

Call for Participation - HCIC 2018

AI and HCI

Location: Pajaro Dunes, Watsonville, CA

Dates: June 24-28 2018

From Arthur C. Clarke's global satellite-driven phone system in "Dial F for Frankenstein", to the cybernetic revolt in the movie "Terminator" and the virtual assistant in the movie "Her", pop culture offers innumerable examples of what could happen with Artificial Intelligence (AI) in machines. The unpredictable nature of superintelligent, self-improving machines lends itself nicely to the dramatic storylines of movies and books. Can machines empower humanity to become enlightened and virtuous or could they instead ruthlessly enslave all of humankind to tickle their own warped sense of satisfaction?

As computational power has made significant progress, user interfaces and experiences have moved from the usual desktops, laptops and smartphones. There is now practically a computer in everything, from refrigerators to self-driving cars, and even in the human body. How is AI shifting our relationship to computing?

AI is complicating interaction design, requiring designers to consider features, models, and bias. AI is also making great strides to increasingly "natural" user interfaces. Both present issues. In Terry Winograd's words describing the relationship between knowledge and design underlying AI and HCI - *"Should we expect to communicate with the computer in the same way we would to another human, as persuasively portrayed in Apple's early vision of the Knowledge Navigator? Or are there practical and philosophical objections to encouraging people to attribute human attributes and abilities to their computers?"*

For HCIC 2018, we would like to have a dialog around the boundaries of AI and HCI. We ask you to consider the design process itself, technical challenges and opportunities, psychological implications, as well as social, economic, and cultural issues.

We invite three venues/formats for exploration of these topics: presentations, demos, and "poster-boasters".

Possible topics:

Natural language/conversational interfaces

From fact-finding to more exploratory search, thanks to natural language systems, we no longer need to interact with computers through rigid user interfaces and limited voice commands. Natural language interfaces are now much better at answering questions such as "what is the

best Mexican food nearby?” or automatically adding a “track package” button to your UPS shipping confirmation in your email inbox. AI-enhanced speech recognition has popularized voice-driven search now common in interfaces (e.g., Siri, Alexa and Cortana). With traditional graphical user interfaces, UX was mainly about guiding the user; With conversational interfaces, UX is focused on engaging in a dialog with the user. Can conversations with machines truly feel natural? How do we see advances in natural language technology facilitate new opportunities in interaction behavior?

Machine learning

The results of machine learning are apparent everywhere, from personalization of stream feeds (e.g., Facebook, Twitter, YouTube), to speech recognition and language translation systems (e.g., Google and Microsoft Translate), email spam filtration, financial market tools, and recommendation engines (e.g., Amazon, Netflix, Hulu). Machine learning provides computers with models that detect patterns, draw connections, and make predictions from data to construct informed decisions about what to do next. Is machine learning a useful means for UX adaptation and refinement? How has machine learning changed the role of the UX designer? Are we there yet in terms of realizing highly intelligent behaviors in systems capable of passing a Turing test?

Co-operation behavior between humans and intelligent systems

Intelligent agents and robots are often imbued with anthropomorphic primitives for goals, beliefs, intentions, and commitments, as well as conventions to manage any changes to their plans and actions. How could we design more holistic interactions between humans and machines? This could help instill greater transparency in communications between humans and machines, with machines able to detect, understand, and respond to human behavioral primitives like intentions, which may ultimately lead to better cooperation.

Augmenting human creativity

Although some fear that intelligent agents will replace humans in the workplace, many see their potential for providing humans with “super powers.” In many creative fields such as writing, digital design, and music, people are already working with data-driven systems that provide inspiration, autocompletions, and feedback. How do we build collaborative AIs that augment human creativity?

AI for social good

Both in academia and industry, technological innovations are outpacing our grasp of how to embed them into products and real-world systems. While it is technically impressive that we can detect nuanced sentiment in written passages and synthetically generate realistic images, it is unclear how we should employ these novel capabilities to maximize social impact. Following the push for socially relevant computing, how do we ground advances in machine learning in individual and community needs? How do we foster dialogues between the HCI and AI communities to identify opportunities for the best social impact? And how should we as a HCI scholars approach the real concerns people have about automation replacing human jobs?

Algorithmic bias and transparency

People constantly interface with algorithms in their daily lives through search engines, recommendation engines, targeted advertisements, conversational agents, etc. Yet these algorithms are subject to bias resulting from the data they were trained on and the people that created them. How can we design algorithms that afford personalization while behaving ethically and fairly? How can we provide greater algorithmic transparency, and allow people to measure and understand potential biases?

Humanizing algorithms

Matching people to former romantic partners. Categorizing photos of black people as gorillas. Painful reminders about the death of a loved one. These are just a few of the now familiar stories of algorithms behaving badly. In principle, the algorithms that power recommendation and personalization systems should serve users' needs. They should be sensitive to the benefits and risks of the content they present. But what kinds of social information should they consider? And what social issues should we, as designers and engineers of these systems, consider? How might we socialize AI?

Third paradigm HCI and AI

How do we account for situated, embodied approaches to HCI in the context of AI? Third paradigm approaches in HCI have situated perspectives from which people construct meaning in relationship to technology and through their interactions. Does AI empower or challenge us when design situated, embodied interactions? And how might we engage research with traditional third paradigm methods such as ethnography, action research, practice based research, and interaction analysis? If AI systems are active and dynamic collaborators, in what ways might we also consider AI-world views in addition to our own?

Neurotechnology and biointerfaces

Using one's brain as an input modality to control a computer, may not sound as sci-fi after all. Facebook recently revealed an initiative to build a [computer interface for the human brain](#) to enable one to type a hundred words per minute using their mind. Other initiatives include researching ways to upload one's thoughts and manipulate objects using one's mind. They open interesting opportunities to enhance UX for accessibility, but do have potential downsides, such as stealing sensitive information from the brain. With these challenges and opportunities, what future is in store for such UX?

Submission Formats with Deadlines

We invite proposals for three venues/formats for exploration of these topics: presentations, demos, and "boaster-posters". All submissions should be sent to hcic-pc@googlegroups.com by the specified deadlines. For all categories of submission, please contact us if you would like to consult with us about your ideas.

Presentations

To propose a presentation, submit a pdf of a 2-3 page extended abstract discussing your idea. We invite challenging and provocative ideas. Controversial topics, fierce (but well argued) challenges, and thoughts on the interplay between AI and HCI are strongly encouraged. The standard presentation format is a 45-minute talk followed by a 10-minute discussant response period, and then 35 minutes of open discussion. Topics should be appropriate for this format.

Please submit an extended abstract in PDF form that includes:

1. A cover page with:
 - a. Title
 - b. Author(s) (please indicate those who will attend)
 - c. At least three keywords
 - d. A 150 word abstract
2. A 2-3 page extended abstract that describes your work and what you would like to present and discuss at HCIC 2018.

Submission deadline: March 16, 2018

Demos

To propose a demo, please submit a 2-3 page extended abstract with images/sketches detailing what the demo is, what it is intended to illustrate, and how people will interact with your demo. Your demo could be a technology, it could be a participatory game, it could be a participatory active improvisation, or it could be in the form of a scripted role play. It should, however, clearly illustrate the ways in which possible futures play a role in AI and HCI.

1. A cover page with:
 - a. Title
 - b. Author(s) (please indicate those who will attend)
 - c. At least three keywords
 - d. A 150 word abstract
2. A 2-3 page description of your proposed demo including what the demo is intended to illustrate and how you intend people to interact with your demo. Please also specify A/V requirements for your demo. Note that wireless connectivity may be limited, so make sure your demo does not require an Internet connection.

Submission deadline: March 16, 2018

Boaster-Posters

A "boaster-poster" is a poster that describes your most current research endeavor and/or interest. The idea is to foster dialogue about your topic of interest/research so you can meet like-minded HCIC 2018 attendees. The format for a "boaster-poster" is as follows: a short description of your perspective and interest in this area, plus a description of your work in form of a single page (8.5 x11 inches) poster. Boaster-posters offer an opportunity to showcase the

work of new and experienced authors alike. You can use images and text to frame and illustrate your ideas. A list with booster-poster titles, authors & abstracts will be distributed at the conference, and the posters will be available for view at the HCIC conference. We strongly encourage all student attendees to submit a booster to HCIC, as booster authors will have opportunities across the conference to discuss their work with other attendees.

Please send your submission in PDF form and include the following:

1. Cover page with:
 - a. Title
 - b. Author(s) (indicate those available to chat at meeting)
 - c. At least three keywords
 - d. A 150 word abstract
2. A draft of your poster

Submission deadline: June 8, 2018

All booster-posters are automatically accepted. There is no review process.

HCIC Rules

The rules of the consortium state that only employees of member organizations may submit abstracts for this call. Abstracts may have non-member coauthors, but the board must approve attendance or co-presentation. Students are not eligible to submit proposals for presentations or demos. However, they are strongly encouraged to submit “booster-posters,” short descriptions of their interests and current work in the form of single page (8.5 x11 inches) posters.

Registration

Registration opens in mid-April. To register for HCIC please go to the HCIC website: hcic.org. For more details on registration email hcic-chairs@googlegroups.com.

Logistics

For more information see our website (hcic.org). For all logistics questions related to HCIC, please email hcic-chairs@googlegroups.com

Program Committee

Jed Brubaker, University of Colorado Boulder
Ranjitha Kumar, University of Illinois, Urbana-Champaign
Vidya Setlur, Tableau Software
hcic-pc@googlegroups.com