



CHI 2022

HCI researchers at Google have enormous potential to impact the experience of Google users as well as conduct innovative research. Grounded in user behavior understanding and real use, Google's HCI researchers invent, design, build and trial large-scale interactive systems in the world. We declare success only when we positively impact our users and user communities, often through new and improved Google products. HCI research has fundamentally contributed to the design of Search, Gmail, Docs, Maps, Chrome, Android, YouTube, serving over a billion daily users. We are engaged in a variety of HCI disciplines such as predictive and intelligent user interface technologies and software, mobile, and ubiquitous computing, social and collaborative computing, interactive visualization and visual analytics. Many projects heavily incorporate machine learning with HCI, and current projects include predictive user interfaces; recommenders for content, apps, and activities; smart input and prediction of text on mobile devices user engagement analytics; user interface development tools; and interactive visualization of complex data.

Organizing Committee

Case Studies Chair

Frank Bentley

Social Justice Event Chair

Patrick Gage Kelley

Doctoral Consortium Chair

Jude Yew

CHI 2023 Tech Program Chair

Tesh Goyal

Best Paper Committee & Awards Chair

Carrie Cai

Social Presence in Virtual Event Spaces Workshop

Tesh Goyal

Google Invited Talks

Transition from PhD to UXR

Speakers: **Na Sun, Tesh Goyal, Penny Triệu**

Tuesday May 3, 12:30 p.m. – 1:10 p.m. CST; Expo Hall J

Opportunities in Building for GenZ

Speakers: **Tiane Lee, Lily Chau, Bria Best**

Online; Virtual Office Hours Thursday, May 5, 11:00 - 11:30 a.m. CST

Saturday, April 30

Workshop

Emerging Telepresence Technologies in Hybrid Learning Environments

Authors: Houda Elmimouni, John Paulin Paulin Hansen, Susan Herring, James Marcin, Marta Orduna, Pablo Perez, **Irene Rae**, Janet Read, Jennifer Rode, Selma Sabanovic, Verónica Ahumada

9:00 a.m. – 10:20 a.m. CST; ROOM, 288-289

11:00 a.m. – 12:20 p.m. CST; ROOM, 288-289

2:00 p.m. – 3:20 p.m. CST; ROOM, 288-289

4:00 p.m. – 5:20 p.m. CST; ROOM, 288-289

Computational Approaches for Understanding, Generating, and Adapting User Interfaces

Authors: Yue Jiang, Yuwen Lu, Jeffrey Nichols, Wolfgang Stuerzlinger, Chun Yu, Christof Lutteroth, **Yang Li**, Ranjitha Kumar, Toby Jia-Jun Li

9:00 a.m. – 10:20 a.m. CST; ROOM, 393-385

11:00 a.m. – 12:20 p.m. CST; ROOM, 393-385

2:00 p.m. – 3:20 p.m. CST; ROOM, 393-385

4:00 p.m. – 5:20 p.m. CST; ROOM, 393-385

Sunday, May 1

Workshop

Authors with affiliation in bold

Work done while at Google

Social Presence in Virtual Event Spaces

Authors: Matthew J. Bietz, **NiTesh Goyal**, Nicole Immorlica, Blair MacIntyre, Andrés Monroy-Hernández, Benjamin C. Pierce, Sean Rintel, Donghee Yvette Wohn

9:00 a.m. – 10:20 a.m. CST; ROOM, 395

11:00 a.m. – 12:20 p.m. CST; ROOM, 395

2:00 p.m. – 3:20 p.m. CST; ROOM, 395

4:00 p.m. – 5:20 p.m. CST; ROOM, 395

InContext: Futuring User-Experience Design Tools

Authors: Anna R. L. Carter, Miriam Sturdee, Alan Dix, Dani Kalarikalayil Raju, Martha Aldridge, Eunice Sari, Wendy E. Mackay, **Elizabeth F. Churchill**

9:00 a.m. – 10:20 a.m. CST; ROOM, 387

11:00 a.m. – 12:20 p.m. CST; ROOM, 387

2:00 p.m. – 3:20 p.m. CST; ROOM, 387

4:00 p.m. – 3:20 p.m. CST; ROOM, 387

Monday, May 2

Accepted Papers

The Deskillling of Domain Expertise in AI Development

Authors: **Nithya Sambasivan**, Rajesh Veeraraghavan

2:15 p.m. – 3:30 p.m. CST; ROOM, 288-289

Predicting and Explaining Mobile UI Tappability with Vision Modeling and Saliency Analysis

Authors: Eldon Schoop, **Xin Zhou, Gang Li, Zhouong Chen**, Bjoern Hartmann, **Yang Li**

4:15 p.m. – 5:30 p.m. CST; ROOM, 291

ProtoSound: A Personalized and Scalable Sound Recognition System for Deaf and Hard-of-Hearing Users

Authors: **Dhruv Jain**, Khoa Huynh Anh Nguyen, Steven M. Goodman, Rachel Grossman-Kahn, Hung Ngo, Aditya Kusupati, **Ruofei Du, Alex Olwal**, Leah Findlater, Jon E. Froehlich

4:15 p.m. – 5:30 p.m. CST; ROOM, 395

TypeAnywhere: A QWERTY-Based Text Entry Solution for Ubiquitous Computing

Authors: Mingrui Ray Zhang, **Shumin Zhai**, Jacob O. Wobbrock

4:15 p.m. – 5:30 p.m. CST; ROOM, 286-287

Interactivity

Opportunistic Interfaces for Augmented Reality: Transforming Everyday Objects into Tangible 6DoF Interfaces Using Ad hoc UI

Authors: **Ruofei Du, Alex Olwal, Mathieu Le Goc, Shengzhi Wu, Danhang Tang, Yinda Zhang, Jun Zhang, David Joseph Tan, Federico Tombari, David Kim**

5:45 p.m. – 8:45 p.m. CST; Exhibit Hall J

Hidden Interfaces for Ambient Computing: Enabling Interaction in Everyday Materials through High-brightness Visuals on Low-cost Matrix Displays

Authors: **Alex Olwal, Artem Dementyev**

5:45 p.m. – 8:40 p.m. CST; Exhibit Hall J

Authors with affiliation in bold

Work done while at Google

Tuesday, May 3

Accepted Papers

[Understanding User Mental Models Through App Sketches from Memory](#)

Authors: **Steven Schirra**, **Shraddhaa Narasimha**, **Sasha Volkov**, **Justin W. Owens**

10:15 a.m. – 11:00 a.m. CST; Exhibit Hall J

10:15 a.m. – 11:00 a.m. CST; (Virtual)

3:30 p.m. – 4:15 p.m. CST; Exhibit Hall J

3:30 p.m. – 4:15 p.m. CST; (Virtual)

[PromptChainer: Chaining Large Language Model Prompts through Visual Programming](#)

Authors: **Tongshuang Wu**, **Ellen Jiang**, **Aaron Donsbach**, **Jeff Gray**, **Alejandra Molina**, **Michael Terry**, **Carrie J. Cai**

10:15 a.m. – 11:00 a.m. CST; Exhibit Hall J

10:15 a.m. – 11:00 a.m. CST; (Virtual)

3:30 p.m. – 4:15 p.m. CST; Exhibit Hall J

3:30 p.m. – 4:15 p.m. CST; (Virtual)

[RalTin: Radar Based Identification for Tangible Interactions](#)

Authors: **Tamil Selvan Gunasekaran**, **Ryo Hajika**, **Yun Suen Pai**, **Eiji Hayashi**, **Mark Billinghurst**

10:15 a.m. – 11:00 a.m. CST; (Virtual)

3:30 p.m. – 4:15 p.m. CST; (Virtual)

[Understanding Visual Investigation Patterns Through Digital "Field" Observations](#)

Authors: **Irene Rae***, **Feng Zhou**, **Martin Bilsing**, **Philipp Bunge**

11:00 a.m. – 12:15 p.m. CST; ROOM, 393

["Because AI is 100% right and safe": User Attitudes and Sources of AI Authority in India](#)

Authors: **Shivani Kapania**, **Oliver Siy**, **Gabe Clapper**, **Azhagu Meena SP**, **Nithya Sambasivan**

2:15 p.m. – 3:30 p.m. CST; ROOM, 292

[Hidden Interfaces for Ambient Computing: Enabling Interaction in Everyday Materials through High-brightness Visuals on Low-cost Matrix Displays](#)

Authors: **Alex Olwal**, **Artem Dementyev**

4:15 p.m. – 5:30 p.m. CST; ROOM, 293

[Probability Weighting in Interactive Decisions: Evidence for Overuse of Bad Assistance, Underuse of Good Assistance](#)

Authors: **Andy Cockburn**, **Philip Quinn**, **Carl Gutwin**, **Zhe Chen**, **Pang Suwanaposee**

4:15 p.m. – 5:30 p.m. CST; ROOM, 288-289

Case Studies Session: Machine Learning and AI

★ Honorable Case Study

[PromptMaker: Prompt-based Prototyping with Large Language Models](#)

Authors: **Ellen Jiang**, **Kristen Olson**, **Edwin Toh**, **Alejandra Molina**, **Aaron Donsbach**, **Michael Terry**, **Carrie J. Cai**

2:15 p.m. – 3:30 p.m. CST; ROOM, 393

Authors with affiliation in bold

Work done while at Google

Panels

Considerations for Building Solidarity among Academic and Tech Workers: Thinking through access, positionality and limits to collective action

Authors: Noopur Raval, **Rida Qadri**, Richmond Y. Wong, Tamara Kneese, Alex Hanna
2:15 p.m. – 3:30 p.m. CST; (Virtual)

Wednesday, May 4

Accepted Papers

Understanding User Mental Models Through App Sketches from Memory

Authors: **Steven Schirra**, **Shraddha Narasimha**, **Sasha Volkov**, **Justin W. Owens**
10:15 a.m. – 11:00 a.m. CST; (Virtual)
3:30 p.m. – 4:15 p.m. CST; (Virtual)

PromptChainer: Chaining Large Language Model Prompts through Visual Programming

Authors: Tongshuang Wu, **Ellen Jiang**, **Aaron Donsbach**, **Jeff Gray**, **Alejandra Molina**, **Michael Terry**, **Carrie J. Cai**
10:15 a.m. – 11:00 a.m. CST; (Virtual)
3:30 p.m. – 4:15 p.m. CST; (Virtual)

RaITIn: Radar Based Identification for Tangible Interactions

Authors: Tamil Selvan Gunasekaran, Ryo Hajjika, Yun Suen Pai, **Eiji Hayashi**, Mark Billingham
10:15 a.m. – 11:00 a.m. CST; (Virtual)
3:30 p.m. – 4:15 p.m. CST; (Virtual)

A Systematic Review and Thematic Analysis of Community-Collaborative Approaches to Computing Research

Authors: Ned Cooper, **Tiffanie Horne**, Gillian R. Hayes **Courtney Heldreth**, **Michal Lahav**, **Jess Holbrook**, **Lauren Wilcox**
9:00 a.m. – 10:15 a.m. CST; ROOM, 283-285

Discovering the Syntax and Strategies of Natural Language Programming with Generative Language Models

Authors: **Ellen Jiang**, **Edwin Toh**, **Alejandra Molina**, **Kristen Olson**, **Claire Kayacik**, **Aaron Donsbach**, **Carrie J. Cai**, **Michael Terry**
2:15 p.m. – 3:30 p.m. CST; ROOM, 286-287

AI Chains: Transparent and Controllable Human-AI Interaction by Chaining Large Language Model Prompts

Authors: Tongshuang Wu, **Michael Terry**, **Carrie J. Cai**
2:15 p.m. – 3:30 p.m. CST; ROOM, 286-287

"It's common and a part of being a content creator": Understanding How Creators Experience and Cope With Hate and Harassment Online

Authors: **Kurt Thomas**, **Patrick Gage Kelley**, **Sunny Consolvo**, **Patrawat Samermit**, **Elie Bursztein**
4:15 p.m. – 5:30 p.m. CST; ROOM, 393

Authors with affiliation in bold

Work done while at Google

Whose AI Dream? In search of the aspiration in data annotation

Authors: **Ding Wang**, **Shantanu Prabhat**, **Nithya Sambasivan**

4:15 p.m. – 5:30 p.m. CST; ROOM, 286-287

SilentSpeller: Towards mobile, hands-free, silent speech text entry using electropalatography

Authors: Naoki Kimura, Tan Gemicioglu, Jonathan Womack, Yuhui Zhao, Richard Li, Abdelkareem Bedri, Zixiong Su, **Alex Olwal**, Jun Rekimoto, Thad Starner

4:15 p.m. – 5:30 p.m. CST; ROOM, 386

Case Studies Session: Understanding Use With Data

Numeric Forced Rank: A Lightweight Method for Comparison and Decision-making

Authors: **Erin Gannon**, Barbara Chaparro

2:15 p.m. – 3:30 p.m. CST; ROOM, 394

Panels

Alexa, Tell Me a Joke!: "Voice Interfaces are Truly Inclusive"

Authors: Jaisie Sin, Cosmin Munteanu, Jenny Waycott, Robin N. Brewer, Sergio Sayago, Amanda Lazar, **Astrid Weber**

9:00 a.m. – 10:15 a.m. CST; ROOM, New Orleans Theater A

Thursday, May 5

Accepted Papers

★ Honorable Mention

"You have to prove the threat is real": Understanding the needs of Female Journalists and Activists to Document and Report Online Harassment

Authors: **NiTesh Goyal**, Leslie Park, **Lucy Vasserman**

9:00 a.m. – 10:15 a.m. CST; ROOM, 283-285

When is ML data good?: Valuing in Public Health Datafication

Authors: **Divy Thakkar**, Azra Ismail, Pratyush Kumar, **Alex Hanna**, **Nithya Sambasivan**, Neha Kumar

9:00 a.m. – 10:15 a.m. CST; ROOM, 297

VisGuide: User-oriented Recommendations for Data Event Extraction

Authors: Yu-Rong Cao, Xiao Han Li, **Jia-Yu Pan**, Wen-Chieh Lin

9:00 a.m. – 10:15 a.m. CST; ROOM, 288-289

Journal

Alert Now or Never: Understanding and Predicting Notification Preferences of Smartphone Users

Authors: Tianshi Li, **Julia Katherine Haines**, **Miguel Flores Ruiz de Eguino**, Jason I. Hong, **Jeffrey Nichols**

9:00 a.m. – 10:15 a.m. CST; ROOM, 293

Authors with affiliation in bold

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