

LAUREN M. CHAMBERS

lauren@ischool.berkeley.edu •• laurenmarietta.github.io •• Pronouns: She/Her/Hers

EDUCATION

- 2021 – Pres. **University of California, Berkeley**, Ph.D. in Information Science
Advised by Prof. Deirdre Mulligan
- 2013 – 2017 **Yale University**, B.S. in Astrophysics and African American Studies
Phi Beta Kappa, *magna cum laude*, with distinction in both majors

RESEARCH EXPERIENCE

- Berkeley School of Information** *Doctoral Research* 2021 – Pres.
A Taxonomy of Black Algorithmic Resistance
- Exploring how and why Black advocates resist algorithmic injustice; characterizing Black contributions to algorithmic resistance ideologies and tactics; engaging with critical algorithm studies and Black studies
 - Designing a mixed-methodology study, including thematic analysis of interviews with Black algorithmic advocates, policy documents, and multimedia
- Transparency, Differential Privacy, and the US Census I Collaborators: Amina Abdu, Abbie Jacobs, Deirdre Mulligan*
- Examining the Census Bureau's implementation of differential privacy for the 2020 disclosure avoidance system in order to interrogate the role of public participation and engagement in algorithmic development processes
 - Analyzing publicly available documents and evaluating Census policies and processes promoting transparency
- Algorithmic Harm & Reparation in the Criminal Legal System I Collaboration from 2022 Algorithmic Reparation Workshop*
- Defining and taxonomizing algorithmic harm in the criminal legal system; proposing reparative measures within an Algorithmic Reparation framework grounded in international human rights law
 - Two case studies: gunshot detection systems (ShotSpotter) & pretrial risk assessment tools (COMPAS)
- Yale African American Studies Dept.** *Undergraduate Thesis* 2016 – 2017
A Different Kind of Dark Energy: Placing Race and Gender in Physics I Advisor: Hazel Carby
- Analyzing physical and astronomical theory through the lens of critical race theory and feminist theory in an effort to understand the effects of a racist-sexist society on scientific ways of knowing
- Harvard Center for Astrophysics & Yale Astronomy Dept.** *Undergraduate Thesis* 2016 – 2017
Understanding Gas-Phase Ammonia (NH₃) Chemistry in Proto-Planetary Disks I Advisors: Karin Öberg & Hector Arce
- Optimizing a numerical astrochemical model to investigate NH₃/H₂O ratios in proto-planetary disks

PROFESSIONAL EXPERIENCE

- American Civil Liberties Union of Massachusetts** *Technology for Liberty Consultant* 2021 – Pres.
Fellow & Staff Technologist 2019 – 2021
- Supporting civil rights advocacy through data analysis:
 - Consulting on and [writing](#) about how the latest technological research affects algorithmic governance
 - Developing [interactive web interfaces](#) for public data visualizations in R Shiny, HTML, CSS, & Javascript
 - Engaging the public in ACLU work and public interest technology through talks, [blogs](#), and [tweets](#)
 - Updating and maintaining the Data for Justice server and website: data.aclum.org
 - Promoted from fellow to staff technologist (first to hold role) after less than a year for exceptional performance
- Space Telescope Science Institute** *Research & Instrument Analyst* 2017 – 2019
- Supporting the NASA JWST mission in preparation for launch/commissioning in 2021 by developing interactive tools in Python and enhancing instrument [simulator software](#) to generate higher-fidelity commissioning images
 - Deputy Technical Lead for [JWST Quicklook](#) (observatory performance trending and analysis application)

PUBLICATIONS & PRESENTATIONS

Academic Publications

- "Engaging Diverse Publics in Algorithmic Development: Lessons Learned from the US Census' Implementation of Differential Privacy," Amina Abdu, **Lauren M. Chambers**, Abigail Jacobs, Deirdre Mulligan [in prep]
- "Should Reparations be Algorithmic?," Colin Doyle, Melissa Garcia Alvarez, Pelle Tracey, Gabriel Grill, **Lauren M. Chambers**, Cedric Whitney, Lydia X. Z. Brown, & Rachel Kuo, *Big Data & Society* (2023) [in revision]
- "A Different Kind of Dark Energy: Evidence for Placing Race and Gender in Physics," **Lauren M. Chambers**, *Bulletin of the American Astronomical Society*, Vol. 51, Issue 7, id. 162 (2019), Bibcode: 2019BAAS...51g.162C

Selected Analytic Blogs and Websites

- "Police Violence Happens Here," Sep. 2020, database & interactive [map](#)
- "Research shows domino effect when humans use face recognition algorithms," Sep. 2020, [blog](#)
- "Unpacking the Boston Police budget," June 2020, [blog](#)
- "Tracking COVID-19 in Massachusetts Prisons and Jails," Apr. 2020, interactive [dashboard](#)
- "Data show COVID-19 is hitting essential workers and people of color hardest," Apr. 2020, [blog](#)
- "How to programmatically create dozens of Wordpress pages to catalogue 1000s of docs," Mar. 2021, [blog](#)

Selected Presentations

- "Tech Storytelling for Oppositionists and Others," Code4Lib Conference, [closing keynote](#), May 2022
- "Technology for Liberty: Advocating For (and With) Responsible Tech in Massachusetts," Davidson College Math & CS Dept. Colloquium, [invited talk](#), Sep. 2020
- "Unpacking the Boston Police Budget," Boston City Council Budget Hearing, oral [testimony](#), June 2020
- "A Different Kind of Dark Energy: Placing Race and Gender in Physics," Astronomy X Conference, [talk](#), Sep. 2018
- "Understanding Ammonia Chemistry in Protoplanetary Disks," AAS Conference, [poster](#), Jan. 2017

HONORS & AWARDS

- 2023 – Pres. **National Science Foundation Graduate Research Fellowship (NSF GRFP)**
- 2023 – Pres. **Ford Foundation Predoctoral Fellowship**
- 2021 – Pres. **Berkeley Fellowship**, "awarded to outstanding applicants to doctoral programs in all fields"
- 2021 – 2022 **I School Graduate Scholar Program**, for demonstrating "leadership in diversity, equity, and inclusion"
- Nov. 2020 **Boston Bar Association President's Award**, for advocacy supporting prisoners during COVID-19
- May 2017 **George Beckwith Prize**, "to the undergraduate most proficient in some branch of astronomy."
- May 2017 **William Pickens Prize**, "for an outstanding senior essay in the field of African American Studies."
- 2015 – 2017 **Edward A. Bouchet-Robertson Fellowship**, for underrepresented students pursuing academia

MENTORSHIP & COMMUNITY INVOLVEMENT (SELECTED)

- 2021 – Pres. **Program Organizer**, UC Berkeley I School PhD Underrepresented Applicant Feedback Program
- 2020 – Pres. **Mentor**, Coding it Forward Civic Digital Fellowship
- Nov. 2019 **Algorithmic Justice League "Drag v. AI" [Workshop](#) Organizer**, Boston Public Library
- 2018 – 2019 **Director's Diversity and Inclusion Working Group Member**, Space Telescope Science Institute
- 2015 – 2016 **Science, Technology, and Research Scholars (STARS) Peer Mentor**, Yale College Dean's Office

ADDITIONAL SKILLS

Software Development & Data Analysis:

- Python (including pandas, matplotlib, astropy, scipy, pyqt, django, scikit-learn, Jupyter notebooks)
- R (including dplyr, ggplot, leaflet, shiny, plotly)
- git (GitHub & GitLab) and CI (Travis/Jenkins/GitLab)
- Unix/Bash, Apache
- HTML, CSS, Javascript

Language: Intermediate Spanish, Intermediate French

Hobbies: ballet, board games, concerts, disc golf, puzzles, writing & editing Wikipedia articles