Lauren M. Chambers

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EDUCATION

2021 – Present **University of California, Berkeley**
Ph.D. in Information Management & Systems (School of Information)
Advised by Prof. Deirdre Mulligan

2013 – 2017 **Yale University**
B.S. in Astrophysics and African American Studies, *magna cum laude*, with distinction in both majors
Theses: *A Different Kind of Dark Energy: Placing Race and Gender in Physics*
Understanding Gas-Phase Ammonia (NH_3) Chemistry in Proto-Planetary Disks

PROFESSIONAL EXPERIENCE

American Civil Liberties Union of Massachusetts *Technology for Liberty Consultant* *2021 – Present*
Fellow & Staff Technologist *2019 – 2021*

- Supporting advocacy around civil rights 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

Space Telescope Science Institute *Research and Instrument Analyst* *2017 – 2019*

- Supporting the James Webb Space Telescope mission in preparation for launch and commissioning in 2021:
  - Developing interactive software tools in Python using engineering best practices
  - Enhancing instrument simulator software to generate higher-fidelity commissioning images
- Deputy Technical Lead for JWST Quicklook (observatory performance trending and analysis application)

RESEARCH EXPERIENCE (SELECTED)

2016 – 2017 **Harvard-Smithsonian Center for Astrophysics** and **Banneker Institute**, Cambridge, MA
Advisors: Dr. Karin Öberg , Dr. Ilse Cleeves , and Dr. Hector Arce (Yale)
Optimizing a numerical astrochemical model to investigate NH_3/H_2O ratios in proto-planetary disks

2016 – 2017 **Yale African American Studies Department,** New Haven, CT
Advisor: Dr. Hazel Carby
Analyzing physical and astronomical theory through the perspective of Black women in an effort to understand the effects of a racist-sexist society on scientific ways of knowing

2015 – 2016 **Yale Wright Laboratory**, New Haven, CT
Mentor: Dr. Reina Maruyama
Designing and constructing a cryogenic spectrometer for the DM-Ice South Pole dark matter study

HONORS & AWARDS

2020 – Pres. **Harvard Berkman Klein Center for Internet & Society**, Affiliate
Mar. 2022 **Ford Foundation**, Predoctoral Fellowship Honorable Mention
Aug. 2021 **Berkeley Fellowship**, *"awarded to outstanding applicants to doctoral programs in all fields"*
Aug. 2021 **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 **Phi Beta Kappa,** Alpha chapter of Connecticut

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,** in support of minority students who will pursue PhDs
Jan. 2017 **Chambliss Outstanding Student Poster Presentation Award,** AAS Winter Conference 2017

PUBLICATIONS & PRESENTATIONS

Academic Journals

"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

"STEM Climate survey developed through student–faculty collaboration," Claudia De Grandi, … **Lauren M. Chambers,** et al. (2019), *Teaching in Higher Education*, DOI: 10.1080/13562517.2019.1636219

Selected Analytic Blogs and Websites

"Police Violence Happens Here," Sep. 2020, database & interactive map

"Bias all the way down: 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 thousands of documents," 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 Ways & Means FY21 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," 229th American Astronomical Society Winter Conference, poster, Jan. 2017

MENTORSHIP & COMMUNITY INVOLVEMENT (SELECTED)

2021 – Pres. **Program Co-Organizer,** UC Berkeley I School PhD Underrepresented Applicant Feedback Program
2021 – Pres. **"Effective Data Visualization" Workshop Organizer**, Boston University Spark! Lab
2020 – Pres. **Mentor,** Coding it Forward Civic Digital Fellowship
Mar. 2022 **Palestine Trek Participant,** political solidarity coalition of grad & law students visiting the West Bank
Dec. 2020 **Mentoring Roundtable**, 2020 NeurIPS Women in Machine Learning Workshop
Sept. 2020 **"How To Adult" Mentoring Circle**, 2020 Virtual Grace Hopper Conference
Nov. 2019 "**Drag v. AI" Workshop Organizer**, Boston Public Library
Jan. 2019 "**Using Python for Astronomical Data Analysis" Workshop Facilitator**, 2019 Winter AAS Conference
2018 – 2019 **Director's Diversity and Inclusion Working Group Member**, STScI
2016 – 2017 **First-year Counselor**, Yale College Dean's Office
2015 – 2016 **Science, Technology, and Research Scholars (STARS) Peer Mentor,** Yale College Dean's Office
2015 – 2017 **Yale Physics Department Climate & Diversity Committee**, Undergraduate Representative

ADDITIONAL SKILLS

Software Development & Data Analysis:

- Python (including pandas, matplotlib, Astropy, SciPy, PyQt, Django, scikit-learn, Jupyter notebooks; coursework in astrostatistics and applied ML)
- R (including dplyr, ggplot, leaflet, shiny)
- git (GitHub & GitLab) and CI (Travis/Jenkins/GitLab)
- Unix/Bash, Apache
- HTML, CSS, Javascript

Language: Intermediate Spanish, Intermediate French