WELCOME FROM CHAIRS

GENERAL CHAIRS WELCOME

We are excited to welcome you to CHI 2019 in Glasgow! This is the first time CHI has been in the UK, and we are very happy to host it in Scotland.

The ACM CHI Conference on Human Factors in Computing Systems is the premier international conference of Human-Computer Interaction. CHI — pronounced “kai” — is a place where researchers and practitioners gather from across the world to discuss the latest in interactive technology. We are a multicultural community from highly diverse backgrounds who together investigate new and creative ways for people to interact.

Our theme is “Weaving the Threads of CHI.” This is reflected in our celtic knot logo, a symbol of strength and friendship. Threads are interconnected and interwoven, without a clear beginning or end. We are the threads of CHI, people from different disciplines, cultures, sectors, communities, backgrounds — designers, researchers, practitioners — weaving together into one community, with the common purpose of technology that works for people and society.

The theme of weaving informed all our planning and we are excited to present a vibrant technical and social programme for you to experience. Our hope is that, over the next six days, you weave yourself ever more as part of the CHI community, exploring technology and world-class research, engaging in discussions with your community of designers, researchers, students, and practitioners and all attendees!

DIVERSITY AND INCLUSION STATEMENT

CHI 2019 is an Association for Computing Machinery (“ACM”) Special Interest Group on Computer-Human Interaction (“SIGCHI”) sponsored conference. The open exchange of ideas and the freedom of thought and expression are central to the ACM’s aims and goals. These require an environment that recognizes the inherent worth of every person and group, that fosters dignity, understanding, and mutual respect, and that embraces diversity. For these reasons, ACM requires all ACM members and members of ACM Special Interest Groups (“SIGs”) to abide by their Policy Against Discrimination and Harassment with respect to their participation in ACM-related activities. ACM also expects registered attendees of ACM- or SIG-sponsored events such as CHI 2019 (“Event Attendees”) to abide by this Policy. https://www.acm.org/special-interest-groups/volunteer-resources/officers-manual/policy-against-discrimination-and-harassment

At CHI 2019, we want every participant to feel welcome, included, and safe at the conference. Moreover, we will do our best to accommodate specific needs such as accessibility, or dietary requirements. We cannot promise to solve every issue, but will try our best. We expect all interactions between CHI members to be respectful and constructive, including interactions during the review process, at the conference itself, and on social media.

Anyone witnessing or subject to unacceptable behaviour should notify the CHI 2019 General Chairs immediately at generalchairs@chi2019.acm.org.

SUSTAINABILITY STATEMENT

One of our goals for CHI 2019 is to make more sustainable choices wherever we can, recognising of course that international travel is still a huge part of getting to conferences. Working with the Sustainability chairs, we’ve chosen recycled, biodegradable or eco-friendly products wherever possible, removed the conference bag and gifts by default, reduced print paper, offer re-usable water bottles, and are working to promote more sustainable food choices and shared transport options.

PHOTO CREDITS

Site photos: Glasgow Convention Bureau
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CHI 2020 Save the Date ..........................inside back cover

SEC (Scottish Event Campus)
WIFI (case sensitive)
SSID: CHI2019
Password: WEAVE2019

Crowne Plaza Hotel
WIFI (case sensitive)
SSID: CHI2019
No Password
CHI 2019 Information and Policies

CHI 2019 Info Booth  Hall 4
Student Volunteers staff the Info Booth during Exhibit Hall hours. They are happy to help answer your questions or find someone who can. At other times, stop by the Registration Desk for information. The SEC also has a staffed Info Desk in the main concourse for your convenience.

Name Badges
Your CHI 2019 name badge serves as your admission pass to conference sessions and events. Please wear your name badge at all times while inside the conference centre. Conference management reserves the right to deny admission to anyone not wearing a CHI 2019 name badge.

Student Volunteers  M1
CHI 2019 has almost 200 Student Volunteers (SVs), easily identified by their purple SV t-shirts. Most are graduate students in HCI and some are seeking jobs or internships. All SVs are ready to help you.

Lunch@CHI  Monday – Wednesday, 12:20 – 14:00
Lunch@CHI is a chance to form lasting relationships with people you might not have otherwise had the opportunity to meet in the hustle and bustle of a large conference like CHI. It is also a unique opportunity to get to know people at myriad points in their careers and at various institutions. The Lunch@CHI Chairs will place you in a small group with other people who share an interest in a topic. Then, you have lunch together and chat about the lunch topic (or whatever else you want!). The Lunch@CHI Chairs will find and book restaurants for you, and everyone pays for their own meals. Lunches are capped at 8 people, including the host(s). For more information, look on the CHI 2019 website under “Attending” to find Lunch@CHI. If you want to participate, use the link on your confirmation email or ask at the registration desk for help.

Wireless Access
CHI 2019 offers wireless high-speed internet access throughout the conference centre and the Crowne Plaza Hotel including all meeting rooms. Please be considerate of your colleagues and limit your time spent online and any unnecessary bandwidth usage. See Table of Contents for network and password.

Live Streaming
CHI 2019 will be livestreaming all paper sessions, widening the reach of paper presentations. Go to https://chi2019.acm.org/for-attendees/stream/ to connect.

Blogging and Photosharing
CHI encourages attendees to blog, tweet and share photos using the hashtag #chi2019.

Photography and Recording
Photographing crowd scenes and people interacting with technology is common at CHI. Attendees should be aware that their images might be captured. Please use common courtesy when taking photos or video of individuals that are later uploaded to YouTube, Flickr or similar sites and ask permission before posting pictures of identifiable people. Audio or video recording of any talks or presentations is prohibited. Flash photography is not permitted.

Remote Attendance (Telepresence)
Pre-registration required
We are providing the opportunity for people to remotely attend the social events at the CHI conference via “local buddies” or “human proxies.” Our goal is to increase access to the conference experience for remote participants who would otherwise be unable to attend due to mobility impairments, chronic health issues, or travel restrictions.

Charging Access  Hall 4
Power up while chatting with colleagues during the breaks at the Work Area, located in the SEC Hall 4.

Smoking Policy
The conference centre and the Crowne Plaza Hotel support a mandated smokefree environment. No smoking is allowed inside the facilities.

Child Care
CHI 2019 is committed to providing childcare. For more information, please go to the registration desk. Space is limited, so please sign up as soon as you know your needs. For more information, please go to the registration desk.

Nursing Room  M2
The nursing room is a quiet space for feeding and soothing babies and very young children whose caregivers are attending CHI. It is also for nursing parents who need to pump breast milk, and it is equipped with a kettle, microwave, and fridge. Please go to the conference office (SEC M5) to ask for the key to this room. There is an additional unequipped parent/child room on the concourse opposite R. S. McColl’s shop.

First Aid
SEC does not have an infirmary on the concourse, but there is a medical centre for private treatment located outside Hall 5, if required. The medical centre also has a bin available for sharps disposal. First aiders are on duty at all times. In the Crowne Plaza, contact any staff member to call for help.

In Case of Emergency
In case of emergency, please notify SEC or Crowne Plaza staff and the Conference Office staff in SEC M5. SEC will deal with all emergencies and will call emergency services (999) if required. Should there be a danger to the immediate safety of people, please call emergency services (999) directly, facilitate first aid, if you can, and ask someone to raise the attention of on-site staff to the incident.

Headshots  Mezzanine  Sunday – Tuesday, 10:00 – 15:00
Having a professional headshot on hand can prevent the need for taking last-minute selfies for use in book chapters, journal articles, biographies, or job applications. Sunday through Tuesday (10:00-15:00), a professional photographer from Lorenzo Hill Photography will be available provide free digital headshots for all students. Others may also pay for headshots to be taken.

Equity Allies
Allies [designated by an “ALLY” pin] will be available throughout the conference. These volunteers have received training in basic bystander intervention, harassment, and discrimination management, relevant policies, and CHI Equity procedures. We encourage you to approach them whenever you have questions about equity matters, need direction, or wish to file a report.
General Information

Registration and Merchandise Desk
Registration for the CHI 2019 Conference, Workshops and Courses (subject to availability) Saturday morning through Thursday at the Registration Desk located in the SEC Concourse outside of Hall 4. CHI 2019 merchandise, including zip-up sleeveless hoodies, plushie unicorns, recyclable bags, and bamboo coffee cups, will be available for purchase (subject to availability).

<table>
<thead>
<tr>
<th>Day</th>
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<tr>
<td>Saturday</td>
<td>07:30 – 16:00</td>
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<td>Sunday</td>
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<td>Monday</td>
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<td>Tuesday</td>
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<td>Wednesday</td>
<td>08:00 – 17:30</td>
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<tr>
<td>Thursday</td>
<td>08:00 – 16:00</td>
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Exhibit Hall
The Exhibit Hall is located on the ground floor of the SEC Concourse in Hall 4. Here you can enjoy a beverage and light snack during coffee breaks, talk with colleagues or explore exhibits, posters and Interactivity. Opens on Monday evening.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Area</th>
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<tbody>
<tr>
<td>Monday</td>
<td>17:30 – 19:30</td>
<td>Conference Reception</td>
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<tr>
<td>Tuesday</td>
<td>10:00 – 18:00</td>
<td>(Job Fair 17:30 – 19:30)</td>
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<td>Wednesday</td>
<td>10:00 – 17:30</td>
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<tr>
<td>Thursday</td>
<td>10:00 – noon</td>
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Coffee Breaks
Regularly scheduled morning and afternoon coffee breaks are complimentary for all registered CHI 2019 attendees:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Monday</td>
<td>10:30 – 11:00</td>
<td>Hall 5</td>
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<td></td>
<td>15:20 – 16:00</td>
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<tr>
<td>Tuesday-Wednesday</td>
<td>10:20 – 11:00</td>
<td>Hall 4</td>
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<td></td>
<td>15:20 – 16:00</td>
<td>Hall 4</td>
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<tr>
<td>Thursday</td>
<td>10:20 – 11:00</td>
<td>Hall 4</td>
</tr>
<tr>
<td></td>
<td>15:20 – 15:40</td>
<td>SEC Concourse &amp; Clyde Auditorium Foyer</td>
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</tbody>
</table>

Media/Press Office
CHI 2019 welcomes members of the media. There is a Media Office available for your use Monday through Thursday. CHI 2019 volunteers will be happy to help you schedule interviews with select authors at the conference. The Media Office hours are the same as the Registration Desk.

Lunch Area (and lunch purchase)
Located to the left of the commercial exhibits area (see Hall 4 map on page 21), the Lunch Area is a place where you can find seating and concessions with different food options for purchase during the Tuesday and Wednesday lunch breaks. This area is not open on Thursday. Additional lunch purchase options include SEC's restaurant, Clydebuilt Bar & Kitchen, which is open from 07:30, as well as other concessions in the SEC Concourse.

Work Area
The Work Area (see Hall 4 map on page 21) provides a place to focus on your work. Charging access and work tables are provided.

Lounge Area
Relax here in the Lounge Area on soft furniture and hang out with friends. (See Hall 4 map on page 21).

Photo Op Area
Near the front of the Exhibit Hall, you will find a playful photo op area. Tweet your photos, tagged with #chi2019.

Desensitization Room
Attending conferences—especially those with numerous simultaneous tracks—can be a challenging experience for many. If you feel anxious or need some breathing room, this room is provided for that purpose. It is a place to be quiet and recover from the hustle and bustle of CHI.

Prayer Room
This a quiet place for prayer. Please be respectful of others already using this room when you enter or exit.
CHI 2019 has a wide variety of technical content for you to attend at the conference. It includes: Papers, Journal Articles, Courses, Case Studies, Panels/Roundtable Discussions, alt.chi, SIGs, and Video Showcase. Also included are poster presentations of Late-Breaking Work, the Doctoral Consortium, the Student Research Competition, and the Student Design Competition, as well as Interactivity.

We distinguish between two categories of CHI material in the ACM Digital Library. Papers are the most rigorously peer reviewed and prestigious material presented at the conference, and are collected in the Conference Proceedings. The other categories of work are represented in the Extended Abstracts. These are peer-reviewed, juried, or curated, and reflect the breadth of education, research, design, artistic, scientific exploration and engineering activity within the HCI community. Most content is available on the ACM Digital Library at http://dl.acm.org. Journal articles are archived in their respective journals.

Navigating CHI 2019: How do you choose?
With so many presentations happening at once, how do you choose? CHI 2019 offers the following resources to help you make the most of your conference experience:

1. This CHI 2019 Conference Programme offers at-a-glance summaries and details of all events in the main technical programme, as well as times and locations.

2. The CHI 2019 Web Programme (https://chi2019.acm.org/for-attendees/full-schedule-of-events/) is available online and offers interactive summaries and full details of all events in the main technical programme, including times and locations.

3. The CHI 2019 Conference Proceedings and Extended Abstracts are available in the ACM Digital Library, and these publications contain details of the work presented.

4. The free SIGCHI Mobile App contains the full CHI 2019 programme as well as a personal interactive schedule to help you keep track of events you would like to see. The app can be downloaded by searching for “SIGCHI” with the yellow icon in Apple’s App Store and on Google Play. To provide feedback on the app design, please go to: http://bit.ly/sigchiapp.

5. The CHI 2019 Video Previews are 30-second video overviews of most presentations in the main technical programme. You can browse Video Previews through the CHI 2019 Web Programme and on YouTube (http://www.youtube.com/user/acmsigchi).

6. SVs or CHI 2019 Student Volunteers are available to point you in the right direction or answer questions about the programme.

Presentation Length
When there are multiple presentations in a session, each presentation is 20 minutes, making it possible for you to “session hop” if you wish. If there are particular presentations that you would like to attend in sessions occurring at the same time, you may be able to move between the sessions to see particular presentations in each.

Audience Questions
Plenaries, Invited Talks, and selected technical programme sessions will use sli.do to organize and moderate questions. Visit http://sli.do, use the event code #chi2019, and select your room to ask or vote for questions.

Standing Area and Accessible Seating Area
CHI 2019 paper sessions will feature a chair-free area at the back and sides of most paper presentation rooms to facilitate standing as an alternative to sitting in the provided chairs. In addition, stickers on the floor in presentation rooms designate reserved spaces for attendees using wheelchairs and scooters.
TECHNICAL PROGRAMME VENUES

Papers
20-minute presentations
These rigorously peer-reviewed presentations are equivalent to journal articles in other fields, and form the core of CHI’s technical programme.

Journal Articles
20-minute presentations
Several HCI journals, including ACM TOCHI (Transactions on Computer-Human Interaction) and ACM TSC (Transactions on Social Computing), invite authors from papers published in the last year to present at CHI.

Case Studies
20-minute presentations
Case Studies describe examples of best practices in human-computer interaction. The goal is to explain methods that deliver reliable, high-quality results based on real-world experience and to present the lessons learned.

Panels and Roundtable Discussions
80-minute sessions
Panels are an interactive, discussion-oriented forum in which panelists present and debate a chosen topic, whereas roundtable discussions are forums in which the moderators pose questions to the audience for discussion.

alt.chi
20-minute presentations
alt.chi is a forum for controversial, risk-taking, and boundary-pushing presentations at CHI. alt.chi presentations are often innovative in format as well as content.

Courses
One, two, or three 80-minute units
Courses provide professional development opportunities for existing and prospective HCI community members. Pre-register to receive the course notes and an identifier on your badge that permits entry to the course. You may register for any unfilled courses at the Registration Desk.

Special Interest Groups (SIGs)
80-minute sessions
SIGs offer a forum for conference attendees who share similar interests to discuss a specified topic. Previous SIGs have launched new conferences and publications or generated new CHI activities.

Video Showcase
40-minute session
The CHI 2019 Video Showcase features engaging videos that offer a variety of perspectives on human-computer interaction, including novel interfaces, reflective pieces and future envisionments.

Interactivity
Hands-on demonstrations
Interactivity is a high-visibility, high-impact forum of the Technical Programme that allows attendees to engage with research prototypes, novel interactive techniques, artworks, design experiences, and inspirational technologies. Plan your experience using the Interactivity map on page 21.

Doctoral Consortium
Posters
Doctoral Consortium posters are highlighted during the Tuesday afternoon break and on display Tuesday – Thursday in Hall 4. Students are available to discuss their research during the Tuesday morning break.

Student Research Competition
Jura/Barra (Island B) CROWNE
Posters and 80-minute session
The Student Research Competition (SRC) is a branch of the ACM Student Research Competition. Students’ posters are highlighted during the Tuesday afternoon break and on display Tuesday – Thursday in Hall 4. The SRC jury selects finalists who present their work and answer questions in front of their posters in Hall 4 on Tuesday. Final presentations are held on Thursday (14:00 – 15:20, Jura/Barra [Island B] CROWNE), and winners are announced at the Closing Plenary. Students are available to discuss their research during the Tuesday afternoon break.

Student Design Competition
Jura/Barra (Island B) CROWNE
Posters and 80-minute session
The Student Design Competition (SDC) challenges students from around the globe to respond to the CHI 2019 Design Brief of “Weaving the Threads within the Social Fabric.” Student Presentations are Monday (14:00 – 15:20, Jura/Barra [Island B] CROWNE). Semifinalist posters are highlighted during the Tuesday afternoon break and on display Tuesday – Thursday in Hall 4. The SDC jury selects four finalists to present on Wednesday (11:00 – 12:20, Jura/Barra [Island B] CROWNE), and the winner is announced at the Closing Plenary.

Late-Breaking Work (LBW)
Posters
A Late-Breaking Work submission is a concise report of recent findings or other types of innovative or thought-provoking work relevant to the CHI community. Submissions report on cutting edge or emerging work that has not been fully realized or developed, for which empirical data may not yet be available, or that has not yet reached a level of maturity expected for the fully-refereed paper process. Rotation 1 posters appear on Tuesday; authors are available to discuss their work during the Tuesday morning and afternoon breaks. Rotation 2 posters appear on Wednesday; authors are available to discuss their work during the Wednesday morning and afternoon breaks.

The following CHI2019 poster collections are on display:

Rotation 1: Tuesday, 10:20 – 16:00
Specific Application Areas
Boards 1-2
CSCW
Boards 2-3
Design
Boards 3-4
Engineering Interactive Systems and Technologies
Boards 4-6
Games and Play
Boards 6-7
Health, Accessibility and Aging
Boards 7-8

Rotation 2: Wednesday, 10:20 – 16:00
Health, Accessibility and Aging
Boards 1
Interaction techniques, Devices and Modalities
Boards 1-3
Understanding People: Theory, Concepts, Methods
Boards 3-5
Privacy, Security, and Visualization
Boards 6
User Experience and Usability
Boards 7-8
SATURDAY–SUNDAY INVITATION ONLY EVENTS

Doctoral Consortium
Selected doctoral students present and explore their research topics with senior researchers and other students in a two-day interdisciplinary workshop. Doctoral Consortium posters are displayed in Hall 4 and brief descriptions appear in the CHI 2019 Extended Abstracts.

Workshops and Symposia
Workshops and Symposia provide a valuable opportunity for small communities of people with diverse perspectives to engage in rich one- and two-day discussions about a topic of common interest. Participants are pre-selected based on submitted position papers, and a brief description of each Workshop and Symposium appears in the CHI 2019 Extended Abstracts.

If you need room information for Workshops or Symposia, visit the Registration Desk in the SEC Concourse in front of Hall 4.

ACM/SIGCHI BEST OF CHI AWARDS
The SIGCHI “Best of CHI” awards honour exceptional submissions to SIGCHI sponsored conferences. They are marked in the web programme as well as in the SIGCHI app.

Papers receiving Honourable Mention awards are designated by a medallion icon.

Papers receiving a Best Paper award are designated by a trophy icon.

Winners of Student Competitions are announced in the Closing Plenary session. Congratulations to the 2019 award winners and nominees for their outstanding contributions to CHI 2019 and to our field.

VIDEO SHOWCASE AWARDS
The Video awards below will be announced during the Video Showcase on Wednesday from 17:30 – 18:10 in Lomond.

The Golden Mouse Award has been awarded annually since the creation of the Video Showcase in 2009. It is a “best of show” award and recognizes the best overall submission to the showcase in terms of both content and presentation value.

The Best Design Study Award is this year’s “jury’s choice” award and recognizes a video for making a potential design feel sensitive, real, and vivid.

The Best Design Exploration Award is also this year’s “jury’s choice” award and recognizes a video that explores a device design with a very different approach.

ABOUT ACM SIGCHI
CHI 2019 is sponsored by ACM’s Special Interest Group on Computer-Human Interaction (ACM SIGCHI). ACM, the Association for Computing Machinery, is an educational and scientific society uniting the world’s computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field’s challenges. ACM strengthens the profession’s collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking. ACM offers its more than 100,000 worldwide members cutting edge technical information through world class journals and magazines, dynamic special interest groups, and globally recognized conferences. Visit www.acm.org for more information about ACM.

SIGCHI is the premier international society for professionals, academics, and students who are interested in human-computer interaction (HCI). We provide a forum for the discussion of all aspects of HCI through our conferences, including our flagship CHI conference, publications, web sites, email discussion groups, and other services. We advance education in HCI through courses, workshops, and outreach, and we promote informal access to a wide range of individuals and organizations involved in HCI.

Members can be involved in HCI-related activities with others in their region through local SIGCHI chapters. Come to the SIGCHI Town Hall meeting on Wednesday at 12:20-14:00 in Lomond or visit www.sigchi.org to learn more about SIGCHI. We also have a Youtube channel www.youtube.com/user/acmsigchi and an active Tumblr at sigchi.tumblr.com where we document the discussion and process around the development of CHI.

Membership Information
Please contact ACM’s Member Services Department

Online:  www.acm.org
Tel:    +1-800-342-6626 (USA/Canada)
       +1-212-626-0500 (International)
Fax:    +1-212-944-1318
Email: acmhelp@acm.org
Write: Association for Computing Machinery, Inc.
      General Post Office
      P.O. Box 30777
      New York, NY 10087-0777, USA
### MONDAY MORNING OPENING KEYNOTE

**Aleks Krotoski, Pillowfort Productions**  
*Monday May 6, 09:00 – 10:30*  
**Clyde Auditorium**

**Touchies and Feelies: Everything I Know About Human Interfaces**

Social psychologist, Aleks Krotoski, is not an expert on computer-human interfaces. But she is an expert on other things. In this interactive talk, she shares what baking, beach volleyball, parenting and radio storytelling have taught her about how we interact with each other, ourselves and the world around us - and what this tells us about the possibilities for future social, digital humans.

Dr. Aleks Krotoski is a broadcaster, journalist and academic who has been studying and writing about technology and interactivity since 1999. She has a PhD in the social psychology of relationships in online communities, and is the host of The Guardian's Tech Weekly podcast, and BBC's series The Digital Human.

Aleks studied psychology at Oberlin College, in Ohio, and then moved to the UK to become a television presenter. She returned to university to study Social Psychology and completed her PhD thesis at the University of Surrey in 2009. She has been Researcher in Residence at the British Library, a Research Associate at the Oxford Internet Institute, and a visiting fellow at the London School of Economics.

From 1999 to 2001, she co-presented a late evening video gaming review show called “Bits” on Channel 4. Since 2007, Aleks has presented the award-winning Guardian podcast, Tech Weekly.


### THURSDAY AFTERNOON CLOSING KEYNOTE

**Ivan Poupyrev, Google**  
*Thursday May 8, 15:40 – 17:10*  
**Clyde Auditorium**

**Technology Woven In**

The digital revolution has changed every aspect of our lives, the very essence of how we live, work and play. Instead of creating an alternative cyber space parallel to our reality as it was often envisioned by techno prophets, the opposite is happening: information is no longer confined to the pixels on our screens. The entire physical world -- even living and breathing matter -- is being infused with data, demanding new, unprecedented forms of interactivity.

In this talk, Ivan Poupyrev will discuss his explorations of the present and the future where technology, connectivity and intelligence are woven into the very fabric of our lives. The vision of the world as an interface where everything is connected and interactive will be discussed through a lens of projects that cover over 20 years of research and that spans a variety of fields from augmented and virtual reality, haptics and touch interfaces, to novel sensors and manufacturing techniques. The talk will present his most recent explorations in creating a pico-radar sensor for touchless gesture interaction (Project Soli), and designing a platform for manufacturing interactive, connected soft goods at scale (Project Jacquard).

Dr. Ivan Poupyrev is an award-winning technology leader, scientist and designer working at the cutting edge of interactive technologies. Over the last 20 years, he has been leading the invention, development and productization of breakthrough technologies that span a variety of fields such as VR and AR, haptic interaction and internet of things, novel touch and touchless sensor paradigms, wearables and smart garments, 3D printing and novel manufacturing techniques among many others.

Dr. Poupyrev grew up in the Soviet Union and received his Ph.D. in Engineering from Hiroshima University in Japan. He is currently Director of Engineering and Technical Projects Lead in Google’s Advanced Technology and Projects (ATAP) division where he leads a team focused on inventing and developing interaction technologies and products for future digital lifestyle. Prior to Google, he was Principal Research Scientist at Walt Disney Research and at Sony Corporate Research laboratories in Tokyo. Additionally, he was a visiting scientist at the University of Washington's HIT Lab, a visiting lecturer at Princeton University School of Architecture and an adjunct professor at Carnegie Mellon University's School of Computer Science.
**NEWCOMERS’ RECEPTION**

- **Hall 5**
- **Sunday, 17:00 – 19:30**
- **Online pre-registration/ticket purchase required.**
- New to CHI? Not quite sure how to navigate and tame the complex beast that is CHI? Want to intermingle with other newcomers as well as people who have been coming to CHI for years? This will be a great opportunity to compare notes, get useful tips, make new friends and help set the foundation for a great week.

**SC/AC RECEPTION**

- **Hall 5**
- **Sunday, 18:00 – 19:30**
- Associate and Subcommittee papers chairs, to say thanks for all your hard work putting together the programme for CHI 2019, come along to Hall 5 for some drinks and snacks. You can chat with your fellow committee members and say hello to the CHI Newcomers. Pick up your ticket from the conference office.

**MONDAY**

**OPENING PLENARY SESSION**

- **Clyde Auditorium**
- **Monday, 09:00 - 10:30**
- On Monday morning, we welcome our opening plenary speaker, Dr. Aleks Krotoski. See page 7 for details.

**CONFERENCE RECEPTION AND EXHIBITS GRAND OPENING**

- **Hall 4**
- **Monday, 17:30 – 19:30**
- Catch up with old friends and meet new ones at the conference reception and the grand opening of Exhibits. Interactivity will also be open at this time. Admission and a drink ticket are included with your conference registration. Additional admission tickets may be purchased at the Registration Desk until 18:00. Tickets are not available at the door.

**TUESDAY**

**DIVERSITY & INCLUSION LUNCH**

- **Hall 4**
- **Tuesday, 12:20 – 14:00**
- Open to all attendees, online pre-registration/ticket purchase required.
- Our hope for the CHI 2019 Diversity & Inclusion Lunch is that all who participate will find it a way to deepen their engagement with multiple aspects of diversity and inclusion. These issues include but are not limited to race, ethnicity, geolocation, and culture; age and professional experience; gender identity and sexual orientation; (dis)ability and impairments; religious beliefs; work-life-balance and needs of parents and families at CHI. This lunch is intended as a social-peer platform to celebrate diversity, discuss challenges, and collaborate on strategies to bolster diversity and inclusion in the CHI community.

**CHI STORIES**

- **Lomond**
- **Tuesday, 17:30 – 19:30**
- CHI Stories is a space where we can listen to each other and learn from each others’ perspectives, to foster deeper connections and more awareness of the diversity of our community members’ experiences. Community members will share their personal stories of inspiration, challenge, breakthrough, setback, perseverance, twists, and turns. These stories are performed live on stage.

**UX EVENT**

- **Castle 1/2 CROWNE**
- **Giles Colborne, CEO, cxpartners**
- **Tuesday, 17:40 - 20:00**
- **Online pre-registration/ticket purchase required.**
- **Bridging the Relevance Gap**
- Join the discussion with Giles Colborne about the gap between the academic study of HCI and the practice of interaction design in industry.

At a time when organisations are investing heavily in their design teams, why does that gap remain so wide? Giles draws on his conversations with design leaders in industry and past research into this topic to find places where we may just be able to bridge the gap for the benefit of both sides.

Giles co-founded cxpartners in 2004. Since then, it has grown to one of the world’s leading independent experience design consultancies working on next generation experience design and generating hundreds of millions of dollars of revenue for companies such as Marriott, RAC, and AXA. His book, *Simple and Usable*, now in its second edition, is a best seller in Europe and the US, and has been translated into Chinese and Korean. Giles is former president of the UPA, co-chair of IA Summit, and UX Awards judge. Additionally, he has worked with the British Standards Institute in developing standards for web accessibility.
Job Fair & Recruiting Boards
Hall 4
Tuesday, 17:30 – 19:30
Recruiters and job candidates are invited to take advantage of the CHI 2019 Job Fair on Tuesday evening. Visit the recruiting booths and boards throughout the conference to find out more about available positions. **Job candidates may submit resumes at the Info Booth (Booth 501)** in response to positions advertised on the boards.

**Champion Sponsor Recruiters:**
- Alibaba Group: Booth 400
- Baidu: Booth 602
- Bloomberg: Recruiting Board
- Facebook: Booth 210
- Google: Booth 100
- Microsoft: Booth 606
- Verizon Media: Booth 600

**Contributing Sponsor Recruiters:**
- Autodesk: Recruiting Board
- Huawei: Recruiting Board
- IBM Research: Recruiting Board
- Mozilla: Recruiting Board

**Additional Recruiters:**
- Apple, Inc.: Recruiting Board
- Singapore Management University: Booth 404
- Uber: Booth 408

**Video Showcase**
Lomond
Wednesday, 17:30 – 18:10
Come and enjoy the Video Showcase, a forum for human-computer interaction that leaps off the page: vision videos, reflective pieces, humor, novel interfaces, and studies will be presented through video in a plenary session, complete with popcorn and drinks! Three awards will be presented: the Golden Mouse award, the Best Design Study award, and the Best Design Exploration award.

**Glasgow Science Centre Reception**
Science Centre
Wednesday, 18:00 – 20:00
Across footbridge from SEC
Please join us at the incredible Glasgow Science Centre for a Civic Reception, courtesy of The Rt. Hon. The Lord Provost Councillor Eva Bolander.

Glasgow Science Centre is one of Scotland's favourite visitor attractions, and it is located right across the River Clyde from the site of CHI 2019. Easily accessible via a footbridge, Glasgow Science Centre houses hundreds of interactive exhibits, a Planetarium, Scotland's biggest-screen IMAX cinema, and a Science Show Theatre. One of the most popular exhibits is BodyWorks where you can burn some energy in the giant hamster wheel and perform a virtual autopsy.

The vision of Glasgow Science Centre is a Scotland where all people value science and technology to inform decision making, empower individuals and enrich lives. Glasgow Science Centre inspires people of all ages to explore and understand the world around them, to discover and enjoy science, and understand its relevance to their own lives.

This reception is a great prelude to an evening out on the town, and a welcome drink and top off are waiting for you there, courtesy of the Lord Provost. Delicious appetisers, with many a local flavour, are provided courtesy of our CHI Sponsor Hosts below. Your badge is your ticket to enter the reception, so please be sure to wear it. We hope to see you there!

**Champion Sponsor Hosts:**
- Bloomberg
- Facebook
- Verizon Media

**WEDNESDAY**

**Listening Post**
Jura/Barra (Island B) CROWNE
Wednesday, 08:00 – 10:20
This drop-in session is an opportunity to openly share your experiences, thoughts, wants, and concerns regarding your CHI experience to the Equity Chairs and other organizers.

**ACM SIGCHI & Town Hall Lunch**
Lomond
Wednesday, 12:20 – 14:00
SIGCHI officers and CHI Steering Committee members present ongoing programmes, processes, activities, and plans. An audience Q&A session follows. Participants interested in shaping SIGCHI and CHI’s future are encouraged to attend. An informal lunch is available on a first-come, first-served basis.

**THURSDAY**

**Closing Plenary Session**
Clyde Auditorium
Thursday, 15:40 - 17:10
Finish off CHI2019 with our Thursday Afternoon Closing Plenary speaker, Ivan Poupyrev. See page 7 for details.
Baidu is not only the largest Chinese search engine in the world, but it has gradually become the leading pioneer in Artificial Intelligence in China. Baidu’s mission is “Making A Complex World Simpler Through Technology”.

UXC

Baidu’s User Experience Center (UXC) was founded in 2016 and is responsible for experience design and user research on overall products within the AABBCC system.

We value rationality, minimalism, fairness, and respect in our design, aiming to build a harmonious bridge between users and products.

We focus on users, insisting on the design philosophy of “simplicity and perfection”, and we strive to promote the perfect integration of art, design and technology. Our vision is to set a high benchmark for user experience throughout China, and become a well-respected and trusted user experience organization.

AIID

AIID (Baidu Artificial Intelligence Interaction Design Lab) was founded in 2017. Baidu’s Artificial Intelligence Interaction Design Lab (AIID) embarked on a mission of leading and defining the future of human-computer interaction.

By investigating “habits”, “behavior”, and “needs” of humans, we aim to better serve the evolution of AI products and their product forms and interaction designs.

We conduct human factors research, user experience evaluations, and needs assessments in multiple areas, such as voice interaction, multimodal interaction, and affective interaction. Our findings continue to benefit AI products that companies such as smart products and self-driving cars utilise.
We Build Meaningful Experiences on a Global Scale

Giving people the power to build community requires constant innovation. At Facebook, research permeates everything we do. We believe the most interesting research questions are derived from understanding how people interact in the world around us.

A hands-on approach

Our world-class teams of researchers take a hands-on approach to understand, design and build smarter, unique and more meaningful experiences on a global scale.

Immediate impact

Researchers at Facebook directly contribute new ideas to products that impact the experience of billions of people around the world.

We’re hiring!

We are looking for great people to join our team. Talk to us about internships, full-time positions and post doc opportunities, and visit facebook.com/careers for more info.

Academic Program Opportunities

- Fellowship Program
- Conferences & Workshops
- Research Awards
- Faculty Sabbaticals
- Invited Talks

Learn more at research.fb.com
CHI Attendees
Save 20%
on Interaction Design:
Beyond Human-Computer Interaction, 5th Edition
Purchase on Wiley.com with Code CHI20

If you are an instructor considering this title as a textbook for your course, please visit https://news.wiley.com/ContactRep to request your inspection copy.
Human-Computer Interaction
Redefining human experiences through innovations in research, design, and technology

Visit us at booth #606
Your Publishing Partner in Human-Computer Interaction

International Journal of Human - Computer Studies

The journal publishes original research over the whole spectrum of work relevant to the theory and practice of innovative interactive systems. The journal is inherently interdisciplinary, covering research in computing, artificial intelligence, psychology, linguistics, communication, design, engineering, and social organization, which is relevant to the design, analysis, evaluation and application of innovative interactive systems.

www.journals.elsevier.com/international-journal-of-human-computer-studies

International Journal of Child-Computer Interaction

The International Journal of Child-Computer Interaction serves as a forum to communicate original, high-quality research in child-computer interaction and interaction design and children.

www.journals.elsevier.com/international-journal-of-child-computer-interaction
Alibaba Group Natural HCI lab envisions enhancing human capacity of interacting with machine in natural ways through AI and digitalization of our senses. The research areas include Natural Human-Computer Interaction, Multimodal Interaction, User Behavior Analysis, Haptics and Computer Vision.

Grad Interns

LOCATION:
Sunnyvale, CA, USA
Alibaba Group Natural HCI Lab

LEVEL OF EDUCATION:
Master and PhD Students

KEYWORDS:
Multimodal Interaction • VR & AR Display • Haptics • User Behavior Modeling • Machine Learning

KEY DELIVERABLE:
Create a concept prototype that can demonstrate novel NUI experience.

JOB RESPONSIBILITIES:
• Plan and execute cutting-edge research to advance Natural User Interaction with techniques that combine multiple modalities
• Collaborate with other researchers and engineers to prototype hardware and software solutions

Research Scientists

LOCATION:
Sunnyvale, CA, USA
Alibaba Group Natural HCI Lab

WHO WE’RE LOOKING FOR:
Talented research scientists whom can contribute to ambitious and multi-disciplinary projects with an emphasis on transforming the next generation user experience, and empowering people with technology.

KEY DELIVERABLE:
Driving research programs by collaborating with universities, research institutes, and internal product teams.

JOB RESPONSIBILITIES:
• Initiate, establish and lead research projects within Alibaba Group
• Pursue creative work with high international standards and a proven impact within the innovative UX sphere and beyond
• Engage in collaborative projects with other Alibaba research groups and product teams
• Collaborate with universities and supervise masters and doctoral students

Apply Today!
Submit your resume to: stephaniechan@alibaba-inc.com
Want to immerse yourself in award-winning UX?

Bloomberg is building the world’s most trusted information network for financial professionals. Our core product is the Bloomberg Terminal, an independent and unbiased source of information for our clients around the globe. Bloomberg’s user experience team is dedicated to enhancing and evolving the Bloomberg Terminal through human-centered design. We partner with product and technology to accelerate our clients’ access to data and insights every day.

We’re looking for the brightest minds to come work with us at our headquarters in New York City and are currently hiring for the following positions:
- Experienced Interaction Designer: Mobile and Desktop
- Interaction Designer
- UX Data Scientist
- Technical Writer

To apply and learn more about our UX team, please visit bloomberg.com/UX or contact Elaine Kwong at ekwong2@bloomberg.net
Our UX Research and Consumer Insights team help product creating what's next in content, advertising & technology. connect. We're creators and coders, dreamers and doers while creating new ways for advertisers and partners to improve lives. Our brands like Yahoo, TechCrunch & HuffPost help people with machine in natural ways through AI and digitization of our senses.

Baidu
Baidu is the leading Chinese language internet search provider. Baidu aims to make a complex world simpler for users and enterprises through technology.

Facebook
Giving people the power to build community and bring the world closer together requires constant innovation. At Facebook, research permeates everything we do. We work on cutting edge research with a practical focus, pushing product boundaries every day. We seek to create the technologies that give people new ways to communicate.

Google
Google’s mission is to organize the world’s information, making it universally accessible and useful. Every day, we bring our spirit of innovation and entrepreneurship to work. Come by our booth, meet our engineers and researchers, demo some new products and learn about some of the great opportunities we have at Google.

Microsoft
Microsoft Research is where leading scientists and engineers have the freedom and support to propel discovery and innovation. Here, they pursue and publish curiosity-driven research in a range of scientific and technical disciplines that can be translated into products. With access to vast computing power, global multi-disciplinary teams tackle complex problems that drive breakthrough technologies and improve lives.

Verizon Media
Our brands like Yahoo, TechCrunch & HuffPost help people stay informed and entertained, communicate and transact, while creating new ways for advertisers and partners to connect. We’re creators and coders, dreamers and doers creating what's next in content, advertising & technology. Our UX Research and Consumer Insights team help product teams create products that offer indispensable experiences.

Academous
Academous is going to be an online platform that will help University Researchers in the OECD member countries find participants for their user studies and their online surveys. Academous is a fusion of two words; a) Academia, our target group and b) anonymous, as we promote digital privacy and partial anonymity for our users according to Academic Research ethics.

Bitbrain
Bitbrain is a neurotechnology company that develops high-tech EEG brain sensing devices and other monitoring technologies, together with software solutions for real-world human behaviour research. Our objective is to help science, business and health professionals to leverage neuroscience in a practical and reliable way.

Brain Products GmbH
Our applications for BCI, neuroadaptive technologies and symbiotic fields are unparalleled in flexibility, ease of application and integration. We are always pushing the boundaries of discovery, constantly developing and improving products to better serve your research efforts. Our solutions are driven by innovation, close customer interactions and dedication to the cutting edge of neuroscience.

Cambridge University Press
Cambridge University Press is a not-for-profit publisher that dates from 1534. We are part of the University of Cambridge and our mission is to unlock people’s potential with the best learning and research solutions. Visit our stand to discuss publishing with us, browse our publications and get a 20% discount.

Exponent
We are looking for PhDs, postdocs, and early-career faculty interested in technical consulting. Exponent’s nearly 1,000 employees comprise multidisciplinary teams of scientists, engineers, physicians, and regulatory consultants across more than 90 disciplines and 26 domestic offices to solve complicated problems facing corporations, insurers, government entities, associations, and individuals.

Frontiers in Computer Science
Frontiers in Computer Science publishes rigorously peer-reviewed research across all areas of fundamental and applied computational sciences. Led by an outstanding Editorial Board of international researchers, this multidisciplinary open-access journal is at the forefront of disseminating and communicating scientific knowledge and impactful discoveries to academics, industry and the public worldwide.

MIT Press
The MIT Press is a leading publisher of books and journals at the intersection of science, technology and the arts, publishing more than 200 new books a year and more than 30 journals. The MIT Press is committed to reimagining what a university press can be. Known for iconic design, rigorous scholarship, and creative technology, the Press advances knowledge by publishing significant works by pioneering authors. We honor complexity with provocative and transformative work that crosses academic and geographic boundaries to serve the broadest possible global audience.
Morgan & Claypool Publishers  |  Booth 208
Morgan & Claypool publishes the Synthesis digital library for computer and information science researchers. At CHI, we will display books from our Human-Centered Informatics and Assistive Technologies series while offering 30 days of free guest access to the digital library for attendees without institutional subscriptions.

Noldus Information Technology  |  Booth 504
Noldus develops innovative solutions for behavioral research: from software packages and lab equipment to fully integrated observation labs including training and support. With 30 years of experience we translate your questions into practical and proven solutions. Our turn-key observation labs come complete with The Observer XT, FaceReader, Viso, eye trackers, and data acquisition systems.

now publishers  |  Booth 304
Founded in 2004, now publishers has built a reputation as a source of excellent peer-reviewed publications in business, economics, computer science, and engineering. Their leading product series, Foundations and Trends® (F&T) offers peer-reviewed, state-of-the-art reviews of specific subjects that act as "go to" resources for graduate students and senior researchers looking for high-level introductions to new topics.

Overleaf  |  Booth 302
Overleaf is a free, collaborative, cloud-based LaTeX editor which makes the process of writing, editing and publishing scientific documents quicker and easier. Overleaf's award-winning collaboration technology is now in use by over 4 million researchers, students and technical writers in institutions, labs and industry worldwide. Try it out and use it for free at www.overleaf.com.

Oxford University Press  |  Booth 402
Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide.

PLUX-Wireless Biosignals SA  |  Booth 206
PLUX develops award-winning wireless physiological sensing hardware and software tools that are redefining the way in which students, researchers and practitioners can collect and analyse reliable, high definition data. From low-cost DIY kits to professional systems and engineering services, our innovative technologies and expert team can help bring to life your most demanding R&D vision.

The Royal Society  |  Booth 604
The Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science. We publish ten high-quality journals which offer rigorous peer review; open access and open peer review options; promotion by our press office; and broad dissemination to an international audience. To find out more, please visit our website at http://royalsociety.org/journals.

Singapore Management University  |  Booth 404
City University, Global Focus. An education game changer, SMU models a unique approach to university education in Singapore. Its new way of teaching laid the foundation for SMU’s innovative education and research programmes. SMU today remains a forerunner in the tertiary education sector.

Smart Eye  |  Booth 500
Smart Eye is committed to delivering the most advanced non-intrusive 3D head and eye tracking system in the world. We strive to establish a standard of reliability and availability which is unparalleled in the industry. We are equally committed to accommodating even the most complex applications and demanding field of view requirements from a remote perspective, while still maintaining superior accuracy.

Springer  |  Booth 308
Looking to publish your research? Discover Springer's print and electronic publication services, including open access! Get high-quality review, maximum readership and rapid distribution. Visit our booth or springer.com/authors. You can also browse key titles in your field and buy (e)books at discount prices. With Springer you are in good company.

Tobii Pro  |  Booth 200
Tobii Pro, part of the Tobii Group, is the leading provider of eye tracking research solutions and services designed to deepen the understanding of human behavior. Through eye tracking insights, business and science professionals are enabled to drive change and further their research. The products and services are used by over 3000 companies and 2000 research institutions, including all of the world's 50 highest ranked universities.

Uber  |  Booth 408
At Uber, we ignite opportunity by setting the world in motion. We take on big problems to help drivers, riders, delivery partners, and eaters get moving around the world. Our UX Research team’s mission is to inform and influence product decisions with exceptional insights about people, technology and services in our current and future world. We look forward to meeting you at CHI 2019!

Ultrahaptics  |  Booth 507
At Ultrahaptics we are passionate about collaborating with academia. We’ve found it incredibly rewarding to see the depth and breadth of studies that ultrasound mid-air haptic technology has been applied to, from evaluating mid-air haptic gesture-interfaces in cars, to levitating tractor beams, to creating a more magical connection with technology. We look forward to meeting you at CHI 2019!

University of Glasgow  |  Booth 601
The School of Computing Science is one of the foremost in the UK, setting itself the highest standards in research, and research-led learning and teaching. Renowned for our expertise in information retrieval, machine learning, data science, cybersecurity of safety critical systems, computer science education, human computer interaction, and formal methods. Our graduates are highly sought after.

UX-Study  |  Booth 300
UX-Study designs and builds UX Labs, and provides hardware and software for qualitative research. We specialise in building Labs and Design spaces, along with tools to support a broad range of UX research methodologies for both in-lab and field work. Our ‘Lab-in-a-box’ is the most advanced Research Lab on the market.
Interactivity is a high-visibility, high-impact forum of the Technical Programme that allow attendees to engage with research prototypes, novel interactive techniques, artworks, design experiences, and inspirational technologies. Plan your experience with the Interactivity map on the facing page.

**Interactivity hours**

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<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tr>
<td>Monday</td>
<td>17:30 – 19:30</td>
<td>(during Conference Reception)</td>
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<tr>
<td>Tuesday</td>
<td>10:20 – 11:00</td>
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<td>15:20 – 16:00</td>
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<td>Wednesday</td>
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<td>15:20 – 16:00</td>
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<tr>
<td>Thursday</td>
<td>10:20 – 11:00</td>
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**Mixed Reality Laboratory**

A-1 to A-7

- Thresholds: Twenty Years of The Mixed Reality Laboratory
- VR Playground: Twenty Years of The Mixed Reality Laboratory
- The Moment: Twenty Years of The Mixed Reality Laboratory
- Enchanted Forest: Twenty Years of The Mixed Reality Laboratory
- Video Kiosk: Twenty Years of The Mixed Reality Laboratory
- Bronromatic: Twenty Years of The Mixed Reality Laboratory
- The Prediction Machine: Twenty Years of The Mixed Reality Laboratory

**Media and Families**

B-1 to B-2

- PhotoFlow in Action: Picture-Mediated Reminiscence Supporting Family Socio-Connectivity
- Movie+: Towards Exploring Social Effects of Emotional FINGERPRINTS for Video Clips and Movies

**Games**

C-1 to C-6

- Slackliner 2.0: Real-time Training Assistance through Life-size Feedback
- Playing Beyond The Front Room: Designing for Social Play
- La Ola De La Vida
- Towards Evidence-informed Design Principles for Adaptive Reading Games
- ‘In the Same Boat,’ A Game of Mirroring Emotions For Enhancing Social Play
- Brick: A Synchronous Multiplayer Augmented Reality Game for Mobile Phones
- Crushed it! Interactive Floor Demonstration

**VR Experiences**

D-1 to D-7

- Immersive VR Exergames for Health and Wellbeing
- Experiencing a Mirrored World with Geotagged Social Media in Geolology
- Egocentric Smaller-person Experience through a Change in Visual Perspective
- Demonstration of SeeingVR: A Set of Tools to Make Virtual Reality More Accessible to People with Low Vision
- A Virtual Reality Experience for Learning Languages
- Multisensory Virtual Environment for Fire Evacuation Training

**Creation & Fabrication**

E-1 to E-4

- Demonstrating Kyub: a 3D Editor for Modeling Sturdy Laser-Cut Objects
- Digital Fabrication of Soft Actuated Objects by Machine Knitting

**AR/VR Controllers & Interfaces**

F-1 to F-5

- Keycube is a Kind of Keyboard (k3)
- Demonstrating VRBox — A Virtual Reality Augmented Sandbox
- VRCHandRacer: Using an Office Chair Backrest as a Locomotion Technique for VR Racing Games
- Demonstration of Transcalibur: A VR Controller that Presents Various Shapes of Handheld Objects

**Coding & Tools**

H-1 to H-3

- Flowboard: A Visual Flow-Based Programming Environment for Embedded Coding
- Live Programming By Example
- Dynamic Depth-of-Field Projection for 3D Projection Mapping

**Haptics and Ultrasonic**

I-1 to I-4

- Multimodal Representation of Complex Spatial Data
- Three-in-one: Levitation, Parametric Audio, and Mid-Air Haptic Feedback
- Tangible Interactions with Acoustic Levitation
- Demonstration of Refinity: An Interactive Holographic Signage for New Retail Shopping Experience

**Tangible**

J-1 to J-4

- ScaleDia: A Novel Tangible Device for Teaching Musical Scales & Triads
- ClassBeacons: Unobtrusively Enhancing Reflection-in-Action of Teachers through Spatially Distributed Ambient Information
- Physical Programming for Blind and Low Vision Children at Scale
- StringTouch - A Scalable Low-Cost Concept for Deformable Interfaces

**Movement and the Body**

K-1 to K-4

- Augmenting Circle Dance with Physical Computing
- Are Drones Dronetic?
- 3D Positional Movement Interaction with User-Defined, Virtual Interface for Music Software: MoveMIDI
- iScream!: Towards the design of Playful Gustosonic Experiences with Ice Cream

**Wearables and IoT**

L-1 to L-5

- Bear & Co: Simulating Value Conflicts in IoT Development
- Demonstration of Springlets: Expressive, Flexible and Silent On-Skin Tactile Interfaces
- A Sensing Technique for Data Glove Using Conductive Fiber
- LUNE: Representing Lunar Day by Displayed Lighting Object
- An Exploration of Responsive and Emotive Wearables through Research Prototyping
COURSES

All Courses are held in the Crowne Plaza Hotel except C05 (on Monday), which is held in SEC.

Courses allow CHI attendees to extend their knowledge beyond their current community and their current areas of expertise. Courses are taught in one to three 80-minute units.

Pre-registration is required. The Course Notes you receive at registration serve as your entry ticket. You may register for courses that have not yet been filled at the Registration Desk in the SEC Concourse in front of Hall 4.

Monday Courses, 6 May

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<thead>
<tr>
<th>Time / Room</th>
<th>Course</th>
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<tbody>
<tr>
<td>11:00 / Castle 3</td>
<td>C01 Making with Fabric: Foundations of Soft Goods and E-Textiles Fabrication</td>
</tr>
<tr>
<td>11:00 / Argyll 2</td>
<td>C02 Modern Vision Science for Designers: Making Designs Clear at a Glance</td>
</tr>
<tr>
<td>11:00 / Castle 1</td>
<td>C03 Sketching in HCI: Hands-on Course of Sketching Techniques</td>
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<tr>
<td>11:00 / Castle 2</td>
<td>C04 How to Write CHI Papers (Third Edition)</td>
</tr>
<tr>
<td>11:00 / Argyll 3</td>
<td>C06 Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>12:20 / SEC Forth</td>
<td>C05 Preparing for the Future of HCI by Understanding the Past and Present</td>
</tr>
<tr>
<td>14:00 / Castle 1</td>
<td>C03 Sketching in HCI: Hands-on Course of Sketching Techniques</td>
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<tr>
<td>14:00 / Castle 2</td>
<td>C04 How to Write CHI Papers (Third Edition)</td>
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<tr>
<td>14:00 / Castle 3</td>
<td>C07 Professional Presentation Training: Improve the User Experience of your CHI Presentation</td>
</tr>
<tr>
<td>14:00 / Argyll 3</td>
<td>C06 Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>14:00 / Argyll 2</td>
<td>C08 Empirical Research Methods for Human-Computer Interaction</td>
</tr>
<tr>
<td>16:00 / Castle 2</td>
<td>C04 How to Write CHI Papers (Third Edition)</td>
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Tuesday Courses, 7 May

<table>
<thead>
<tr>
<th>Time / Room</th>
<th>Course</th>
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<tbody>
<tr>
<td>9:00 / Jura/Barra (Island B)</td>
<td>C29 Communicating your Research to the Public and the Press</td>
</tr>
<tr>
<td>9:00 / Argyll 2</td>
<td>C09 Insights in Experimental Data through Intuitive and Interactive Statistics</td>
</tr>
<tr>
<td>9:00 / Argyll 3</td>
<td>C10 Ethnographic Methods for Human Factors Researchers: Collecting and Interweaving Threads of HCI</td>
</tr>
<tr>
<td>9:00 / Castle 1</td>
<td>C11 Make This! Introduction to Electronics Prototyping Using Arduino</td>
</tr>
<tr>
<td>9:00 / Castle 2</td>
<td>C12 Rapid Prototyping of Augmented Reality &amp; Virtual Reality Interfaces</td>
</tr>
<tr>
<td>9:00 / Castle 3</td>
<td>C13 Balancing Interaction Design</td>
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Wednesday Courses, 8 May

<table>
<thead>
<tr>
<th>Time / Room</th>
<th>Course</th>
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<tbody>
<tr>
<td>9:00 / Argyll 3</td>
<td>C16 Designing with the Mind in Mind: The Psychological Basis for UI Design Guidelines</td>
</tr>
<tr>
<td>9:00 / Castle 1</td>
<td>C17 Avoiding and Mitigating Ethical Traps in Technocentric Fieldwork</td>
</tr>
<tr>
<td>9:00 / Argyll 2</td>
<td>C18 Computational Interaction with Bayesian Methods</td>
</tr>
<tr>
<td>9:00 / Castle 2</td>
<td>C19 Building Economic Models of Human Computer Interaction</td>
</tr>
<tr>
<td>9:00 / Castle 3</td>
<td>C20 Tangible Ecosystem Design - Developing Disruptive Services for Digital Ecosystems</td>
</tr>
<tr>
<td>11:00 / Argyll 3</td>
<td>C16 Designing with the Mind in Mind: The Psychological Basis for UI Design Guidelines</td>
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<td>11:00 / Castle 2</td>
<td>C19 Building Economic Models of Human Computer Interaction</td>
</tr>
<tr>
<td>11:00 / Castle 3</td>
<td>C20 Tangible Ecosystem Design - Developing Disruptive Services for Digital Ecosystems</td>
</tr>
<tr>
<td>14:00 / Argyll 2</td>
<td>C18 Computational Interaction with Bayesian Methods</td>
</tr>
</tbody>
</table>
**Hoʻomaluō**

To conserve, to use and manage wisely. At a nexus of four continents, we celebrate the Aloha spirit, to cherish and protect what is given, for now and for the future. As the plumeria, or "pua melia," represents positivity and new beginnings, CHI 2020 brings together a beautiful multicultural and diverse community, in an equally beautiful and stimulating environment. Here, we celebrate positivity, and balance work and life to nurture new beginnings.

Aloha!

### Submission Deadlines

**Papers**

- **13 September 2019**
  - Title, abstract, authors, subcommittee, metadata
- **20 September 2019**
  - All materials

**Other Venues**

- **16 October 2019**
  - Case Studies, Courses, Doctoral Consortium, Workshops, Symposia
- **18 December 2019**
  - Panels, Special Interest Groups (SIGs)
- **6 January 2020**
  - Alt.CHI, Interactivity/Demos, Late Breaking Work, Student Games Competition (SGC), Student Research Competition (SRC)
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