest and support from enthusiastic SIG members and the hard work of the organizing team, SIGHCI continues to be one of the largest and most active AIS SIGs. In this limited space, we report the activities and accomplishments over the past year (July 2013 to June 2014).

# AIS SIGHCI One-Year Report: 7/2013 - 6/2014

### 3.1. Identity and Community Building

In keeping with its mission, SIGHCI continues to advance the goal of building a community of scholars who share common interests and who can appreciate and help develop each other's work. Our membership roster has nearly 350 members. The SIG continues to work with AIS to integrate SIG membership renewals with general conference registrations, and AIS membership renewals. This integration should result in a greater number of current (paid) members. The membership has a global impact representing over 30 countries and six continents. SIGHCI listserv is also open to non-members and has over 500 subscribers (as of June 30th 2014) from across the world. In an effort to further support our members and the HCI community, all SIGHCI workshop papers from 2003 are available through the AIS e-Library at: <http://aisel.aisnet.org/sighci/>.

### 3.2. Communications and Outreach

In the past year, we have continued to promote awareness of SIGHCI, to extend the identity and reputation of SIGHCI, and to promote dialogs with the MIS community and other related external parties. These activities are carried out using four levels of communication (see prior year reports for details): SIG-wide communication, promotion of HCI in the MIS community, dialog with other HCI associations, and connections with industry.

### 3.3. SIGHCI Sponsored Conferences/Meetings

SIGHCI has sponsored and organized the annual Pre-ICIS Workshop on HCI Research in MIS since 2002. SIGHCI also participates in the following conferences: HCI track at AMCIS (Americas Conference on Information Systems) since 2002, HCI track at ECIS (European Conference on Information Systems) in 2006 and 2007, 2011-2014, paper sessions at HCII (HCI International Conference) since 2005, HCI mini-track at HICSS (Hawaiian International Conference on System Sciences) beginning in 2007, HCI track at ICIS (International Conference on Information Systems) since 2004, and HCI track at PACIS (Pacific-Asia Conference on Information Systems) since 2005. In addition, this year we supported the 1<sup>st</sup> International Conference on HCI in Business as part of HCII 2014. Table 1 summarizes these conferences/meetings.

**Table 1. Summary of meetings completed or in progress**

<b>Pre-ICIS Workshop 2013, Milan Italy</b>	
Format	Workshop (1 day)
Chairs	Johnson, Djasmasbi
Program Chairs	Durcikova, Sheng, Aguirre-Urreta
Local Committee	
PC/reviewers	93
Accepted	12 papers, 11 posters
Acceptance Rate	33%
Participants	49
Special events	best paper and service awards, business meeting
<b>ICIS 2013, Milan Italy</b>	
Format	Track
Chairs	Ho, Sia
Accepted	7
Acceptance Rate	13.7%

<b>AMCIS, 2013, Chicago, IL</b>	
Format	Track with 7 mini-tracks
Chairs	Saeed, Li, Johnson
Accepted	16 completed papers; 11 research-in-progress papers
Acceptance Rate	62%
Special events	Business meeting
<b>HICSS 2014, Maui, Hawaii</b>	
Format	Mini-track
Chairs	Schneider, Dimoka, Valacich
Accepted	10 papers
Acceptance Rate	53%
<b>ECIS 2014, Tel Aviv, Israel</b>	
Format	Track
Chairs	Clemmensen, Tractinsky, Wulf, Zhang
Accepted	10 papers
Acceptance Rate	38%
<b>PACIS 2014, Chengu China</b>	
Format	Track
Chairs	Nah, Sheng
Accepted Papers	10
Acceptance Rate	47.6%
<b>AMCIS 2014, Savannah, GA</b>	
Format	Track with 6 mini-tracks
Chairs	Saeed, Li, Wu
Accepted	21 papers and 4 posters
Acceptance Rate	54%
Special events	Business Meeting

**Table 2. Summary of meetings in planning**

<b>International Conference on HCI in Business</b>	
Chair	Nah
<b>Pre-ICIS Workshop 2014, Auckland, New Zealand</b>	
Format	Workshop (1 day)
Chairs	Johnson, Li
Program Chairs	Sheng, Aguirre-Urreta, Moody
Special events	best paper and service awards, panel and round table discussions, business meeting
<b>PACIS 2015, Singapore</b>	
Format	Track
Chairs	Nah, Ho, Wu
<b>HICCS 2015, Kauai, Hawaii</b>	
Format	Track
Chairs	Schneider, Valacich, Dimoka,



# AIS SIGHCI One-Year Report: 7/2013 - 6/2014

## 3.4 AIS Transactions on Human-Computer Interaction

AIS Transactions on Human-Computer Interaction (THCI) in an AIS Journal managed by SIGHCI and offers a high quality publication outlet for researchers interested in HCI. The first issue of THCI was published in March 2009. We encourage SIGHCI members to contribute towards the progress of THCI by sending their best work to the Journal (visit the THCI website at: <http://aisel.aisnet.org/thci/>). We extend special thanks to Ping Zhang, Dennis Galletta, and Joe Valacich (Editors of THCI) for their efforts in initiating and managing THCI. Table 3 provides an update on THCI from July, 2013 to June, 2014.

Total number of issues	22
Total number of submissions	163 (156 original and 7 editorial)
Total number of acceptances (including editorials)	57 (50 research papers and 7 editorials)
Acceptance rate	25.9%
Average time: submission to first decision	73 days
Average time: submission to final acceptance	283 days

## 3.5. Special Issues of Refereed Academic Journals

We are continuing the tradition of fast-tracking best, completed research papers presented at SIGHCI sponsored meetings to top IS and HCI academic journals. The authors of the best, completed research papers are invited to submit expanded versions of their papers for consideration in various MIS / HCI journals. Table 4 shows the list of journals in which manuscripts have been or are currently being fast tracked.

Journal	Based on	Editors	Status
IJHCI	HCI 2007	Nah, Fang, Hess, Hong	2009
DATA BASE	AMCIS & PACIS 2007	Germonprez, Hess, Kacmar, Lee	2008
JAIS	Pre-ICIS 2007, ICIS 2007, HICSS 2008	Benbasat, Venkatesh	2009
THCI	Pre-ICIS 2008, ICIS 2008, HICSS 2009	Galletta	2009
JAIS	Pre-ICIS 2008-12, ICIS 2008-12, HICSS 2009-12	Srinivasan	In progress
HCI	Pre-ICIS 2009-13, ICIS 2009-13, HICSS 2010-14	Galletta, Zhang, Valacich	In progress

## 3.6. SIGHCI Annual Election

In April 2014, Dezhi Wu, Khawaja Saeed, & Dianne Cyr were appointed as the nominating/election committee by SIGHCI Executive Board, to help administer the annual election for the position of SIG Chair-Elect. Miguel Aguirre-Urreta was nominated, and the was completed in April & May, 2014. Miguel Aguirre-Urreta was elected as the next Chair-Elect, effective July 1, 2014, with Na Li becoming the Chair and Richard Johnson the Past-Chair on this same date.

## 4. SERVICES TO MEMBERS & COMMUNITIES

SIGHCI provides a range of services to its members (visit the SIGHCI website, <http://www.sighci.org/>, for more information about these services). The website has information about every aspect of SIGHCI, including the mission, bylaws, membership, listserv, conferences, newsletters, photo gallery, HCI related journals, research resources, teaching resources, and SIGHCI officers and contacts. In 2010 a redesign of the website was completed under the direction of Dezhi Wu. The new website was launched in 2011 and received the AIS Technology Challenge Award for this achievement. In order to provide greater access to research materials to our members and the SIGHCI community, all SIGHCI workshop papers from 2003 onwards were made available through the AIS e-Library at: <http://aisel.aisnet.org/sighci>. This year we also expanded our outreach and services to our members by adding two new officers to our team: Student Ambassador, and VP of Marketing. Additionally, we created a detailed task list with deliverables and their time lines to be used to recruit new officers and assist them in transitioning into their roles. We also redesigned the format of the workshop to provide more support for our student members. Finally, we redesigned the fundraising structure to improve the SIG's yearly fundraising efforts.

## 5. FINANCIAL MATTERS

Our SIGHCI accounting records, which are maintained by AIS, show that as of April 2014 our SIG has earned a surplus of \$39,552.11. The income and expenses for the fiscal year are listed in Table 5. We worked hard on increasing the surplus by controlling costs, e.g. we reduced printing costs by providing more online content. We also took major steps to attract more organizations to support our SIG. We created two new positions, VP of Marketing and Student Ambassador, and recruited an officer for each position to increase our membership base and help to attract more attendees to our workshops and other events.

Balance (4/30/2013)		<b>\$30,869.05</b>
Revenue		\$13,141.07
Membership Fees	\$2006.07	
Workshop Fees	\$7,135.00	
Sponsorship	\$4,000.00	
Expenses		(\$4458.11)
AIS Registration Fees	(\$376.00)	
Workshop 2013	(\$4,082.11)	
Balance (4/30/2014)		<b>\$39552.11</b>

## 6. LOOKING FORWARD

Since its inception in 2001 our SIG has made significant progress through the support of its advisors, officers, sponsors; and members. The cooperation and assistance of the AIS office, as well as the support of journal editors' in encouraging HCI research in MIS, has been instrumental in SIGHCI's growth. On a personal note, the opportunity to work with such an outstanding team of professionals has been a great pleasure and a rewarding experience. I have every confidence that our new Chair and Chair-Elect (Na Li & Miguel Aguirre-Urreta) will build upon our past successes and will skillfully lead the SIGHCI to continue its growth and achievements.



# Call for Papers: HICSS Minitrack: HCI and Consumer Health

*HICSS 48- Kauai, Hawaii - January 5-8, 2015*

**The best completed research papers from the mini-track will be fast-tracked for publication consideration in the AIS Transactions on Human Computer Interaction (THCI) - <http://aisel.aisnet.org/thci>**

A wide range of users are affected by emerging technologies in health care and a wide range of services these technologies can offer. Health care professionals and healthcare organizations worldwide are undertaking massive transformations and additions to their IT infrastructure. Health care professionals use health technologies to comply with changing regulations, improve patient care, and provide improved support for office staff, clinicians, and patients. There is an enormous wave of new approaches to reach and empower patients directly through computers and telecommunications systems. Consumer participation may take place at various points in the care process: prevention, diagnosis, treatment, monitoring, and/or maintenance.

This minitrack provides a focused outlet for HCI and consumer health informatics researchers in health care domains to share and discuss the results of their work. Research is welcomed on any work that focuses on users (health consumers, medical professionals, and others) and related usability. Various methodologies (design science, qualitative, and quantitative work) are welcome. The best, completed research papers from the mini-track will be fast-tracked for publication consideration in the AIS Transactions on Human Computer Interaction (THCI) - <http://aisel.aisnet.org/thci>.

Broad categories of suitable papers will include:

- Usability, design, and other HCI issues related to health technology such as:
- Personal health record (PHR) and electronic record (EMR) applications
- Patient care monitoring systems and chronic care management tools
- Home health care devices
- Media and devices to assist communication between doctor and patient
- Telemedicine devices
- Systems assisting patients in self-management
- Practice management systems
- Preventive care systems
- Public health informatics
- Electronic medical records applications
- Innovation of new tools and devices with a strong usability or HCI consideration
- Interaction issues in new technologies to empower and inform health care for consumers
- Interaction issues in navigating the wealth of health information on the Internet
- HCI issues in using health technologies across cultures or geographic regions.

We look forward to hearing from you! Please contact us anytime.

Ann Fruhling, Chair

Rich Burkhard Co-Chair, primary contact

Soussan Djamasbi, Co-Chair.

## Continued: Call for Papers and Posters Pre-ICIS HCI/MIS Workshop

THE 13TH ANNUAL PRE-ICIS WORKSHOP ON HCI RESEARCH IN MIS SPONSORED BY AIS  
SIGHCI

Sunday, December 14, 2014 (One day workshop) in Auckland, New Zealand

### IMPORTANT DATES:

Submissions Due: August 22, 2014

Acceptance Notification: September 26, 2014

Extended Abstracts Due for Proceedings: October 17, 2013

Workshop: December 14, 2014

Building upon past successes of the pre-ICIS HCI/MIS workshops as well as the tremendous interest in broad HCI issues exhibited by MIS colleagues, the AIS SIGHCI will hold its thirteenth annual pre-ICIS HCI/MIS research workshop prior to ICIS 2014 in Auckland, New Zealand on Sunday, December 14, 2014.

### WORKSHOP OBJECTIVE:

The objective of the workshop is to provide an opportunity for HCI researchers to come together and build a dynamic community for open and constructive discussions and exchange of ideas.

### WORKSHOP FORMAT

The workshop will include paper and poster presentations, a panel discussion, and a roundtable session. If you are a doctoral student and your research falls under the broad domain of Human-Computer Interaction, you may be interested in submitting your work to be considered for a roundtable. It is being organized with the aim of showcasing doctoral student led research, while further supporting students through feedback provided by a number of seasoned HCI scholars. Each accepted doctoral student led research paper will be assigned to one table with the author in attendance, and a discussion of the research will be led by a senior HCI scholar. The workshop concludes with a business meeting. This meeting is open to all SIGHCI members as well as to all of those non-members who are interested in SIGHCI.

### SUBMISSION, REVIEW, AND ACCEPTANCE PROCESS

The workshop will be accepting high quality research papers as completed or research-in-progress papers, or doctoral student led roundtable papers. Additionally, the workshop will be accepting work that describes novel, early, and creative research ideas as posters. Authors should identify their submission as "Completed Research", "Research in Progress", "Posters", or "Doctoral Student Roundtable Paper" on the first page below the title. Submissions will undergo a double-blind review process. The submissions should not be currently under review elsewhere, and they should have not appeared elsewhere. All accepted submissions will be published in the workshop proceedings, which are available electronically in the AIS digital library.

**Manuscripts should be submitted as email attachments to the workshop program co-chairs at ([sighci.workshop@gmail.com](mailto:sighci.workshop@gmail.com)) with the subject heading "HCI/MIS workshop submission."** Authors can use the body of the email as the cover letter for the submission, and should ensure that their identities do not appear in any part of the manuscript.

## Call for papers and posters: Pre-ICIS HCI/MIS Workshop 2014

### SUBMISSION FORMAT

Maximum length: Completed research papers, research-in-progress papers, doctoral student roundtable papers, and posters must not exceed 14, 7, 7, and 3 single-spaced pages, respectively. The page limit includes all text, figures, and tables, but does not include the cover page, abstract, keywords, and references.

File Formats: Only Word file formats will be accepted. All submissions must be formatted for 8.5 x 11 inch paper (1 inch = 2.5 cm) and have 1 inch margins all around. Please use Times New Roman 12-point font with single spacing for the body of the paper. The first page of the manuscript should have a title, the type of the submission (complete research, research in progress, doctoral student roundtable paper, or poster), total word count of the submission, an abstract of 150 words or less, and a list of 5-6 keywords.

### ORGANIZING COMMITTEES

Workshop Co-chairs:

- Na “Lina” Li, Baker College ([nli01@baker.edu](mailto:nli01@baker.edu))
- Richard Johnson, University at Albany ([rjohnson@albany.edu](mailto:rjohnson@albany.edu))

Program Co-chairs:

- Hong Sheng, Missouri University of Science and Technology ([hsheng@mst.edu](mailto:hsheng@mst.edu))
- Miguel Aguirre-Urreta, DePaul University ([maguirr6@depaul.edu](mailto:maguirr6@depaul.edu))
- Greg Moody, University of Nevada, Las Vegas ([gregory.moody@unlv.edu](mailto:gregory.moody@unlv.edu))

## Review: HCI Track at ECIS 2014

Track Co-Chairs: Torkil Clemmensen, Noam Tractinsky, Volker Wolf, Ping Zhang.

Forty-five papers were submitted to the HCI track at ECIS 2014, which was held in June 9-11, 2014 in Tel Aviv. Ten manuscripts were accepted as full papers and were presented in three sessions. Six manuscripts were accepted as research in progress and presented in a roundtable format, and one paper was accepted as a prototype. Thus, the overall acceptance rate was 38%.

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## New HCI Concentration at Michigan State University

The Department of Media and Information at Michigan State University (MSU) is pleased to announce the offering of a recently launched MA concentration in *Human Computer Interaction* (HCI). This transcriptable concentration is designed to prepare students for careers in user experience / interaction design, usability, information architecture, and other HCI related areas, while also providing foundational scholarly training for those interested in pursuing postgraduate studies in related domains. Courses bridge theory and practice while offering experiential learning through industry client engagements that focus primarily on the design and development of media artifacts/projects.

As MSU advances knowledge and transforms lives through innovative academic programs, research, and outreach, the university is recognized internationally as a top research university and a leader in international engagement. Our *Media and Information Studies* (MIS) doctoral program was ranked second (2<sup>nd</sup>) in the Mass Communication category by the *Chronicle of Higher Education*. The 2014 Quacquarelli Symonds (QS) subject rankings list MSU as 11<sup>th</sup> in the world in “Communication and Media Studies”. *U.S. News & World Report's* 2013 edition of America's Best Colleges ranks MSU 28th among the nation's public universities. The publication consistently ranks MSU among the top 100 national universities in its annual rankings, as it has also been ranked by *Times Higher Education*.

Our Department of Media and Information is a dynamic, interdisciplinary and energetic community of researchers, creators, and teachers united by a passion for media and information. A member of the [iSchools Consortium](#), we study and design technology and produce content in a vibrant environment of engaged learning and scholarship.

You may find more information online for our:

- M.A. HCI concentration: <http://tism.msu.edu/ma>
- Ph.D. in Media and Information Studies: <http://tism.msu.edu/phd>

Dr. Constantinos K. Coursaris  
Director of Graduate Studies  
Associate Professor

## Eye Tracking for Research and Analysis

Our corporate sponsor, LC Technologies, are leaders in eye tracking technologies for research and development. Learn more about their products at:

<http://www.eyegaze.com/eye-tracking-for-research-and-human-computer-interaction/>



# Article: Addressing the Fundamental Attribution Error of Design Using the ABCS

Gordon D. Baxter<sup>1</sup>, Elizabeth F. Churchill<sup>2</sup>, Frank E. Ritter<sup>3</sup>

<sup>1</sup> University of St Andrews, UK <sup>2</sup> eBay Research Labs, <sup>3</sup> Penn State University

There are countless tales of system users being labeled “stupid” when they encounter difficulties. Too often, this criticism (or rather, insult) is hurled by the system designers<sup>1</sup> who are bemused when their apparently intuitive systems are dubbed unusable.

The situation normally arises when designers project their own mental models of how they would act in the same context onto their users. In doing so they project their own feelings, needs, knowledge, and goals onto their users. If their users are *exactly* like them, it therefore follows that those users should behave in exactly the same way as them. The corollary of this is that any problems that arise must be due to the users rather than the technology. We describe this as the *fundamental attribution error of design*. It derives from the fundamental attribution error in social psychology (Ross et al., 1977) which refers to the human propensity to attribute observed outcomes to personal characteristics much more strongly than external factors in a particular situation. We are as likely to make this error about ourselves in unfamiliar situations (self-blame) as about others in situations where we, as observers, feel comfortable (other-blame).

Of course, experienced designers are able to delineate between what *they* know, want, need, and can do, and what *their users* know, want, need, and can do. They understand that the technology may not always behave as users expect. They design their systems to provide appropriate feedback so that it appears *transparent* (or at least interpretable) so the users can make the appropriate attributions to answer questions like: *Is this an issue with the technology or did I do something wrong?* Based on the answer, the users can then take steps to diagnose the source of the problem, fix it, where appropriate, and learn from the experience.

Understanding users is hard, though. Some designers develop this understanding through experience, supplemented by case studies and recourse to the vast literature on design and engineering. Just organizing all the information in a way that is both tractable and useful is a major problem. Based on our work as researchers and practitioners we developed the *ABCS framework* (Ritter et al., 2014) to help manage this information and understand how it affects system design.

## The ABCS Framework

The ABCS framework addresses four critical ways of thinking about users: their bodies (**A**nthropometrics); their typical behavior patterns and characteristics (**B**ehavior); their ways of information processing, reasoning, learning and communicating (**C**ognition); and their ways of cooperating, collaborating, and sharing with others (**S**ocial).

### A: Anthropometrics

The basic characteristics of the human body (size, shape, weight, fitness) all affect how people use systems. Although bodies vary, there are some common, shared factors and some general guidance that can be applied to system design. We know, for example, that no human greater than 10 feet tall has been encountered to date. We can use information about the size and shape of fingers and hands to help determine the size of buttons on a device, and the size of the device itself. Where systems design abuts ergonomics the physical layout of the system can affect the users’ well-being, potentially leading to ailments like upper limb disorders, and back pain. The human sensory and somatosensory systems are important in system design too: consider haptic perception—touch and tactile feedback—which is particularly important in touch screen technologies and some new ways of interacting that are emerging (Schmidt & Churchill, 2012).

### B: Behavior

The behavioral characteristics of people are related to perception in broad terms. For interactive systems, in particular, this means that appropriate consideration has to be given to how both vision and hearing work. The ambient lighting conditions may be important, for example, because it takes time for people’s eyes to adapt to low levels of lighting, so the environment could be designed to have gradual changes in lighting as they enter the work area. When designing systems where the display shows many objects they can be grouped to make it easier for the user to process them.

Alongside behavior we consider the role of motivation, which can be used to help explain why individual users behave in a particular way when carrying out a task. Systems for work settings can be designed to motivate users to get the task done, for example, whereas games would normally be designed to motivate people to continue playing.

# Continued: Addressing the Fundamental Attribution Error of Design Using the ABCS

## C: Cognition

People use mental models of how systems work to guide how they use those systems. These mental models are developed using information acquired through cognitive processes that employ memory and attention—both limited resources—and learning. Systems need to be designed to present the right information in the right format at the right place and right time to both support task accomplishment and the development of these mental models; information that is not directly available should be readily findable. If the users' mental model is incorrect or if some required information is missing or confusing, it becomes harder to work out what to do next, and they may have to resort to using problem solving strategies such as trial and error (Churchill, 1994). In the worst scenario, incorrect mental models can lead to accidents (e.g., Besnard et al., 2004).

Understanding the way that users communicate is important too: their interaction with the system can be classed as a type of conversation. This process can be optimized using Grice's (1975) maxims. Information about communication and language can also be used to determine how content should be written and structured so that users can search for it and read it effectively.

## S: Social factors

People mostly work together in teams to carry out tasks. How they interact with other team members can affect how they interact with technology, so it is important to understand the effects of individual limitations on working in teams, e.g., some people are natural leaders. The way that teams work together needs to be accounted for in system design to make sure that the technology does not adversely affect any social relationships that are critical to the tasks being performed. These could include reducing communication with possible reductions in learning (e.g., Baxter et al., 2005). The way that systems are designed for work settings will need to take into account organizational procedures, and regulatory constraints. Systems designed for social settings, however, will be much less constrained and people will be intrinsically motivated to use these systems.

## The General Applicability of the ABCS

The ABCS framework grew out of our experiences in researching and developing interactive systems in domains including aviation, consumer Internet, defense, eCommerce, enterprise system design, health care, and industrial process control. It provides a relatively lightweight structure to guide how system designers can think about users, and start to ask appropriate questions about those users in their contexts trying to achieve their tasks and activities in the most effective, efficient and enjoyable way. Because the framework provides structure to guide designers to ask relevant questions rather than providing a prescriptive checklist of must-dos, we believe the ABCS provides a foundation for learning as well as for the design of systems that are more usable, more useful and more effective.

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AMCIS'14 – HCI Track, Savannah, Georgia	7-10 Aug, 2014
SIGHCI Pre-ICIS Workshop, Auckland, New Zealand	14 Dec, 2014
ICIS'14 – HCI Track, Auckland, New Zealand	14-17 Dec, 2014
HICSS'15 – HCI Track, Kauai, Hawaii	5-8 Jan, 2015
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You are invited to offer items to the coming issue of AIS SIGHCI newsletter (Volume 13, Issue 2), to be published in December 2014. All items will be editorial reviewed. If you are interested, please send your pieces to the newsletter editor John D'Ambra ([j.dambra@unsw.edu.au](mailto:j.dambra@unsw.edu.au)) by October 15, 2014. Possible topics include, but are not limited to, the following:

1. Short essay/opinion/research study (800 – 1700 words)
2. HCI book review (800 – 1700 words). Please feel free to contact the editor beforehand if you intend to review a book or if you wish your own book to be reviewed.
3. Teaching HCI (up to 1700 words): teaching ideas or cases, sample syllabus, etc.
4. Industry voice (800 – 1700 words). We welcome HCI related essays from industry professionals.
5. Brief introduction of HCI research tools (up to 300 words).
6. Brief introduction of interesting HCI journals and/or special issues, including citation information, brief description, table of content (for special issues), etc.
7. CFP for HCI related journals or conferences.
8. News about SIGHCI members (up to 300 words for each item): honors and awards, professional activities, new appointments, interesting projects, new books or publications, etc.
9. Any other announcements (up to 300 words for each item).

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