



**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

NEWS RELEASE

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CSCW CONFERENCE EXPLORES HOW COLLABORATIVE ACTIVITIES ARE SUPPORTED BY COMPUTERS

Program Includes Leading-edge Research in Areas Including Work, Home, Education and Healthcare

New York, NY, October 24, 2019 – The dynamic interactions that occur when humans and computers collaborate will again be the focus of the 22nd Association for Computing Machinery (ACM) [Conference on Computer-Supported Cooperative Work and Social Computing \(CSCW 2019\)](#). CSCW is an international and interdisciplinary peer-reviewed conference seeking the best research on all topics relevant to collaborative and social computing. CSCW 2019, to be held November 9-13 in Austin, Texas, features 210 research papers in seven parallel sessions, as well as numerous posters and demos. The scope of CSCW spans the socio-technical domains of work, home, education, healthcare, the arts, entertainment and ethics.

“The subfield of computer-supported cooperative work is one of the fastest-growing areas of research within computer-human-interaction,” said CSCW General Co-chair Eric Gilbert of the University of Michigan. “New ways of interacting on social media, new techniques, and new computing technologies all contribute to the excitement of our field. The annual CSCW conference brings an interdisciplinary community together from around the world to present the best of this research.”

Added CSCW General Co-chair Karrie Karahalos of the University of Illinois at Urbana-Champaign, “Our 2019 program includes many of the longstanding issues in computer-human interaction—such as methodologies, tools and system design. At the same time, the papers we received also reflect emerging areas, such as AI, whose impact is increasing with each passing year. Our community is also interested in the ethical implications of socio-technical systems, and this is certainly reflected in this year’s program.”

CSCW 2019 HIGHLIGHTS:

Keynote Addresses

“Participatory Machine Learning”

Fernanda Viégas, Martin Wattenberg, Google AI

How should people relate to artificial intelligence technology? Is it a tool to be used, a partner to be consulted, or perhaps a source of inspiration and awe? As technology advances, choosing the right human/AI relationship will become an increasingly important question for designers, technologists and users. Viégas and Wattenberg will show a series of examples from the People+AI Research (PAIR) initiative at Google--ranging from data visualizations and tools for medical practitioners to guidelines for designers--that illustrate how AI can play each of these roles.

“Beyond Just Code: Why You Can’t Just ‘Nerd Harder”

Katharine Trendacosta, Electronic Frontier Foundation

The amazing achievements of technology can make some believe that there is a tech solution to every problem. Governments, corporations, and other powerful interests will ask for tech to do things that are a) impossible to do or b) impossible to do morally. “Nerd harder,” they demand. Whether these commands are for backdoors in encryption, speech controls on social media, or filters for copyright, some believe that where laws and society have no answers, tech has an easy, ready-to-deploy solution. As a result, being in the tech space these days doesn’t just mean writing code, it means being able to recognize the values your code is reinforcing, knowing the promises and limits of technology, and having the ability to speak tech to power.

Best Papers

“Deconstructing Community-Based Collaborative Design: Towards More Equitable Participatory Design Engagements”

Christina Harrington, Anne Marie Piper, Northwestern University; Sheena Erete, DePaul University

Participatory Design (PD) is envisioned as an approach to democratizing innovation in the design process by shifting the power dynamics between researcher and participant. Recent scholarship in HCI and design has analyzed the ways collaborative design engagements, such as PD situated in the design workshop can amplify voices and empower underserved populations. The authors argue that PD as instantiated in the design workshop is very much an affluent and privileged activity that often neglects the challenges associated with envisioning equitable design solutions among underserved populations. By reflecting on these tensions as a call-to-action, the authors hope to deconstruct the privilege of the PD workshop within HCI and re-center the focus of design on individuals who are historically underserved.

“Does Transparency in Moderation Really Matter?: User Behavior After Content Removal Explanations on Reddit”

Shagun Jhaver, Amy Bruckman, Georgia Institute of Technology; Eric Gilbert, University of Michigan

When posts are removed on a social media platform, users may or may not receive an explanation. What kinds of explanations are provided? Do those explanations matter? Using a sample of 32 million Reddit posts, the authors characterize the removal explanations that are provided to Redditors, and link them to measures of subsequent user behaviors---including future post submissions and future post removals. Most importantly, the authors show that offering explanations for content moderation reduces the odds of future post removals.

“How Computers See Gender: An Evaluation of Gender Classification in Commercial Facial Analysis Services”

Morgan Klaus Scheuerman, Jacob M. Paul, Jed R. Brubaker, University of Colorado, Boulder

Investigations of facial analysis (FA) technologies—such as facial detection and facial recognition—have been central to discussions about Artificial Intelligence's (AI) impact on human beings. Research on automatic gender recognition, the classification of gender by FA technologies, has raised potential concerns around issues of racial and gender bias. In this study, the authors augment past work with empirical data by conducting a systematic analysis of how gender classification and gender labeling in computer vision services operate when faced with gender diversity.

“How Data Scientists Use Computational Notebooks for Real-Time Collaboration”

April Yi Wang, Anant Mittal, Christopher Brooks, Steve Oney, University of Michigan

Effective collaboration in data science can leverage domain expertise from each team member and thus improve the quality and efficiency of the work. Computational notebooks give data scientists a convenient interactive solution for sharing and keeping track of the data exploration process through a combination of code, narrative text, visualizations, and other rich media. In this paper, the authors report how synchronous editing in computational notebooks changes the way data scientists work together compared to working on individual notebooks.

“Sensing (Co)operations: Articulation and Compensation in the Robotic Operating Room”

Amy Cheatle, Steven Jackson, Malte F. Jung, Cornell University

Drawing on ethnographic fieldwork in two different teaching hospitals that deployed the da Vinci surgical robot, this paper traces how the introduction of robotics reconfigures the sensory environment of surgery and how surgeons and their teams recalibrate their work in response. The authors explore the entangled and mutually supportive nature of sensing within and between individual actors and the broader world of people and things (with emphasis on vision and touch) and illustrate how such inter-sensory dependencies are challenged and sometimes extended under the conditions of robotic surgery.

“The Principles and Limits of Algorithm-in-the-Loop Decision Making”

Ben Green, Yiling Chen, Harvard University

The rise of machine learning has fundamentally altered decision making: rather than being made solely by people, many important decisions are now made through an “algorithm-in-the-loop” process where machine learning models inform people. Yet insufficient research has considered how the interactions between people and models actually influence human decisions. First, the authors posited three principles as essential to ethical and responsible algorithm-in-the-loop decision making. Second, through a controlled experimental study on Amazon Mechanical Turk, they evaluated whether people satisfy these principles when making predictions with the aid of a risk assessment. The authors contend that the results of their study highlight the urgent need to expand our analyses of algorithmic decision-making aids beyond evaluating the models themselves to investigating the full sociotechnical contexts in which people and algorithms interact.

About CSCW

[CSCW](#) is the premier venue for presenting research in the design and use of technologies that affect groups, organizations, communities, and networks. Bringing together top researchers and practitioners from academia and industry who are interested in the area of social computing, CSCW encompasses both the technical and social challenges encountered when supporting collaboration.

About ACM

[ACM, the Association for Computing Machinery](#), is the world's largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing 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.

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