LAUREN M. CHAMBERS

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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 | 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 | 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 | 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 (NH_3) Chemistry in Proto-Planetary Disks | Advisors: Karin Öberg & Hector Arce
- Optimizing a numerical astrochemical model to investigate NH_3/H_2O 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

"Transparency, Technocracy & Trust in Participatory Algorithmic Governance: Lessons 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, Cedric Whitney, **Lauren M. Chambers**, *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**
2023 – Pres.	**Berkeley Empirical Legal Studies Fellowship**
2021 – Pres.	**Berkeley Fellowship**, *"awarded to outstanding applicants to doctoral programs in all fields"*
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)

2022 – Pres.	**PhD Representative,** Berkeley I School Diversity, Equity, Inclusion, Belonging, & Justice Working Group
2021 – Pres.	**Program Organizer,** 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