

## *Author Biographies*

**Amariah Becker** is a data scientist who worked at the MGGG Redistricting Lab in 2019-2021. Her interests include algorithm design, combinatorial optimization, and computing for social change. Amariah's background is in graph algorithms.

**Mira Bernstein** is a math and statistics educator and consultant, with a PhD in algebraic geometry. She was one of the co-creators of MGGG in 2017. She also chairs the Board of Directors for Canada/USA Mathcamp, a unique summer program for high school students.

**Ruth Buck** is a graduate student in Geography at Penn State University studying population, scale, and redistricting. She previously worked as a geographer at the MGGG Redistricting Lab.

**Guy-Uriel Charles** has recently moved to Harvard Law School as the inaugural Charles J. Ogletree, Jr. Professor of Law and the faculty director of the Charles Hamilton Houston Institute for Race and Justice. He is an expert in constitutional law, election law, campaign finance, redistricting, race, and politics.

**Kristen Clarke** is a civil rights attorney with extensive experience in government and the nonprofit sector. She is the former president & executive director of the National Lawyers' Committee for Civil Rights Under Law and has also worked at NAACP-LDF, in the Civil Rights Bureau for the New York State Attorney General's office, and in the Civil Rights Division of the U.S. Department of Justice.

**Daryl DeFord** is an assistant professor of Data Analytics at Washington State University. His research applies algebraic and combinatorial methods to problems in data analysis, with a special focus on redistricting. As a postdoc with Justin Solomon's group at MIT, he was affiliated with the MGGG Redistricting Lab and was one of the key developers of GerryChain.

**Moon Duchin** is a mathematician at Tufts University, where she founded the interdisciplinary Science, Technology, and Society program and runs the MGGG Redistricting Lab at the Tisch College of Civic Life. Her background is in geometry, topology, and dynamics, and her current research focus is data science for civil rights.

**Iván Espinoza-Madrigal** is the Executive Director of Lawyers for Civil Rights, whose focus is on extending legal protections for people of color and immigrants. Previous positions include legal director for the Center for HIV Law and Policy and immigrant rights attorney at MALDEF (the Mexican American Legal Defense and Education Fund).

**Chris Fowler** is a geographer at Penn State, where he serves as Director of The Peter R. Gould Center for Geography Education and Outreach. He is currently building methods for representing neighborhood change in complex, multiscalar contexts

and developing a line of research that explores the increasing neighborhood-scale diversity in U.S. cities.

**Keith Gaddie** is the President's Associates Presidential Professor of Architecture and Executive Faculty Fellow of the University of Oklahoma. His specialties are redistricting, voting rights reform, and the built environment of democratic systems.

**Megan Gall**'s career as a civil rights practitioner focuses on quantitative analyses for Voting Rights Act compliance and litigation. Her specialties include racially polarized voting statistics and redistricting. She's a certified GIS Professional and holds a PhD in Political Science.

**Arusha Gordon** is an attorney at the Lawyers' Committee for Civil Rights Under Law, where she serves as Associate Director of the James Byrd Jr. Center to Stop Hate. She was formerly counsel for the Lawyers' Committee's Voting Rights Project.

**Larry Guth** is the Claude Shannon professor of mathematics at MIT, with specialties in metric geometry, harmonic analysis, and extremal combinatorics, as well as a longstanding commitment to pedagogy and mentorship.

**Lee Hachadoorian** is an assistant professor of instruction in Temple University's Department of Geography & Urban Studies. His research is broadly concerned with applying geospatial technologies to urban and demographic analysis; his teaching and research heavily emphasize the use of free and open-source software.

**Ellen Katz**, the Ralph W. Aigler Professor of Law at the University of Michigan, writes and teaches about election law, civil rights and remedies, and equal protection. Her scholarship addresses questions of minority representation, political equality, and the role of institutions in anti-discrimination law.

**Karin Mac Donald** directs the Election Administration Research Center at Berkeley Law, as well as the Statewide Database, the redistricting database for the State of California. Her work and research center on access to elections focusing on voting rights and representation via election administration and nonpartisan, transparent districting processes.

**Fred McBride** is a Redistricting and Voting Rights Policy Specialist at the Lawyers' Committee for Civil Rights Under Law, where he engages in quantitative and qualitative research in redistricting and voting rights law. He previously held positions at the ACLU and FairVote, and holds a PhD in Political Science from Clark Atlanta University.

**James M. Murphy** is an assistant professor of mathematics at Tufts University, with interests in applied harmonic analysis, mathematics of data science, and applications to image, signal, and network processing.

**Garrett Dash Nelson** is the Curator of Maps and Director of Geographic Scholarship at the Leventhal Map & Education Center at the Boston Public Library. His research investigates how geographic units are historically formed and contested. His methods combine qualitative research on the politics, culture and landscape of cities and regions with spatial analysis and critical cartography.

**Ari Nieh** is a mathematician, professional singer, and game designer. She was a

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founding member of MGGG, specializing in math pedagogy and communication. She co-led a cycle of four Educator Training workshops with a focus on gerrymandering and geometry.

**Jonathan Rodden** is a professor in the political science department at Stanford who works on the comparative political economy of institutions. His specialties include federalism, political geography, and the historical origins of political institutions.

**Heather Rosenfeld** is an environmental geographer currently teaching at Smith College, formerly staff geographer at the MGGG Redistricting Lab and instructor in the Science, Technology, and Society Program at Tufts University. Heather's research examines the co-construction of citizen/activist science and political-economic structures, using feminist and critical cartographic methods.

**Oren Sellstrom** is the litigation director of Lawyers for Civil Rights in Boston, MA. He oversees the organization's litigation and advocacy work in all areas including education, economic justice, employment, police accountability, immigrants' rights, and voting rights.

**Justin Solomon** is an associate professor at MIT, where he heads the Geometric Data Processing Group in CSAIL (the Computer Science and Artificial Intelligence Laboratory). His specialties include discrete differential geometry and numerical analysis, with applications to computer graphics and machine learning. He co-founded MGGG's Voting Rights Data Institute summer program.

**Douglas M. Spencer** is an associate professor of law at the University of Colorado. He is an election law scholar whose research addresses the role of prejudice and racial attitudes in voting rights litigation, as well as campaign finance and election dynamics.

**Alma Steingart** is an assistant professor of history at Columbia University, researching the interplay between politics and mathematical rationalities. Her current book project examines how mathematical thought and computing technologies have impacted electoral politics in the United States in the twentieth century.

**Olivia Walch** is a mathematician, app developer, and cartoonist. Apps developed by her have been downloaded more than half a million times, and her comics have appeared in *The Washington Post* and *The Nib*. She is currently CEO of Arcascope, a company that makes software for tracking sleep and circadian rhythms.

**Thomas Weighill** is an assistant professor of mathematics at the University of North Carolina at Greensboro, following a postdoc at MGGG. His research is in topology and geometry and their applications to data science, focusing on ways in which Census and election data can be harnessed for social good.