Crystal Lee

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Appointments

July 2023–	**Assistant Professor**, Computational Media and Design, MIT
	Joint appointment in the Schwarzman College of Computing and Comparative Media Studies / Writing
	KDD Career Development Professor in Communications and Technology (2023–2026)
2022–	**Faculty Associate**, Berkman Klein Center for Internet and Society, Harvard University
	Co-lead, Ethical Tech Working Group. Former Fellow (2020–2021) and Affiliate (2021–2022).
2022–	**Senior Fellow**, Responsible Computing, Mozilla
2022–2023	**Postdoctoral Associate**, Schwarzman College of Computing, MIT
2018	**Visiting Scientist**, Joint Research Center (Italy), European Commission

Education

2022	**PhD**, Massachusetts Institute of Technology
	History, Anthropology, Science, Technology, and Society (HASTS)
	Visualization Group, Computer Science and Artificial Intelligence Laboratory (CSAIL)
2016	**MA**, *History of Science*, Stanford University
2015	**BA (high honors)**, *History of Science*, Stanford University

Research Interests

Data visualization, critical data studies, digital media, science and technology studies, human-computer interaction, disability studies

Selected Fellowships, Grants, and Awards

External awards

2022	Honorable Mention, Eurographics Conference on Visualization (EuroVis; top 3 papers)
2021	Honorable Mention, Conference on Human Factors in Computing Systems (top 5%)
2020	National Science Foundation Dissertation Improvement Grant #1941577 ($18,825)
	Social Science Research Council (SSRC) Social Data Dissertation Fellowship ($15,000)
2017	Digital Humanities Summer Institute Scholarship, University of Victoria

Internal awards

2021	MIT Undergraduate Experiential Learning Opportunity Grant ($15,680)
	T.S. Lin Fellowship, MIT
	Outstanding UROP Mentorship Award, MIT
	MIT Schwarzman College of Computing Grant ($10,188)
	MIT Digital Humanities Summer Graduate Fellowship
2016	MIT Presidential Fellowship
	Lane Research Grant in the History of Science, Stanford University

Peer-Reviewed Publications

2023 Gracen Brilmyer* and **Crystal Lee***. "Terms of use: Crip legibility in information systems," *First Monday* (January 2023).

2022 Jonathan Zong*, **Crystal Lee***, Alan Lundgard*, JiWoong Jang, Daniel Hajas, Arvind Satyanarayan. "Rich Screen Reader Experiences for Accessible Data Visualization," *Eurographics Conference on Visualization* (May 2022). 🏅 *Honorable Mention.*

2021 Jamie Wong*, **Crystal Lee***, Vesper Long*, Di Wu*, Graham Jones*. "Let's Go, Baby Forklift: The Power of Cuteness and the Cuteness of Power on Chinese Social Media," *Social Media + Society* (April 2021).

2021 **Crystal Lee**, Tanya Yang, Gabrielle Inchoco, Graham M. Jones, and Arvind Satyanarayan, "Viral Visualizations: How Coronavirus Skeptics Use Orthodox Data Practices to Promote Unorthodox Science Online." *ACM Human Factors in Computing Systems (CHI)*, 2021. [video] 🏅 *Honorable Mention.*

2019 Alan Lundgard*, **Crystal Lee*** (co-first author), and Arvind Satyanarayan, "Sociotechnical Considerations for Accessible Visualization Design," *IEEE Transactions on Visualization and Computer Graphics* (October 2019). [video]

Extended Abstracts

2021 Calvin Liang, Emily Tseng, Sachin Pendse, **Crystal Lee**, Kimberley Allison, Neilly H. Tan, Ruotong Wang, Alexandra To, Amy Zhang. "Subtle CSCW Traits: Tensions Around Identity Formation and Online Activism in the Asian Diaspora" workshop, *CSCW '21: Companion Publication of the 2021 Conference on Computer Supported Cooperative Work and Social Computing. October 2021: pp. 347–351.*

Reviews, Essays, and Reports

2022 **Crystal Lee**, "Review: A History of Data Visualization and Graphic Communication," *Information and Culture*, 60.1 (Spring 2022).

2019 **Crystal Lee*** and Jonathan Zong*, "Consent is Not An Ethical Rubber Stamp." *Slate.* August 30, 2019.

2018 **Crystal Lee**, "Global Conflict Risk Index Final Consulting Report," prepared for the Peace and Stability Unit, Joint Research Center, European Commission.

2016 **Crystal Lee**, "Wartime Collaborations in Computing and Intelligence Collection," in Crystal Lee, ed., *Glimpses: British Visions of War and Peace* (exhibit essay collection).

Data Visualization and Museum Projects

2021 **Crystal Lee**, Jonathan Zong, Anna Arpaci-Dusseau, Katherine Huang, Mateo Monterde, Ethan Nevidomsky, Tanya Yang, Anna Meurer, Soomin Chun, and Arvind Satyanarayan, *The Data Visualizations Behind Coronavirus Skepticism* (interactive digital project).

2016 **Crystal Lee***, Murphy Temple*, Meade Klingensmith*, Holly Dayton*, *Glimpses: British Visions of War and Peace* (museum exhibition), Stanford University.

Keynotes

May 2022   "On Data Justice and Accessible Systems." Keynote Address, Code4Lib (May 24, 2022).

Invited Seminar Talks

Jan 2024   TBD. Science, Technology, and Society Seminar. Rice University (January 27, 2024).

Sep 2023   "Sensory Encounters in the Age of Computation," Department of Information Science Seminar Series, University of Colorado-Boulder (September 20, 2023).

May 2023   "Who's Responsible for Responsible Tech?" University at Buffalo, Computer Science and Engineering Seminar (May 8, 2023).

July 2021   "Viral Visualizations: How Coronavirus Skeptics Use Orthodox Data Practices to Promote Unorthodox Science Online." DUB Shorts, University of Washington (July 14, 2021).

May 2021   "Academic Ableism and New Paradigms for Design." The Science Speak-Easy, University of Colorado-Boulder (May 17, 2021).

Mar 2021   "Visualizing Misinformation: Digital Ethnography and Computational Methods in a Pandemic." MIT Digital Humanities Speaker Series (March 18, 2021).

Feb 2021   "Beyond Visualization: Technoableism and New Paradigms for Design." *Reimagining Access: Inclusive Technology Design for Archives and Special Collections*, ArtCenter College of Design (February 11, 2021).

Nov 2020   "The Promises and Perils of Data Visualization," Tufts STS Seminar, Tufts University (November 13, 2020).

Oct 2020   "Learning from COVID-19 Data Visualizations." Berkman Klein Center for Internet and Society, Harvard University (October 28, 2020).

April 2017   "Lining Things Up: Mapping Time, Power, and Politics," *History of Visualization / Visualizations in History*. Center for Science and Society, Columbia University (April 8, 2017).

Invited Academic Roundtables and Panel Discussions

Nov 2023   "A Discussion on Disability Justice, Human Rights, and the Politics of Space." Donia Human Rights Center, University of Michigan (invited panel with Lydia X. Z. Brown, Eman Rimawi-Doster, Laura Guidry-Grimes).

July 2021   "Going Viral: How Covid Misinformation Spreads Online" (invited panel with Carl Bergstrom and Chase Small). *Scientists Speak Up*, Stanford University (July 29, 2021).

June 2021   "Prototyping AI ethics futures: Rights, access, and refusal" (invited roundtable with Alex Taylor and Mara Mills). JUST AI joint event between Ada Lovelace Institute, British Academy, and the UK Arts and Humanities Research Council (June 23, 2021).

June 2021   "Talking About and Thinking with Disability" (invited panel with Cora Olson and Ashley Shew). *STS as Critical Pedagogy*, James Madison University (June 23, 2021).

April 2021   "Disability Justice & Crip Technoscience: Racism & Ableism in AI & the Future of Technology" (with Damien Patrick Williams and Lydia X.Z. Brown). Autistic Women and Nonbinary Network Liberating Webinar Series (April 23, 2021).

Oct 2020   "Data By Touch," North American Cartographic Information Society (October 15–16, 2020).

Invited Public Talks

Oct 2022   Invited commentary, "The Moderate" (script by Ken Urban), Central Square Theater and Catalyst Collaborative: Science Play Reading Series, Cambridge Science Festival (October 3, 2022).

June 2021   "More Data, More Problems: Lessons from the Far Right Internet." U.S. Department of Health and Human Services (June 10, 2021).

May 2021   "Radical Possibilities for Technology" (with Christine McRae and Regan Sommer McCoy). YX Foundation and the Radical AI Podcast (May 18, 2021).

Conference Presentations

Mar 2023   "Teaching Responsible Computing in Context: Models, Practices, and Tools," SIGCSE Technical Symposium on Computer Science Education (with Stacy Doore, Atri Rudra, Omowumi Ogunyemi, Trystan S. Goetze, Mehran Sahami, Thomas Cortina, and Kiran Bhardwaj). Toronto, Canada and online (March 15–18, 2023).

Dec 2022   "Everyone Likes Access," with Michele Friedner, Daniel Greene, Allison Fish, Vijayanka Nair, and Beth Semel. Society for the Social Studies of Science. Cholula, Mexico (December 7–10, 2022).

July 2022   "Incorporating Ethics into Computer Science Education," with Bobby Schnabel, Kathy Pham, Casey Fiesler, Helena Mentis, and Atri Rudra. Computing Research Association Conference at Snowbird. Snowbird, UT (July 19–21, 2022).

Oct 2021   "STS as Critical Pedagogy" (roundtable discussion), with Emily York, Anna Geltzer, Michael Klein, Sean Ferguson, Marisa Brandt, Jim Malazita, Matthew Harsh, Shelby Dietz, Matt Wisnioski, Nicole Mogul, Kathryn de Ridder-Vignone, and Lindsay Smith. 4S 2021 (virtual).

May 2021   "Viral Visualizations: How Coronavirus Skeptics Use Orthodox Data Practices to Promote Unorthodox Science Online." ACM CHI. Yokohama, Japan [virtual] (May 8–13, 2021).

April 2020   "Multisensory Mapping and Design," American Association for Geographers. Denver, CO (April 6–10, 2020). [cancelled due to COVID-19]

April 2020   "Practicing Disability Justice: A Working Group on Bringing Activist Praxis into our Teaching and Research," (with Cynthia Bennett and Joanne Woiak), Society for Disability Studies. Columbus, OH [virtual] (April 3–5, 2020).

Oct 2019   "Sociotechnical Considerations for Accessible Visualization Design," (with Alan Lundgard), IEEE VIS 2019. Vancouver, Canada (October 20–25, 2019).

Nov 2018   "Modeling Flavor," History of Science Society Annual Meeting. Seattle, WA (November 1–4, 2018).

Nov 2017   "Visualizing Historical Knowledge," History of Science Society Annual Meeting. Toronto, Canada (November 9–11, 2017).

Nov 2017   Discussant and chair, "Computing and Science: Application and Influences." History of Science Society Annual Meeting. Toronto, Canada (November 9–12, 2017).

Sep 2017   "History Along a Line: Historical Timelines and the Digital Humanities," Tradition and Transformation. Emmanuel College, University of Cambridge, UK (September 18–20, 2017).

Nov 2016   "One Nation Under Quantification: Measuring Nazi-ness in post-1945 Germany," History of Science Society Annual Meeting. Atlanta, GA (November 3–6, 2016).

June 2016   "Joseph Priestley's Charts of History & Biography, Redrawn," Digital Humanities Australasia. University of Tasmania, Hobart, Australia (June 20–23, 2016).

Mar 2016   "Hidden Narratives: Inventing Universal History in Joseph Priestley's Charts of History & Biography," Columbia History of Science Group Annual Meeting. Friday Harbor Biological Research Station, University of Washington. Friday Harbor, WA (March 11–13, 2016).

Organized Seminars, Panels, & Conferences

2021   "Toward Accessible Data Representations" workshop, IEEE Visualization (co-organized with Arvind Satyanarayan, Danielle Szafir, Keke Wu, and Alan Lundgard). Speakers: Cynthia Bennett, Chancey Fleet, Zoe Gross, Ariel Schwartz, and Rua Williams.

2021   Misinformation Working Group Invited Speaker Series, Harvard University: Gerald Mullally (UK Prime Minister's Office), "G7 Vaccine Confidence Campaign and Research Partnerships"; Yvonne Lee (Facebook), "Misinformation Policy."

2019–20   Columbia History of Science Annual Meeting, University of Washington, Friday Harbor Marine Station (program chair with Nathan Kapoor).

2018   "Technologies of Taste" panel, History of Science Society, Seattle, WA (with Hannah Leblanc).

2017–18   Cross-STS Seminar Series, Massachusetts Institute of Technology (with Elena Sobrino).

2017   Workshop on the History of the Physical Sciences, Princeton University (co-organized with Brad Bolman, Jenne O'Brien, and Michael McGovern).

Workshop Presentations

Invited workshops have been denoted with an asterisk.

Nov 2023   * Institute for Data Systems and Society Faculty Lunch Seminar Series.

Oct 2023   * "Can AI be designed for everyone?" Kensho AI Ethics Speaker Seminar Series (October 24, 2023).

Nov 2022   * Data Analysis Donuts: Internal Discussion at ObservableHQ on misinformation (November 3, 2022).

Aug 2022   * NSF-funded Workshop on Inclusive and Intersectional Research and Analysis in Engineering and Computer Science (invited participant), Stanford University (August 25–26, 2022).

June 2022   Greater Boston Areas AI Ethics Lightning Round. Ethical Issues in Computing and AI: Research Questions and Pedagogical Strategies, Harvard University (June 1, 2022).

Mar 2022   * Access Washing in Data Policy and Practice (invited roundtable discussant). Minderoo Centre for Technology and Democracy, University of Cambridge (March 3, 2022).

June 2021   Flash talk, VIS Summer Camp (co-organized by Universities of Florida, Arizona, Utah; Northwestern, Northeastern, and MIT).

June 2021   * "The Future of the Digital Archive: Data Hoarders and Radical Librarianship." *House/Keeping: Domestic Accumulation, Decluttering, and the Stuff of Kinship in Anthropological Perspective*, Laboratoire d'Anthropologie des Mondes Contemporains, Université libre de Bruxelles (May 31–June 2, 2021).

May 2021   "Methodological Challenges to Studying Online Radicalization" (with John A. Maldonado and Jonas Kaiser). Workshop discussion, Berkman Klein Center for Internet and Society Festival of Ideas (May 7, 2021).

Mar 2021   ACM FAccT Doctoral Consortium. Virtual conference (March 3–10, 2021).

Feb 2021   * Discussion on "Viral Visualizations" project. *MIT Data + Feminism Lab* (March 26, 2021); *University of Washington Social Futures Lab* (February 9, 2021).

Feb 2020   Discussant, "Cripping the History of Computing." *MIT HASTS Program Seminar.*

Sep 2018	Discussant, "Searching for Google." *MIT HASTS*.
Sep 2017	Discussant, "The Multiple Autonomies of Self-Driving Cars." *MIT HASTS*.
Apr 2017	Discussant, "Crafting Nanotechnology for Art and Heritage Conservation." *MIT HASTS*.
Sep 2016	"Lining Things Up: Mapping Time, Power, and Politics." *MIT HASTS*.
Jan 2016	"Digital Methods in History." History of Science Workshop, Stanford University.

Research Mentorship

Asterisks denote published student co-author.

Summer 2023	**Landscape analysis, responsible computing student groups**: Princess Vongchanh (Stanford)
2022–2023	**Social and Ethical Responsibilities of Computing (SERC) Scholars**: Designing Participatory AI Systems Reading Group (with Elizabeth Bondi-Kelly)
Fall 2022	**Harvard Climate Justice Design Fellowship**: Jacqueline Thanh (VAYLA New Orleans)
Summer 2021	**Accessible Interactions** (published in *EuroVis*): JiWoong Jang* (Carnegie Mellon)
Spring 2021	**The Social Life of Climate Data**: Casey Hong (MS candidate), Emma Chabane
Fall 2020	**The Data Visualizations Behind Coronavirus Skepticism** (interactive essay)
	Kat Huang*, Anna Arpaci-Dusseau*, Tanya Yang*, Ethan Nevidomsky*, Anna Meurer*, Soomin Chun*, Mateo Monterde*
Summer 2020	**Viral Visualizations** (published in ACM CHI 2021): Tanya Yang*, Gaby Inchoco*
	Let's Go, Baby Forklift (published in *Social Media + Society)*: Vesper Long*
	History of Braille Uniformity: Zhirui Xiong

Dissertation Committee Advising

2023	Max Lisnic (PhD candidate, School of Computing, University of Utah).
2022	Jacqueline Thanh (DSW candidate, USC Dworak-Peck School of Social Work).

Teaching

Guest Lectures

Fall 2023	"Who's Responsible for Responsible Tech?" Critical Internet Studies (Sulafa Zidani), Northwestern University
Fall 2023	"Who's Responsible for Responsible Tech?" Introduction to Information Systems (Gracen Brilmyer), McGill University
Fall 2023	"Sensory Encounters in the Age of Computation," Institute for Data Systems and Society Doctoral Seminar (Ali Jadbabaie and Alberto Abadie), MIT
Spring 2023	Judge for final projects, Machine Learning and Society (Atri Rudra), University at Buffalo
Spring 2023	"Academic ableism," Feminist Disability Studies (Lydia XZ Brown), Georgetown University
Spring 2020	"Methods in Spatial History," Intro to Digital History (Stephan Risi), MIT
Fall 2019	"Mapping and Forensic History," Forensic History (Kate Brown), MIT

Teaching Assistantships

2020	MIT: Medieval Economic History in Comparative Perspective (no evaluation, COVID)
2019	Harvard: Sugar, Spice, and Science: A Global History of Science (evaluation: 5.0/5.0, Certificate of Distinction for Teaching)
2018	MIT: American History from 1865 (evaluation: 7.0/7.0)
2017	MIT: Introduction to Anthropology (evaluation: 6.9/7.0)

Service

Service to the Profession

2023	Program Committee, ACM Special Interest Group on Computer Science Education (SIGCSE)
2021	Program Committee, Visualization for Social Good Workshop, IEEE Visualization (VIS)
2020	Program Committee, ACM Conference on Fairness, Accountability, and Transparency (FAccT)

Peer Review

Conferences	IEEE VIS; ACM SIGCSE, FAccT, CHI, NeurIPS (ethics committee)
Books	MIT Press
Journals	*Public Culture*
Grants	Just Tech Fellowship, Social Science Research Council

Institutional Service

2023–	Faculty co-organizer, MIT CSAIL Human-Computer Interaction Seminar
2023–	Member, CMS/W Diversity, Equity, and Inclusion Committee
2017	Judge, MIT INSPIRE; Committee, MIT Digital Technology Teaching Awards
2016–18	Co-founder and Treasurer, Science Studies Student Committee, MIT
2016–17	Department Representative, MIT Graduate Student Council

Selected Media

2021	**Viral Visualizations**: Slate, World Health Organization Infodemic Management, POLITICO, L'actualité, STAT, MIT News, The Dissenter podcast, Random Walks podcast
2020	**Disability and design**: Al Jazeera English, MIT News

Professional Organizations

2020–	Association for Computing Machinery (ACM), Society for Disability Studies (SDS)
2019–	Institute of Electrical and Electronics Engineers (IEEE)
2016–18	History of Science Society (HSS)

External Advising

2022–	Advisory board member, Disability Inclusion Fund, Borealis Philanthropy
2022–	Advisory board member, WorkingWell Assistive Technology for Autistic/Neurodivergent Individuals and their Employers
2022–	Advisory board member, Reco(r)ding CripTech Project, Criptech Incubator, Leonardo (the International Society for Arts + Sciences + Technology).