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College of Information Sciences and Technology
The Pennsylvania State University
University Park, PA, 16802

Jie Cai

My research lives at the intersection of computer science, social science, and science and technology studies. My primary area of focus is in Human-Computer Interaction (HCI) and Computer Supported Cooperative Work (CSCW), with interests in gaming, shopping, and content moderation. I also have a broad interest in digital technology. I applied both qualitative (e.g., interview, observation) and quantitative (e.g., survey) methods with sociotechnical theories to understand users' mental models and behavioral patterns and to provide design interventions to improve user experience.

Appointment

2022-present **Assistant Research Professor**
College of Information Sciences and Technology, The Pennsylvania State University, PA, USA
Mentor: John M. Carroll

Eeducation

2017-2022 **Ph.D. in Information Systems, Human-Centered Computing**
Ying Wu College of Computing, New Jersey Institute of Technology, NJ, USA
Dissertation: *Understanding the Voluntary Moderation Practices in Live Streaming Communities*
Committee: Donghee Y. Wohn (advisor), Starr Roxanne Hiltz, Aritra Dasgupta, Cody Bauntain, David Wang, Bryan Dosono

2014-2016 **M.S. in Marketing Research**
Hofstra University, NY, USA
Thesis: *The Effect of Color and Dispersion of Review Ratings on Consumers' Purchase Decisions*
Advisor: Veronika Ilyuk-Morace

2010-2014 **B.A. in Marketing/Organizational Leadership (dual degree)**
Shenyang Normal University/Fort Hays State University, Shenyang, China

Publications & Presentations (PDFs)

Conference Proceedings & Journal Papers

J4 **Jie Cai**, Sagnik Chowdhury, Hongyang Zhou, and Donghee Yvette Wohn. (2023). Hate Raids on Twitch: Understanding Real-Time Human-Bot Coordinated Attacks in Live Streaming Communities. *In Proceedings of the ACM on Human Computer Interaction - CSCW'23*.

C9

Jie Cai and Donghee Y. Wohn. (2023).Understanding Moderators' Conflict and Conflict Management Strategies with Streamers in Live Streaming Communities. *In Proceedings of the ACM CHI Conference on Human Factors in Computing Systems - CHI'23.* [Best Paper Honorable Mention Award]

C8   Jie Cai and Donghee Y. Wohn. (2022). Coordination and Collaboration: How do Volunteer Moderators Work as a Team in Live Streaming Communities? *In Proceedings of the ACM CHI Conference on Human Factors in Computing Systems - CHI'22.*

J3   Christine Cook, Jie Cai, and Donghee Y. Wohn. (2022) Awe Versus Aww: The Effectiveness of Two Kinds of Positive Emotional Stimulation on Stress Reduction for Online Content Moderators. *In Proceedings of the ACM on Human-Computer Interaction - CSCW'22.*

C7   Sahaj Vaidya, Jie Cai, Soumyadeep Basu, Azadeh Naderi, Donghee Y. Wohn, and Aritra Dasgupta. (2021). Conceptualizing Visual Analytic Interventions for Content Moderation. *In Proceedings of the IEEE Visualization Conference - VIS'21.*

J2   Jie Cai and Donghee Y. Wohn. (2021). After Violation But Before Sanction: Understanding Volunteer Moderators' Profiling Processes Toward Violators in Live Streaming Communities. *In Proceedings of the ACM on Human-Computer Interaction - CSCW'21.*

C6   Jie Cai, Sarah J Ryu, Donghee Y. Wohn, and Hyejin Hannah Kum-Biocca. (2021). Teleworker's Perception of Technology Use for Collaborative and Social During the COVID-19 Pandemic. *In Proceedings of the International BCS Human-Computer Interaction Conference - BritishHCI'21.*

C5   Jie Cai and Donghee Y. Wohn. (2021). Moderation Visibility: Mapping the Strategies of Volunteer Moderators in Live Streaming Micro Communities. *In proceedings of the 2021 ACM International Conference on Interactive Media Experiences - IMX'21.*

C4   Jirassaya Uttarapong, Jie Cai, and Donghee Y. Wohn. (2021). Harassment Experiences of Women and LGBTQ Live Streamers and How They Handled Negativity. *In proceedings of the 2021 ACM International Conference on Interactive Media Experiences - IMX'21.*

J1   Jie Cai and Donghee Y. Wohn. (2019). Categorizing Live Streaming Moderation Tools: An Analysis of Twitch. *International Journal of Interactive Communication Systems and Technologies - IJICST, 9(2), 36-50.*

C3   Jie Cai and Donghee Y. Wohn. (2019). Live Streaming Commerce: Uses and gratifications Approach to Understanding Consumers' Motivations. In *Proceedings of the 52nd Hawaii International Conference on System Sciences - HICSS'19.*

C2   Jie Cai, Donghee Y. Wohn, and Guo Freeman. (2019). Who Purchases and Why? Explaining Motivations for In-game Purchasing in the Online Survival Game Fortnite. In *Proceedings of Computer-Human Interaction in Play - CHI PLAY'19.*

C1   Jie Cai, Ankit Mittal, Dhanush Sureshbabu, and Donghee Y. Wohn. (2018). Utilitarian and Hedonic Motivations for Live Streaming Shopping. In *Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video - TVX'18.*

EXTENDED ABSTRACT & LATE BREAKING WORK & POSTER

P4   Na Li, Jie Cai, and Donghee Yvette Wohn. (2023). Ignoring As a Moderation Strategy for Volunteer Moderators on Twitch. *In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems - CHI EA'23.*

P3

Jie Cai, Ruiqi Shen, Starr Roxanne Hiltz. (2021). Understanding Choice of Social Music Systems in China: A Study of NetEase Cloud Music. *In Adjunct Proceedings of the ACM International Conference on Mobile Human-Computer Interaction - MobileHCI'21.*

P2 Jie Cai, Cameron Guanlao, and Donghee Y. Wohn. (2021). Understanding Rules in Live Streaming Micro Communities on Twitch. *In WiP Proceedings of the 2021 ACM International Conference on Interactive Media Experiences - IMX'21.*

P1 Jie Cai and Donghee Y. Wohn. (2019). What are Effective Strategies of Handling Harassment on Twitch? Users' Perspectives. In *Companion of the 2019 ACM Conference on Computer Supported Cooperative Work and Social Computing - CSCW'19.*

Organized Workshop

2023 Shuo Niu, Zhicong Lu, Amy Zhang, **Jie Cai**, Carla F. Griggio, and Hendrik Heuer. (2023). Building Credibility, Trust, and Safety on Video-Sharing Platforms. *Extended Abstracts of the ACM CHI Conference on Human Factors in Computing Systems - CHI EA'23.*

Presentations & Workshops

2022 Rae Jereza, **Jie Cai**, and Aashka Patel. (2022). Distress and Disempowerment: How Organizational Factors Limit Commercial Content Moderators' Agency. *Extended Abstract presented at the 12th International Conference on Social Media & Society - #SMSociety'22.*

2019 Jie Cai and Donghee Y. Wohn. (2019). Ignoring As a Strategy: Why Moderators Use It And How It Influences Viewers' Behaviors. *Workshop paper presented at the 2019 ACM Conference on Computer Supported Cooperative Work and Social Computing - CSCW'19.*

Jie Cai and Donghee Y. Wohn. (2019). Live Streaming Shopping. *Presentation at NJIT Dana Knox Showcase.*

2016 Jie Cai, Danlin Liang, Zhibin Cen, Boonghee Yoo. (2016). An Exploratory Model of Consumers' Perceived Value of Business College Education. *Student Paper presented at the 45th Annual Meeting of the Western Decision Science Institute - WDSI'16.*

Doctoral Consortium

2021 Jie Cai. (2021). Understanding the Voluntary Moderation Practices in Live Streaming Communities. *Presentation at the 2021 ACM International Conference on Interactive Media Experiences - IMX'21.*

2019 Jie Cai. (2019). The Motivation of Live Virtual Reality Shopping and Design Principles. *Presentation at the 52nd Hawaii International Conference on System Sciences - HICSS'19.*

Fellowships

2021 summer **CSST Summer Institute**, (Online).
Presentation at the Consortium for the Science of Sociotechnical Systems - CSST'21.

Working Experience

2016.9-
2017.8
Merchandising Assistant, VIP.com (唯品会), New York

- Conducted sales report analysis and market trends and brand research and identified trendy brands to business development managers.
- Accomplished brand introduction to the official website in China in food, home, beauty, and maternity categories from the major platforms - Costco and BJ's Wholesale.

2016.1-
2016.5
Intern Assistant Data Analyst, Tal Depot.com, New York

- Analyzed monthly shipping performance by getting data from the Aftership platform, using Excel (pivot table and data analysis), and writing marketing reports.
- Researched fraud online transactions through Signify platform and tracked suspicious credit transactions.
- Searched UPC for all products and matched product information for eBay and Used Magento platform post and manage products on the website.

Teaching and Research Experience

2023 Spring
Instructor

- Teaching HCDD 364W: *Methods for Studying Users* at Penn State.

2019,   2021
Fall
Instructor

- Independently develop course materials and teach an HCI course for 25-30 students: IS448: *Usability and Measuring UX.*
- Update the syllabus based on students' feedback and re-design the course to ask students to read and present the most recent research papers in HCI domains (e.g., CHI, CSCW, CMC).

2020-2021
Research Assistant

- Work on the NSF-funded project: Collaborative Research: Augmenting Social Media Content Moderation with the PI and my advisor: Dr. Donghee Y. Wohn.
- Lead and conduct exploratory studies with content moderators with observation and interview methods.
- Collaborate with data visualization team at NJIT to explore visualization intervention for content moderation.
- Collaborate with UCLA and UMSI scholars to organize workshops targeting top HCI conferences like ACM SIGCHI.

2017-2022
Teaching Assistant

- Work with Dr. Julie Ancis on course development and grading for a management course: HRM 601–Organizational Behavior.
- Work with Dr. Donghee Y. Wohn to organize class discussion and grade assignments for two HCI courses: IS448–Usability and Measuring UX and IS375–Discovering User Needs for UX.
- Work with Dr. Arthur H. Hendela to grade assignments and support Q&A for two IS courses: IS117–Introduction to Website Development and IS265–Introduction to Information System.

Student Advising and Mentoring

PENN STATE UNIVERSITY

2022-present **Na Li**, PhD in Human-Computer Interaction
2022-present **Jiyoon Kim**, PhD in Human-Computer Interaction
2022-present **Yao Lyu**, PhD in Human-Computer Interaction
2022-present **Hangyang Zhou**, Undergraduate in Psychology, New York University

NEW JERSEY INSTITUTE OF TECHNOLOGY

2022 **Sagnik Chowdhury**, Undergraduate in Cyberphychology
2020-2022 **Aashka Patel**, Undergraduate in Computer Science
2020-2021 **Sarah Ryu**, Undergraduate in Human Computer Interaction
2019-2020 **Andrew Suarez**, Undergraduate in Information Technology
2019-2020 **Aaron Samuel**, Undergraduate in Computer Science
2020 **Abdelmalek Benaissa**, Undergraduate
2019 **Jessy Martinez**, Undergraduate in Chemistry

Services

ORGANIZING COMMITTEES

2022 Assistant to the Technical Program Chairs   *ACM CHI'23*
2021 Proceedings Chair   *ACM IMX'21*

PROGRAM COMMITTEES

2023 CHI PLAY Full Paper (Associate Chair)
     CHI LBW (Associate Chair)
2022 CSCW Poster (Associate Chair)

CONFERENCE REVIEWER

CHI	2019-present
CSCW	2018-present
CHI Late Breaking Work	2020, 2021, 2023
IUI Poster	2023
CSCW Poster	2022
IMX	2021
CHI PLAY	2020, 2022, 2023
ICWSM	2020
PACIS	2020
HICSS	2019, 2023
MobileHCI	2018

2023	Computers in Human Behavior
	International Journal of Human-Computer Interaction
2022	Media Psychology
	Journal of Online Trust and Safety
2021	CSCW: Journal of Collaborative Computing and Work Practices
2020	Cyberpsychology: Journal of Psychosocial Research on Cyberspace
	Telematics and Informatics

STUDENT & CONFERENCE ACTIVITIES

2022	Student Volunteer	*IUI'22*
2020	Student Volunteer	*CSCW'20*
2019	Student Volunteer	*CSCW'19*
2018-2019	Graduate Student Association (GSA) Treasurer	*NJIT*

Awards & Honors

2022	Excellence in Teaching by a Teaching Assistant Award	*NJIT*
2021	Special Recognition for Outstanding Reviews	*ACM CHI'21, 23*
2019	Lisa A. Pierce Student Leader of the Year Award	*NJIT*
2019	**$1300** - Graduate Student Association (GSA) Travel Grant	*NJIT*
2018	**$800** - Graduate Student Association (GSA) Travel Grant	*NJIT*