

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA**

CUBANOS PA'LANTE, *et al.*,

Plaintiffs,

v.

FLORIDA HOUSE OF REPRESENTA-
TIVES, *et al.*,

Defendants.

Case No. 1:24-cv-21983-JB

**SUPPLEMENTAL EXPERT REPORT OF CORY McCARTAN, Ph.D.
November 26, 2025**

I. INTRODUCTION, SCOPE OF WORK, AND METHODOLOGY

1. My name is Cory McCartan, Ph.D., and I am an Assistant Professor of Statistics and a faculty affiliate in Political Science at the Pennsylvania State University. My qualifications are detailed in an earlier report submitted in this case. An updated copy of my curriculum vitae, detailing my experience and qualifications, including expert testimony since my previous report, is attached as Exhibit A.

2. I have been asked by counsel representing the Plaintiffs to redraw a portion of the Florida House district map corresponding to enacted districts 115 and 118–119 while complying with all other statutory and constitutional districting standards, following the same methodology and adhering to the same criteria as described in my original report. To do so, I relied on the enacted House plan with districts 115 and 118–119 removed.

3. I am being compensated at a rate of \$125.00 per hour. My compensation does not depend in any way on the outcome of the case or on the opinions or testimony that I provide.

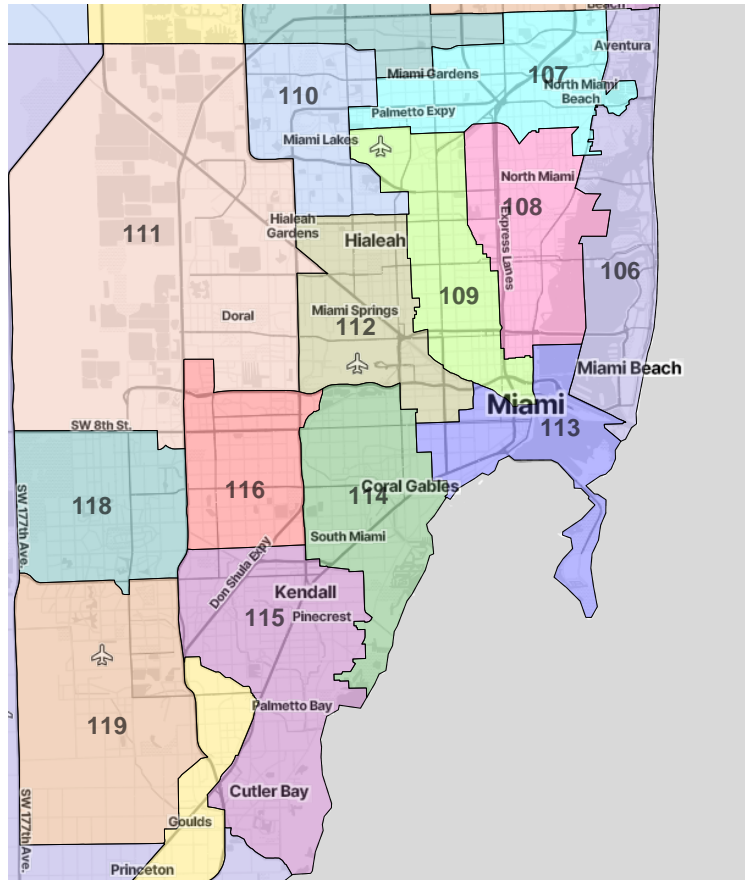


Figure 1: Illustrative House plan D

4. In drawing the illustrative plan, I consulted no partisan or racial data.
5. The illustrative House Plan D is shown in Figure 1. No area outside of the map in Figure 1 has been adjusted from the enacted plan. Plan D alters five districts from the enacted plan: the three I was instructed to redraw, plus adjacent districts 114 and 116. Additionally, an unpopulated area is moved into District 117 in order to follow the Florida Turnpike along nearly the entire eastern boundary of District 118 and 119, but no population is moved into or out of District 117. District 114 consists of Coral Gables, part of Miami, West Miami, and South Miami. District 115 includes the cities of Pinecrest, Palmetto Bay, and Cutler Bay, and the Kendall area north of District 117 up to Sunset Drive (SW 72nd St or SR 986), extending west to the Florida Turnpike, which also marks the western boundary of District 116. District 116 is otherwise bounded by Sunset

| District | Plan | |
|----------|---------|------------|
| | HD-D | HD-Enacted |
| 114 | 183,693 | 181,962 |
| 115 | 183,395 | 183,386 |
| 116 | 182,671 | 182,984 |
| 118 | 182,413 | 183,694 |
| 119 | 183,509 | 183,655 |

Table 1: District populations for Illustrative Plan D.

Drive to the south, the Sweetwater city limit and Dolphin Expressway to the north, and the Palmetto Expressway, Miami city limit, and CSX railroad on its eastern border with District 114. Districts 118 and 119 make up the redrawn area between the Turnpike and Krome Avenue (SR 997). The dividing line between them is Kendall Drive (SW 88th St or SR 94), except for a small area along Lindgren Road (SW 137th Ave or SR 825) to equalize population.

II. PLAN CHARACTERISTICS

6. To help understand how the illustrative plan complies with the requirements of the Florida constitution, this section reports various summary statistics measuring traditional redistricting criteria.

A. Population Balance

7. My changes to the House districts in Illustrative Plan D kept all district populations within the same range as the enacted plan, as shown in Table 1.

B. Municipality splits

8. Illustrative Plan D redraws only unincorporated areas of the enacted plan, and so splits the exact same municipalities as the enacted plan.

| Plan | Mean Boundary Score | | | | | |
|---------------------------------------|---------------------|--------|-------|-------|------|-------|
| | City | County | Road | Water | Rail | Other |
| House (Districts 114–116 and 118–119) | | | | | | |
| HD-D | 23.2% | 0.0% | 60.4% | 21.2% | 0.6% | 9.4% |
| HD-Enacted | 23.2% | 0.0% | 48.2% | 17.2% | 1.6% | 22.8% |

Table 2: Mean boundary scores in redrawn districts for Illustrative Plan D and the enacted plan.

C. Boundary Scores

9. As discussed in my original report, another way to measure the tier two requirement that districts “utilize existing political and geographical boundaries” is using a specific numerical boundary score developed by the Legislature and included in its online redistricting software. The calculated boundary scores are summarized in Table 2 for the redrawn districts. The table averages the boundary scores across the redrawn areas for each type of boundary. The full boundary scores are reported in Table 3.

10. The Illustrative House plan D improves on the boundary scores in the challenged districts compared to the enacted plan in every category, on average.

D. Compactness

11. As discussed in my previous report, the Legislature has historically used three specific compactness measures: the Polsby–Popper score, the Reock score, and the Convex Hull score. For all three scores, larger values indicate greater compactness.

12. I calculated the difference in the compactness scores, averaged across all districts, between Illustrative Plan D and the enacted plan. Illustrative Plan D is higher than the enacted plan, on average, by 0.0072 in Polsby–Popper score, by 0.0093 in Reock score, and by 0.0028 in Convex Hull score.

| District | Boundary Score | | | | | |
|------------|----------------|--------|------|-------|------|-------|
| | City | County | Road | Water | Rail | Other |
| HD-D | | | | | | |
| 114 | 65% | 0% | 28% | 49% | 1% | 5% |
| 115 | 36% | 0% | 32% | 49% | 0% | 1% |
| 116 | 15% | 0% | 83% | 8% | 2% | 0% |
| 118 | 0% | 0% | 89% | 0% | 0% | 11% |
| 119 | 0% | 0% | 70% | 0% | 0% | 30% |
| HD-Enacted | | | | | | |
| 114 | 67% | 0% | 26% | 42% | 0% | 8% |
| 115 | 40% | 0% | 29% | 40% | 0% | 8% |
| 116 | 9% | 0% | 85% | 4% | 0% | 7% |
| 118 | 0% | 0% | 42% | 0% | 4% | 54% |
| 119 | 0% | 0% | 59% | 0% | 4% | 37% |

Table 3: Boundary scores for Illustrative Plan D and the enacted plan.

| District | Polsby–Popper | | Reock | | Convex Hull | |
|----------|---------------|-------|------------|-------|-------------|-------|
| | HD-Enacted | HD-D | HD-Enacted | HD-D | HD-Enacted | HD-D |
| 114 | 0.351 | 0.427 | 0.355 | 0.418 | 0.733 | 0.816 |
| 115 | 0.302 | 0.409 | 0.278 | 0.439 | 0.723 | 0.818 |
| 116 | 0.509 | 0.575 | 0.356 | 0.512 | 0.877 | 0.857 |
| 118 | 0.333 | 0.734 | 0.216 | 0.656 | 0.788 | 0.952 |
| 119 | 0.466 | 0.676 | 0.285 | 0.584 | 0.919 | 0.938 |

Table 4: Compactness scores for Illustrative Plan D and the enacted plan.

13. Table 4 reports the Polsby–Popper, Reock, and Convex Hull compactness scores for the redrawn districts in the illustrative and enacted plans. Illustrative Plan D has the same or higher compactness scores than the enacted plan in all three measures in *every district*, except the Convex Hull score for District 116.

14. Additionally, based on my experience, and comparing the redrawn districts in Illustrative Plan D to other districts drawn by the legislature, the redrawn illustrative districts are visually compact.

III. APPENDED TABLES AND FIGURES

15. Appendix A supplements the tables in the appendix of my original report with additional entries for Illustrative Plan D in the same format.

16. Appendix B provides additional demographic statistics, calculated using data from the Florida Legislature's redistricting application, comparing districts 115, 118, and 119 between Illustrative Plan D and the enacted plan.

17. Appendix C includes an additional rendering of a map of certain areas of the enacted House plan and certain statistics corresponding to areas on the map, calculated using data from the Florida Legislature's redistricting application.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed this 26th day of November, 2025.

A handwritten signature in blue ink, reading "Cory McCartan". The signature is fluid and cursive, with the first name "Cory" and last name "McCartan" clearly distinguishable.

Cory McCartan, Ph.D.

APPENDICES

A. UPDATED APPENDICES**A.1. Population Statistics**

| District | Plan | | | | | | | | |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|------------|
| | HD-A1 | HD-A2 | HD-B | HD-C1 | HD-C2 | HD-C3 | HD-C4 | HD-D | HD-Enacted |
| 108 | 182,430 | 183,435 | 183,035 | 183,094 | 183,706 | 183,706 | 183,355 | 181,345 | 181,345 |
| 109 | 183,568 | 183,579 | 183,147 | 183,237 | 183,711 | 183,711 | 183,517 | 183,366 | 183,366 |
| 110 | 178,199 | 178,199 | 177,623 | 183,144 | 183,144 | 183,144 | 183,144 | 178,199 | 178,199 |
| 111 | 182,999 | 182,999 | 182,332 | 180,564 | 176,382 | 178,405 | 181,380 | 182,977 | 182,977 |
| 112 | 182,260 | 182,260 | 183,152 | 183,726 | 183,726 | 183,726 | 183,726 | 179,362 | 179,362 |
| 113 | 181,246 | 182,852 | 182,908 | 182,272 | 183,634 | 183,634 | 183,178 | 182,742 | 182,742 |
| 114 | 182,802 | 180,180 | 182,898 | 183,347 | 179,026 | 183,545 | 183,547 | 183,693 | 181,962 |
| 115 | 181,499 | 181,499 | 180,270 | 180,406 | 182,283 | 180,677 | 179,727 | 183,395 | 183,386 |
| 116 | 182,747 | 182,747 | 182,385 | 176,699 | 182,138 | 175,941 | 181,712 | 182,671 | 182,984 |
| 117 | 182,260 | 182,260 | 182,260 | 182,260 | 182,260 | 182,260 | 182,260 | 182,260 | 182,260 |
| 118 | 182,413 | 182,393 | 183,327 | 183,643 | 182,382 | 183,643 | 179,498 | 182,413 | 183,694 |
| 119 | 183,509 | 183,529 | 182,595 | 183,540 | 183,540 | 183,540 | 180,888 | 183,509 | 183,655 |

Table 5: District populations for House plans. Supplements original Table 5.

A.2. Boundary Scores

| District | Boundary Score | | | | | |
|----------|----------------|--------|------|-------|------|-------|
| | City | County | Road | Water | Rail | Other |
| HD-A1 | | | | | | |
| 108 | 41% | 0% | 27% | 42% | 3% | 16% |
| 109 | 51% | 0% | 24% | 25% | 4% | 8% |
| 110 | 45% | 14% | 48% | 17% | 0% | 5% |
| 111 | 24% | 10% | 74% | 7% | 0% | 6% |
| 112 | 39% | 0% | 44% | 32% | 0% | 4% |
| 113 | 39% | 0% | 48% | 44% | 2% | 4% |
| 114 | 41% | 8% | 35% | 53% | 0% | 0% |
| 115 | 37% | 0% | 30% | 49% | 0% | 2% |
| 116 | 10% | 0% | 83% | 10% | 0% | 2% |
| 118 | 0% | 0% | 89% | 0% | 0% | 11% |
| 119 | 0% | 0% | 70% | 0% | 0% | 30% |
| HD-A2 | | | | | | |
| 108 | 39% | 0% | 20% | 45% | 1% | 21% |
| 109 | 50% | 0% | 22% | 26% | 0% | 14% |
| 110 | 45% | 14% | 48% | 17% | 0% | 5% |
| 111 | 24% | 10% | 74% | 7% | 0% | 6% |
| 112 | 39% | 0% | 44% | 32% | 0% | 4% |
| 113 | 31% | 12% | 11% | 82% | 0% | 6% |
| 114 | 60% | 0% | 37% | 46% | 0% | 3% |

| | | | | | | |
|-------|-----|-----|-----|-----|----|-----|
| 115 | 37% | 0% | 30% | 49% | 0% | 2% |
| 116 | 10% | 0% | 83% | 10% | 0% | 2% |
| 118 | 0% | 0% | 86% | 0% | 0% | 14% |
| 119 | 0% | 0% | 67% | 0% | 0% | 33% |
| HD-B | | | | | | |
| 108 | 40% | 0% | 28% | 42% | 1% | 18% |
| 109 | 54% | 0% | 22% | 24% | 2% | 9% |
| 110 | 71% | 22% | 18% | 0% | 0% | 28% |
| 111 | 35% | 7% | 57% | 3% | 0% | 15% |
| 112 | 69% | 0% | 16% | 8% | 0% | 20% |
| 113 | 56% | 9% | 26% | 58% | 1% | 3% |
| 114 | 44% | 0% | 48% | 22% | 0% | 11% |
| 115 | 37% | 0% | 30% | 51% | 0% | 2% |
| 116 | 38% | 0% | 74% | 9% | 0% | 14% |
| 118 | 0% | 0% | 86% | 0% | 0% | 14% |
| 119 | 0% | 0% | 67% | 0% | 0% | 33% |
| HD-C1 | | | | | | |
| 108 | 40% | 0% | 29% | 42% | 3% | 15% |
| 109 | 56% | 0% | 24% | 20% | 5% | 7% |
| 110 | 70% | 27% | 27% | 20% | 0% | 12% |
| 111 | 28% | 0% | 61% | 27% | 1% | 6% |
| 112 | 88% | 0% | 10% | 27% | 0% | 12% |
| 113 | 50% | 9% | 25% | 61% | 1% | 5% |
| 114 | 27% | 0% | 66% | 18% | 0% | 9% |
| 115 | 37% | 0% | 32% | 49% | 0% | 1% |
| 116 | 39% | 0% | 72% | 5% | 0% | 18% |
| 118 | 0% | 0% | 86% | 0% | 1% | 13% |
| 119 | 0% | 0% | 67% | 0% | 1% | 32% |
| HD-C2 | | | | | | |
| 108 | 38% | 0% | 17% | 42% | 2% | 27% |
| 109 | 53% | 0% | 20% | 24% | 0% | 14% |
| 110 | 70% | 27% | 27% | 20% | 0% | 12% |
| 111 | 32% | 0% | 56% | 24% | 0% | 10% |
| 112 | 88% | 0% | 10% | 27% | 0% | 12% |
| 113 | 44% | 11% | 12% | 71% | 0% | 4% |
| 114 | 58% | 0% | 25% | 50% | 0% | 8% |
| 115 | 34% | 0% | 49% | 16% | 0% | 20% |
| 116 | 21% | 0% | 68% | 13% | 0% | 19% |
| 118 | 0% | 0% | 86% | 0% | 1% | 13% |
| 119 | 0% | 0% | 67% | 0% | 1% | 32% |
| HD-C3 | | | | | | |
| 108 | 38% | 0% | 15% | 42% | 2% | 28% |

| | | | | | | |
|------------|-----|-----|-----|-----|----|-----|
| 109 | 53% | 0% | 19% | 24% | 0% | 15% |
| 110 | 70% | 27% | 27% | 20% | 0% | 12% |
| 111 | 25% | 0% | 62% | 17% | 0% | 12% |
| 112 | 88% | 0% | 10% | 27% | 0% | 12% |
| 113 | 44% | 11% | 12% | 71% | 0% | 4% |
| 114 | 58% | 0% | 25% | 50% | 0% | 8% |
| 115 | 46% | 0% | 50% | 27% | 0% | 10% |
| 116 | 20% | 0% | 63% | 14% | 0% | 23% |
| 118 | 0% | 0% | 86% | 0% | 1% | 13% |
| 119 | 0% | 0% | 67% | 0% | 1% | 32% |
| HD-C4 | | | | | | |
| 108 | 38% | 0% | 21% | 43% | 3% | 22% |
| 109 | 53% | 0% | 20% | 24% | 4% | 9% |
| 110 | 70% | 27% | 27% | 20% | 0% | 12% |
| 111 | 20% | 0% | 63% | 29% | 0% | 4% |
| 112 | 88% | 0% | 10% | 27% | 0% | 12% |
| 113 | 31% | 12% | 12% | 82% | 2% | 3% |
| 114 | 47% | 0% | 40% | 49% | 0% | 9% |
| 115 | 38% | 0% | 21% | 71% | 0% | 1% |
| 116 | 37% | 0% | 69% | 20% | 0% | 9% |
| 118 | 0% | 0% | 83% | 0% | 1% | 15% |
| 119 | 0% | 0% | 66% | 0% | 1% | 33% |
| HD-D | | | | | | |
| 114 | 65% | 0% | 28% | 49% | 1% | 5% |
| 115 | 36% | 0% | 32% | 49% | 0% | 1% |
| 116 | 15% | 0% | 83% | 8% | 2% | 0% |
| 118 | 0% | 0% | 89% | 0% | 0% | 11% |
| 119 | 0% | 0% | 70% | 0% | 0% | 30% |
| HD-Enacted | | | | | | |
| 108 | 36% | 0% | 19% | 41% | 2% | 26% |
| 109 | 46% | 0% | 27% | 20% | 0% | 18% |
| 110 | 45% | 14% | 48% | 17% | 0% | 5% |
| 111 | 26% | 10% | 75% | 6% | 0% | 4% |
| 112 | 38% | 0% | 44% | 23% | 0% | 10% |
| 113 | 30% | 15% | 13% | 78% | 0% | 7% |
| 114 | 67% | 0% | 26% | 42% | 0% | 8% |
| 115 | 40% | 0% | 29% | 40% | 0% | 8% |
| 116 | 9% | 0% | 85% | 4% | 0% | 7% |
| 118 | 0% | 0% | 42% | 0% | 4% | 54% |
| 119 | 0% | 0% | 59% | 0% | 4% | 37% |

Table 6: Boundary scores for House plans. Supplements original Table 7.

| Plan | House | | | Plan | Congressional | | |
|-------|---------------|--------|-------------|-------|---------------|--------|-------------|
| | Polsby–Popper | Reock | Convex Hull | | Polsby–Popper | Reock | Convex Hull |
| HD-A1 | 0.0087 | 0.0032 | -0.0015 | CD-A | -0.0038 | 0.0061 | 0.0035 |
| HD-A2 | 0.0099 | 0.0034 | 0.0000 | CD-B1 | -0.0019 | 0.0132 | 0.0079 |
| HD-B | 0.0108 | 0.0063 | 0.0005 | CD-B2 | -0.0014 | 0.0142 | 0.0050 |
| HD-C1 | 0.0108 | 0.0030 | 0.0011 | CD-C1 | 0.0139 | 0.0295 | 0.0102 |
| HD-C2 | 0.0102 | 0.0026 | 0.0007 | CD-C2 | 0.0104 | 0.0289 | 0.0135 |
| HD-C3 | 0.0111 | 0.0041 | 0.0009 | CD-D | 0.0015 | 0.0068 | 0.0086 |
| HD-C4 | 0.0133 | 0.0035 | 0.0024 | | | | |
| HD-D | 0.0072 | 0.0093 | 0.0028 | | | | |

Table 7: Difference in average compactness scores from the enacted plan. Supplements original Table 4.

A.3. Compactness Statistics

| District | Plan | | | | | | | | HD-Enacted |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | HD-A1 | HD-A2 | HD-B | HD-C1 | HD-C2 | HD-C3 | HD-C4 | HD-D | |
| 108 | 0.417 | 0.439 | 0.415 | 0.413 | 0.467 | 0.470 | 0.435 | 0.455 | 0.455 |
| 109 | 0.376 | 0.382 | 0.371 | 0.348 | 0.351 | 0.351 | 0.357 | 0.335 | 0.335 |
| 110 | 0.472 | 0.472 | 0.623 | 0.484 | 0.484 | 0.484 | 0.484 | 0.472 | 0.472 |
| 111 | 0.583 | 0.583 | 0.600 | 0.678 | 0.594 | 0.675 | 0.777 | 0.563 | 0.563 |
| 112 | 0.535 | 0.535 | 0.491 | 0.522 | 0.522 | 0.522 | 0.522 | 0.417 | 0.417 |
| 113 | 0.403 | 0.527 | 0.447 | 0.504 | 0.447 | 0.447 | 0.512 | 0.394 | 0.394 |
| 114 | 0.428 | 0.450 | 0.519 | 0.536 | 0.421 | 0.430 | 0.490 | 0.427 | 0.351 |
| 115 | 0.398 | 0.398 | 0.402 | 0.406 | 0.510 | 0.510 | 0.559 | 0.409 | 0.302 |
| 116 | 0.625 | 0.625 | 0.627 | 0.595 | 0.619 | 0.638 | 0.652 | 0.575 | 0.509 |
| 117 | 0.173 | 0.173 | 0.172 | 0.172 | 0.172 | 0.172 | 0.172 | 0.173 | 0.173 |
| 118 | 0.734 | 0.691 | 0.700 | 0.709 | 0.711 | 0.709 | 0.706 | 0.734 | 0.333 |
| 119 | 0.676 | 0.696 | 0.701 | 0.702 | 0.702 | 0.702 | 0.703 | 0.676 | 0.466 |

Table 8: Polsby–Popper compactness scores for House plans. Supplements original Table 9.

| District | Plan | | | | | | | | HD-Enacted |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | HD-A1 | HD-A2 | HD-B | HD-C1 | HD-C2 | HD-C3 | HD-C4 | HD-D | |
| 108 | 0.372 | 0.416 | 0.372 | 0.373 | 0.463 | 0.464 | 0.420 | 0.485 | 0.485 |
| 109 | 0.290 | 0.287 | 0.297 | 0.303 | 0.270 | 0.270 | 0.281 | 0.251 | 0.251 |
| 110 | 0.427 | 0.427 | 0.590 | 0.434 | 0.434 | 0.434 | 0.434 | 0.427 | 0.427 |
| 111 | 0.596 | 0.596 | 0.608 | 0.537 | 0.520 | 0.612 | 0.595 | 0.592 | 0.592 |
| 112 | 0.496 | 0.496 | 0.495 | 0.378 | 0.378 | 0.378 | 0.378 | 0.425 | 0.425 |
| 113 | 0.384 | 0.473 | 0.591 | 0.590 | 0.544 | 0.544 | 0.472 | 0.551 | 0.551 |
| 114 | 0.498 | 0.439 | 0.388 | 0.386 | 0.377 | 0.429 | 0.352 | 0.418 | 0.355 |
| 115 | 0.430 | 0.430 | 0.429 | 0.435 | 0.461 | 0.460 | 0.583 | 0.439 | 0.278 |
| 116 | 0.469 | 0.469 | 0.610 | 0.536 | 0.470 | 0.515 | 0.498 | 0.512 | 0.356 |
| 117 | 0.146 | 0.146 | 0.146 | 0.146 | 0.146 | 0.146 | 0.146 | 0.146 | 0.146 |
| 118 | 0.656 | 0.591 | 0.592 | 0.623 | 0.626 | 0.623 | 0.648 | 0.656 | 0.216 |
| 119 | 0.584 | 0.600 | 0.599 | 0.582 | 0.582 | 0.582 | 0.580 | 0.584 | 0.285 |

Table 9: Reock compactness scores for House plans. Supplements original Table 10.

| District | Plan | | | | | | | | HD-Enacted |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | HD-A1 | HD-A2 | HD-B | HD-C1 | HD-C2 | HD-C3 | HD-C4 | HD-D | |
| 108 | 0.838 | 0.844 | 0.839 | 0.834 | 0.856 | 0.862 | 0.853 | 0.849 | 0.849 |
| 109 | 0.739 | 0.755 | 0.756 | 0.707 | 0.742 | 0.741 | 0.740 | 0.726 | 0.726 |
| 110 | 0.792 | 0.792 | 0.906 | 0.876 | 0.876 | 0.876 | 0.876 | 0.792 | 0.792 |
| 111 | 0.891 | 0.891 | 0.893 | 0.977 | 0.932 | 0.941 | 0.988 | 0.882 | 0.882 |
| 112 | 0.884 | 0.884 | 0.847 | 0.899 | 0.899 | 0.899 | 0.899 | 0.788 | 0.788 |
| 113 | 0.741 | 0.863 | 0.797 | 0.809 | 0.802 | 0.802 | 0.861 | 0.767 | 0.767 |
| 114 | 0.786 | 0.822 | 0.874 | 0.875 | 0.804 | 0.803 | 0.832 | 0.816 | 0.733 |
| 115 | 0.809 | 0.809 | 0.813 | 0.817 | 0.838 | 0.838 | 0.895 | 0.818 | 0.723 |
| 116 | 0.911 | 0.911 | 0.905 | 0.907 | 0.909 | 0.918 | 0.926 | 0.857 | 0.877 |
| 117 | 0.447 | 0.447 | 0.447 | 0.447 | 0.447 | 0.447 | 0.447 | 0.447 | 0.449 |
| 118 | 0.952 | 0.945 | 0.947 | 0.946 | 0.942 | 0.946 | 0.937 | 0.952 | 0.788 |
| 119 | 0.938 | 0.945 | 0.945 | 0.952 | 0.952 | 0.952 | 0.948 | 0.938 | 0.919 |

Table 10: Convex Hull compactness scores for House plans. Supplements original Table 11.

B. ADDITIONAL DEMOGRAPHIC STATISTICS

| | Plan D | Enacted Plan | Difference |
|-------------------------------------------------------------------------|--------|--------------|------------|
| HD 115 | | | |
| 2020 Census VAP, % Hispanic | 64.2% | 65.9% | -1.7pp |
| General election registered voters, % Hispanic (avg. 2012-2020) | 48.8% | 51.3% | -2.4pp |
| Primary election Democratic primary voters, % Hispanic (avg. 2012-2020) | 24.2% | 25.1% | -0.9pp |
| 2020 general election registered voters, % Hispanic | 53.4% | 55.3% | -1.9pp |
| 2020 general election Democratic registered voters, % Hispanic | 42.4% | 43.1% | -0.7pp |
| 2020 general election Republican registered voters, % Hispanic | 61.5% | 64.3% | -2.8pp |
| 2020 primary election Democratic primary voters, % Hispanic | 34.0% | 34.5% | -0.5pp |
| 2020 primary election Republican primary voters, % Hispanic | 61.5% | 65.1% | -3.6pp |
| HD 118 | | | |
| 2020 Census VAP, % Hispanic | 91.2% | 85.7% | +5.4pp |
| General election registered voters, % Hispanic (avg. 2012-2020) | 82.4% | 74.8% | +7.6pp |
| Primary election Democratic primary voters, % Hispanic (avg. 2012-2020) | 70.0% | 51.7% | +18.3pp |
| 2020 general election registered voters, % Hispanic | 83.6% | 77.0% | +6.6pp |
| 2020 general election Democratic registered voters, % Hispanic | 80.0% | 67.9% | +12.2pp |
| 2020 general election Republican registered voters, % Hispanic | 87.1% | 83.7% | +3.4pp |
| 2020 primary election Democratic primary voters, % Hispanic | 76.0% | 60.4% | +15.6pp |
| 2020 primary election Republican primary voters, % Hispanic | 88.4% | 84.9% | +3.5pp |
| HD 119 | | | |
| 2020 Census VAP, % Hispanic | 79.8% | 85.2% | -5.4pp |
| General election registered voters, % Hispanic (avg. 2012-2020) | 67.6% | 75.4% | -7.8pp |
| Primary election Democratic primary voters, % Hispanic (avg. 2012-2020) | 43.4% | 57.2% | -13.8pp |
| 2020 general election registered voters, % Hispanic | 71.1% | 77.6% | -6.5pp |
| 2020 general election Democratic registered voters, % Hispanic | 62.1% | 71.7% | -9.5pp |
| 2020 general election Republican registered voters, % Hispanic | 78.8% | 83.2% | -4.4pp |
| 2020 primary election Democratic primary voters, % Hispanic | 53.5% | 65.0% | -11.5pp |
| 2020 primary election Republican primary voters, % Hispanic | 78.8% | 84.0% | -5.2pp |

Table 11

C. ENACTED PLAN MAPS AND STATISTICS

| | HD 119 | HD 118 | HD 116 | HD 115 | HD 114 |
|--------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| 2020 Census VAP, % Hispanic | | | | | |
| North of Kendall Dr | 90.3% | 91.9% | 88.2% | 81.9% | 75.1% |
| South of Kendall Dr | 81.1% | 78.1% | 74.7% | 58.9% | 46.8% |
| <i>Difference</i> | +9.2pp | +13.8pp | +13.5pp | +23.0pp | +28.3pp |
| 2020 general election registered voters, % Hispanic | | | | | |
| North of Kendall Dr | 83.3% | 83.9% | 80.7% | 73.8% | 62.4% |
| South of Kendall Dr | 73.0% | 68.4% | 63.9% | 48.5% | 39.7% |
| <i>Difference</i> | +10.3pp | +15.4pp | +16.8pp | +25.3pp | +22.7pp |
| General election registered voters, % Hispanic (avg. 2012-2020) | | | | | |
| North of Kendall Dr | 82.3% | 82.4% | 79.6% | 72.5% | 61.8% |
| South of Kendall Dr | 70.0% | 64.6% | 60.4% | 43.5% | 36.4% |
| <i>Difference</i> | +12.3pp | +17.9pp | +19.2pp | +28.9pp | +25.4pp |
| Primary election Democratic primary voters, % Hispanic (avg. 2012-2020) | | | | | |
| North of Kendall Dr | 71.9% | 68.7% | 63.5% | 49.1% | 38.1% |
| South of Kendall Dr | 49.1% | 37.9% | 39.2% | 19.8% | 13.4% |
| <i>Difference</i> | +22.8pp | +30.9pp | +24.3pp | +29.3pp | +24.7pp |
| 2020 general election Democratic registered voters, % Hispanic | | | | | |
| North of Kendall Dr | 80.4% | 79.6% | 74.9% | 63.7% | 50.2% |
| South of Kendall Dr | 65.9% | 57.7% | 55.6% | 37.5% | 22.1% |
| <i>Difference</i> | +14.5pp | +21.9pp | +19.3pp | +26.2pp | +28.1pp |
| 2020 general election Republican registered voters, % Hispanic | | | | | |
| North of Kendall Dr | 87.1% | 87.1% | 85.4% | 81.1% | 73.8% |
| South of Kendall Dr | 79.6% | 77.5% | 69.8% | 56.5% | 50.0% |
| <i>Difference</i> | +7.4pp | +9.6pp | +15.6pp | +24.6pp | +23.8pp |
| 2020 primary election Democratic primary voters, % Hispanic | | | | | |
| North of Kendall Dr | 76.9% | 75.3% | 70.3% | 56.7% | 43.7% |
| South of Kendall Dr | 57.7% | 48.5% | 47.0% | 29.2% | 20.0% |
| <i>Difference</i> | +19.2pp | +26.8pp | +23.3pp | +27.5pp | +23.7pp |
| 2020 primary election Republican primary voters, % Hispanic | | | | | |
| North of Kendall Dr | 88.3% | 88.3% | 87.0% | 83.0% | 76.9% |
| South of Kendall Dr | 79.7% | 77.6% | 72.8% | 55.4% | 49.7% |
| <i>Difference</i> | +8.7pp | +10.7pp | +14.2pp | +27.6pp | +27.2pp |

Table 12

| | HD 119 | HD 118 | HD 116 | HD 115 | HD 114 |
|----------------------------------------------------------------------------|---------|---------|---------|---------|---------|
| 2020 Census total population | | | | | |
| North of Kendall Dr | 82,414 | 100,547 | 172,087 | 52,772 | 178,092 |
| South of Kendall Dr | 101,241 | 83,147 | 10,897 | 130,614 | 3,870 |
| 2020 Census voting-age population (VAP) | | | | | |
| North of Kendall Dr | 65,532 | 83,551 | 144,507 | 44,474 | 148,892 |
| South of Kendall Dr | 80,768 | 66,677 | 9,015 | 102,312 | 3,080 |
| 2020 Census Hispanic VAP | | | | | |
| North of Kendall Dr | 59,148 | 76,751 | 127,456 | 36,408 | 111,779 |
| South of Kendall Dr | 65,493 | 52,047 | 6,735 | 60,272 | 1,440 |
| 2020 general election registered voters who are Hispanic | | | | | |
| North of Kendall Dr | 42,634 | 55,777 | 83,839 | 24,459 | 68,440 |
| South of Kendall Dr | 47,349 | 35,988 | 4,682 | 44,185 | 1,246 |
| 2020 general election Democratic registered voters who are Hispanic | | | | | |
| North of Kendall Dr | 11,485 | 12,889 | 21,154 | 5,725 | 18,913 |
| South of Kendall Dr | 14,150 | 10,869 | 1,401 | 12,426 | 209 |
| 2020 general election Republican registered voters who are Hispanic | | | | | |
| North of Kendall Dr | 15,751 | 24,452 | 35,539 | 11,394 | 27,699 |
| South of Kendall Dr | 15,557 | 12,097 | 1,676 | 17,104 | 666 |
| 2020 primary election Democratic primary voters who are Hispanic | | | | | |
| North of Kendall Dr | 3,100 | 3,667 | 6,269 | 1,911 | 6,404 |
| South of Kendall Dr | 3,857 | 2,936 | 491 | 4,177 | 94 |
| 2020 primary election Republican primary voters who are Hispanic | | | | | |
| North of Kendall Dr | 5,320 | 9,290 | 14,658 | 4,712 | 11,262 |
| South of Kendall Dr | 4,763 | 3,803 | 655 | 5,805 | 263 |

Table 13

| HD 116 | |
|-------------------------------------------------------------------------|---------|
| 2020 Census VAP, % Hispanic | |
| North of Bird Rd | 91.0% |
| South of Bird Rd | 82.3% |
| <i>Difference</i> | +8.7pp |
| 2020 general election registered voters, % Hispanic | |
| North of Bird Rd | 85.1% |
| South of Bird Rd | 73.0% |
| <i>Difference</i> | +12.1pp |
| General election registered voters, % Hispanic (avg. 2012-2020) | |
| North of Bird Rd | 85.1% |
| South of Bird Rd | 70.3% |
| <i>Difference</i> | +14.8pp |
| Primary election Democratic primary voters, % Hispanic (avg. 2012-2020) | |
| North of Bird Rd | 80.6% |
| South of Bird Rd | 46.2% |
| <i>Difference</i> | +34.4pp |
| 2020 general election Democratic registered voters, % Hispanic | |
| North of Bird Rd | 82.1% |
| South of Bird Rd | 63.6% |
| <i>Difference</i> | +18.5pp |
| 2020 general election Republican registered voters, % Hispanic | |
| North of Bird Rd | 88.9% |
| South of Bird Rd | 79.5% |
| <i>Difference</i> | +9.4pp |
| 2020 primary election Democratic primary voters, % Hispanic | |
| North of Bird Rd | 82.9% |
| South of Bird Rd | 55.6% |
| <i>Difference</i> | +27.3pp |
| 2020 primary election Republican primary voters, % Hispanic | |
| North of Bird Rd | 91.1% |
| South of Bird Rd | 80.5% |
| <i>Difference</i> | +10.6pp |

Table 14

| | |
|----------------------------------------------------------------------------|---------------|
| | HD 116 |
| 2020 Census total population | |
| North of Bird Rd | 106,698 |
| South of Bird Rd | 76,286 |
| 2020 Census voting-age population (VAP) | |
| North of Bird Rd | 90,027 |
| South of Bird Rd | 63,495 |
| 2020 Census Hispanic VAP | |
| North of Bird Rd | 81,913 |
| South of Bird Rd | 52,278 |
| 2020 general election registered voters who are Hispanic | |
| North of Bird Rd | 51,340 |
| South of Bird Rd | 37,181 |
| 2020 general election Democratic registered voters who are Hispanic | |
| North of Bird Rd | 13,243 |
| South of Bird Rd | 9,312 |
| 2020 general election Republican registered voters who are Hispanic | |
| North of Bird Rd | 21,047 |
| South of Bird Rd | 16,168 |
| 2020 primary election Democratic primary voters who are Hispanic | |
| North of Bird Rd | 3,707 |
| South of Bird Rd | 3,053 |
| 2020 primary election Republican primary voters who are Hispanic | |
| North of Bird Rd | 8,812 |
| South of Bird Rd | 6,501 |

Table 15

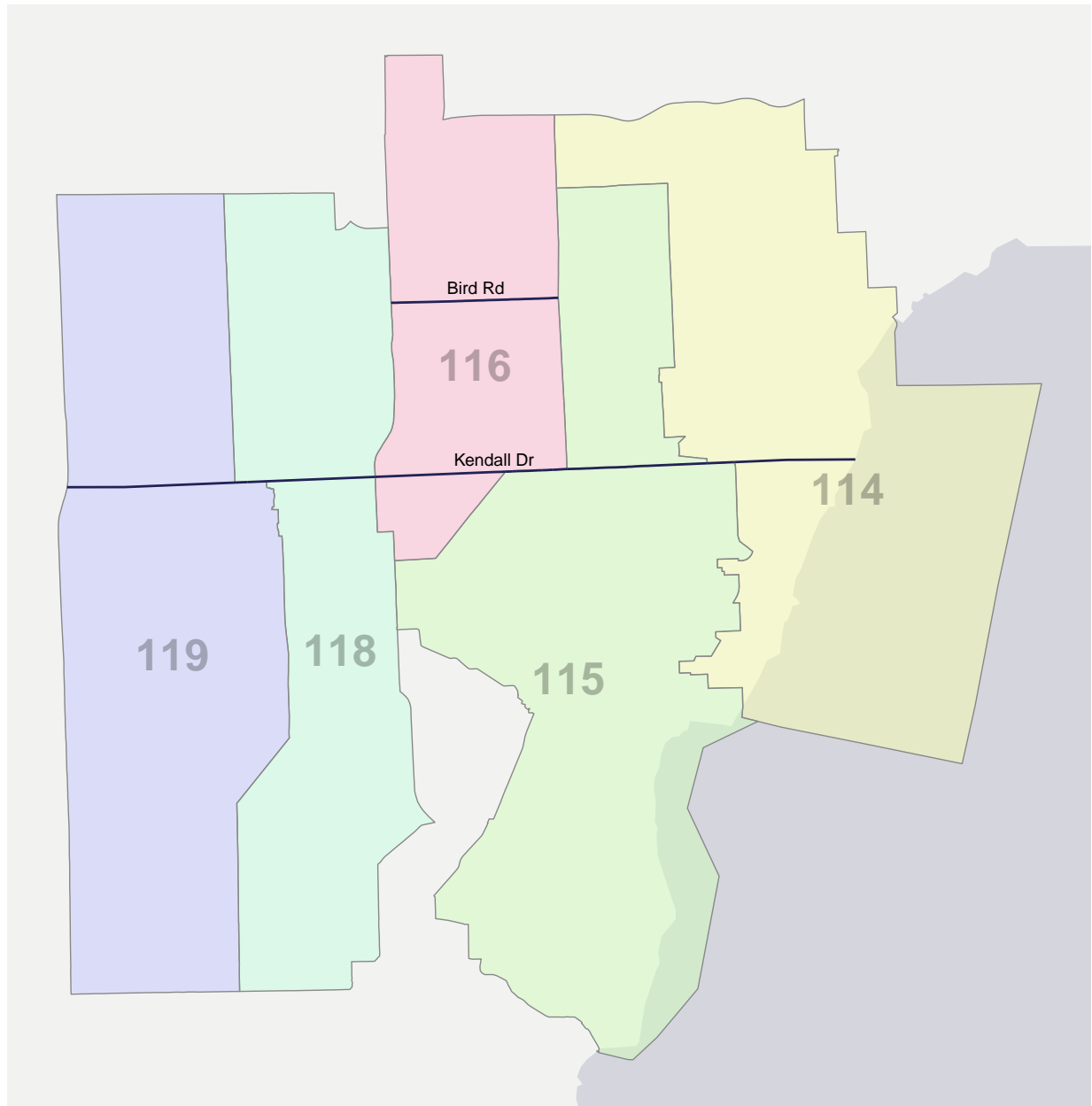


Figure 2

EXHIBIT A

Curriculum Vitae

Cory McCartan

Curriculum Vitae

September 2025

| | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------|
| CONTACT INFORMATION | Department of Statistics, Penn State University 325 Thomas Building, 461 Pollock Road University Park, PA 16802 | (425) 770-9244 mccartan@psu.edu |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------|

| | | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ACADEMIC EMPLOYMENT | Pennsylvania State University Hoben and Patricia Thomas and Thomas and Ann Hettmansperger Early Career Professor of Statistics Assistant Professor of Statistics Affiliate Faculty in Political Science New York University Center for Data Science Data Science Assistant Professor / Faculty Fellow | 2024 – 2024 – 2027 2024 – 2023 – 2024 |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|

| | | |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| EDUCATION | Harvard University Ph.D., Statistics, 2023. Committee: Kosuke Imai (chair), Xiao-Li Meng, Gary King. Dissertation: <i>Computational and Bayesian Methods for Geographic Data in the Social Sciences</i> . A.M., Statistics, 2021. Grinnell College B.A., Mathematics, with honors, 2019. | 2019 – 2023 2015 – 2019 |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PEER-REVIEWED PUBLICATIONS | “Estimating Racial Disparities When Race is Not Observed,” with Robin Fisher, Jacob Goldin, Daniel E. Ho, and Kosuke Imai (2025). <i>Journal of the American Statistical Association</i> , Forthcoming. “Evaluating Bias and Noise Induced by the U.S. Census Bureau’s Privacy Protection Methods,” with Christopher T. Kenny, Tyler Simko, Shiro Kuriwaki, and Kosuke Imai (2024). <i>Science Advances</i> 10:18, eadl2524. “Measuring and Modeling Neighborhoods,” with Jacob R. Brown and Kosuke Imai (2024). <i>American Political Science Review</i> 118:4, 1966-1985. “Census Officials Must Constructively Engage with Independent Evaluations,” with Christopher T. Kenny, Tyler Simko, and Kosuke Imai (2024). <i>Proceedings of the National Academy of Sciences</i> 121:11, e2321196121. Letter to the editor re: Jarmin et al. (2023). “Making Differential Privacy Work for Census Data Users,” with Tyler Simko and Kosuke Imai (2023). <i>Harvard Data Science Review</i> 5:4. |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

With response and rejoinder.

“Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans,” with Kosuke Imai (2023). *Annals of Applied Statistics* 17:4, 3300-3323.

Covered by *The Washington Post*, *Quanta* magazine.

“Widespread Partisan Gerrymandering Mostly Cancels Nationally, but Reduces Electoral Competition,” with Christopher T. Kenny, Tyler Simko, Shiro Kuriwaki, and Kosuke Imai (2023). *Proceedings of the National Academy of Sciences* 120:25, e2217322120.

“Researchers Need Better Access to U.S. Census Data,” with Tyler Simko and Kosuke Imai (2023). *Science* 380:6648, 902-903.

“Recalibration of Predicted Probabilities Using the “Logit Shift”: Why Does it Work, and When Can it be Expected to Work Well?” with Evan T.R. Rosenman and Santiago Olivella (2023). *Political Analysis* 31:4, 651-661.

“Comment: the Essential Role of Policy Evaluation for the 2020 Census Disclosure Avoidance System,” with Christopher T. Kenny, Shiro Kuriwaki, Evan T.R. Rosenman, Tyler Simko, and Kosuke Imai (2023). *Harvard Data Science Review*, Special Issue 2.

Response to boyd and Sarathy (2022).

“Simulated Redistricting Plans for the Analysis and Evaluation of Redistricting in the United States,” with Christopher T. Kenny, Tyler Simko, George Garcia III, Kevin Wang, Melissa Wu, Shiro Kuriwaki, and Kosuke Imai (2022). *Nature: Scientific Data* 9:1, 689.

Covered by *The New York Times*.

“The Use of Differential Privacy for Census Data and Its Impact on Redistricting: the Case of the 2020 U.S. Census,” with Christopher T. Kenny, Shiro Kuriwaki, Evan T.R. Rosenman, Tyler Simko, and Kosuke Imai (2021). *Science Advances* 7:41, eabk3283.

Originally a Public Comment to the Census Bureau (May 28, 2021).

Covered by *The Washington Post*, the *Associated Press*, the *San Francisco Chronicle*, *NC Policy Watch*, and others.

“Geodesic Interpolation on Sierpinski Gaskets,” with Caitlin Davis, Laura LeGare, and Luke Rogers (2021). *Journal of Fractal Geometry* 8:2, 117-152.

WORKING PAPERS

“Identification and Semiparametric Estimation of Conditional Means From Aggregate Data,” with Shiro Kuriwaki (2025).

“Relative Bias Under Imperfect Identification in Observational Causal Inference,” with Melody Huang (2025). Under Review.

“The Role of Confounders and Linearity in Ecological Inference: A Reassessment,” with Shiro Kuriwaki (2025).

“Gerrymandering and Geographic Polarization Have Reduced Electoral Competition,” with Ethan Jasny, Christopher T. Kenny, Tyler Simko, Melissa Wu, Michael Y. Zhao, Aneetej Arora, Emma Ebowe, Philip O’Sullivan, Taran Samarth, and Kosuke Imai (2025). Under Review.

“Redistricting Reforms Reduce Gerrymandering by Constraining Partisan Actors,” with Christopher T. Kenny, Tyler Simko, Emma Ebowe, Michael Y. Zhao, and Kosuke Imai (2024). Under Review.

“Individual and Differential Harm in Redistricting,” with Christopher T. Kenny (2022). Under Review.

“Projective Averages for Summarizing Redistricting Ensembles” (2024).

“Finding Pareto Efficient Redistricting Plans with Short Bursts” (2024).

OTHER WRITING

“Candy Cane Shortages and the Importance of Variation.” International Statistical Institute: *Statisticians React to the News* (December 21, 2021).

“Where Will the Rocket Land?” International Statistical Institute: *Statisticians React to the News* (May 12, 2021).

“Who’s the Most Electable Democrat? It Might be Warren or Buttigieg, Not Biden.” *The Washington Post* (October 23, 2019).

“I-405 Express Toll Lanes: Usage, Benefits, and Equity,” with Shirley Leung, C.J. Robinson, Kiana Roshan Zamir, Vaughn Iverson, and Mark Hallenbeck. Technical report for the Washington State Department of Transportation (2019).

SOFTWARE

redist: Simulation Methods for Legislative Redistricting

seine: Semiparametric Ecological Inference

birdie: Bayesian Instrumental Regression for Disparity Estimation

bases: Basis Expansions for Regression Modeling

easycensus: Quickly Find, Extract, and Marginalize U.S. Census Tables

redistmetrics: Redistricting Metrics

adjustr: Stan Model Adjustments and Sensitivity Analyses using Importance Sampling

PL94171: Tabulate P.L. 94-171 Redistricting Data Summary Files

conformalbayes: Jackknife(+) Predictive Intervals for Bayesian Models

alarmdata: Download, Merge, and Process Redistricting Data

blockpop: Estimate Census Block Populations for 2020

ggredist: Scales, Geometries, and Extensions of ggplot2 for Election Mapping

tinytiger: Lightweight Interface to TIGER/Line Shapefiles

causaltbl: Tidy Causal Data Frames and Tools

wacolors: Colorblind-Friendly Palettes from Washington State

nbhdmodel: Neighborhood Modeling and Analysis

PRESENTATIONS

Invited

| | |
|----------------------------------------------------------------------------------------------------------------------------------|----------------|
| Oxford University, Dept. of Statistics. <i>Causal Inference Reading Group.</i> | May 2025 |
| McMaster University, Faculty of Social Science. <i>Spark Talk Speaker Series.</i> | February 2025 |
| University of North Carolina at Chapel Hill, Dept. of Political Science. <i>Methods and Design Workshop.</i> | February 2025 |
| University of Wisconsin – Madison, Depts. of Political Science and Statistics. <i>Methods, Experiments, and Design Workshop.</i> | January 2025 |
| Harvard Law School, Charles Hamilton Houston Institute for Race and Justice. <i>Guinier Project Research Roundtable.</i> | January 2025 |
| Princeton University. <i>Frontiers in Data Science Symposium: Advances in Record Linkage.</i> | October 2024 |
| Penn State University, Dept. of Political Science. <i>Colloquium Series.</i> | September 2024 |
| New York University. <i>Math and Democracy Seminar.</i> | May 2024 |
| Massachusetts Institute of Technology, Dept. of Political Science. <i>Political Methodology Speaker Series.</i> | September 2023 |
| Harvard University, IQSS. <i>Applied Statistics Workshop.</i> | April 2023 |
| Harvard University, IQSS. <i>Applied Statistics Workshop.</i> | October 2022 |
| Harvard University, IQSS. <i>Applied Statistics Workshop.</i> | September 2021 |
| Harvard University, IQSS. <i>Applied Statistics Workshop.</i> | September 2020 |

Conferences

| |
|----------------------------------------------------------------------------------------------------------------|
| Society for Political Methodology: 2025, 2024, 2023, 2022, 2022 (Poster), 2021 (Poster) |
| Small Area Estimation Conference: 2025 (Invited panel) |
| American Causal Inference Conference: 2025, 2024 (Poster) |
| Southern Political Science Association: 2025 |
| Keystone State Statistics Symposium: 2024 |
| Joint Statistical Meetings: 2024 (Invited paper panel), 2022 (Invited paper panel), 2021 (Invited paper panel) |
| ACM Conference in Equity and Access in Algorithms, Mechanisms, and Optimization: 2023 |
| American Association for Public Opinion Research: 2022 (Poster) |

TEACHING

Penn State University

| | |
|-----------------------------------------------------------------------------------------|----------------------|
| STAT 440: Computational Statistics | Fall 2024, Fall 2025 |
| STAT 597: Visualization and Communication in Statistics (special topic short course) | Fall 2025 |
| STAT 597: Missing Data (special topic short course) | Fall 2024 |

New York University

| | |
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| DS-UA 111: Data Science for Everyone | Spring 2024 |
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Harvard University

| | |
|---------------------------------------------------------------------------------------------------------|-------------|
| STAT 117: Introduction to Biostatistics (Teaching Fellow) | Spring 2021 |
| STAT 221: Monte Carlo Methods & Other Computational Tools for Statistical Learning (Teaching Fellow) | Fall 2020 |

Grinnell College

| | |
|---------------------------------------------|------------------------|
| MAT 215: Linear Algebra (Peer Mentor) | Fall 2017, Spring 2019 |
| MAT 310: Statistical Modeling (Peer Mentor) | Fall 2018 |
| Grinnell College Math Lab | 2018 – 2019 |

ADVISING **Ph.D. Committees**

| | |
|-------------------------------------------------------------------------------|--------|
| Ross Cohen-Kristiansen (<i>co-chair</i> , Statistics, Penn State University) | 2025 – |
| Tinghua Chen (Informatics, Penn State University) | 2025 – |
| Kihyun Han (Statistics, Penn State University) | 2025 – |
| Yang Yang (Political Science, Penn State University) | 2025 – |
| Kyle McGovern (Bioinformatics and Genomics, Penn State University) | 2025 |

M.S. Theses

| | |
|-----------------------------------------------------------------------------------|------|
| Giovanni Stivella (Economics, University of Pisa and the Scuola Sant'Anna, Italy) | 2025 |
|-----------------------------------------------------------------------------------|------|

HONORS AND
AWARDS

Hoben and Patricia Thomas and Thomas and Ann Hettmansperger Early Career Professorship in Statistics, 2024 (total award: \$75,000).

Best Statistical Software Award, for developing statistical software that makes a significant research contribution; awarded to the redist software package by the Society for Political Methodology, 2022.

Certificate of Distinction in Teaching, awarded on the basis of student feedback by the Derek Bok Center for Teaching and Learning, 2021.

Pamela Ferguson Endowed Prize, awarded to up to two senior students by the Grinnell College Department of Mathematics, 2018.

SERVICE

Reviewer: *Proceedings of the National Academy of Sciences*, *Journal of the American Statistical Association*, *Annals of Applied Statistics*, *American Journal of Political Science*, *Quarterly Journal of Political Science*, *Harvard Data Science Review*, *Public Choice*, *Multiscale Modeling and Simulation*, *Discrete Applied Mathematics*, *Election Law Journal*, *Proceedings of the IASSL Triennial International Statistics Conference*, *Sloan Foundation*.

Discussant: 2024 PolMeth Conference, 2024 Midwest Political Science Association Annual Conference

Penn State University

| | |
|------------------------------------|-------------|
| Ph.D. admissions committee | 2025 – 2026 |
| Colloquium and SMAC Talk committee | 2025 – 2026 |
| Colloquium chair | 2024 – 2025 |

New York University

| | |
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| Faculty fellow hiring review | 2023 – 2024 |
| MA admissions committee | 2023 – 2024 |

Harvard University

| | |
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| Harvard Statistics Graduate Council | 2020 – 2023 |
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Organized Ph.D. student retreat and research “lightning talks,” 2020 and 2021.

First-year Ph.D. Student Mentor 2020 – 2023

Harvard Graduate Students Union – UAW Local 5118 2019 – 2021

Elected member, Bargaining Committee, 2020–2021 and 2021–2024 contracts.

Interim chair, Finance and Benefits Committee, 2020.

| | |
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| OTHER EXPERIENCE | <p>CBS News 2024 –</p> <p>Election consulting and election night Data Desk</p> <p>Protect Democracy 2024</p> <p>Consultant, electoral reform modeling</p> <p>Data for Progress 2022</p> <p>Consultant, midterm election modeling</p> <p>University of Washington eScience Institute Summer 2019</p> <p>Data Science for Social Good Fellow</p> <p>Union of Grinnell Student Dining Workers 2016 – 2019</p> <p>Founder, President (2016–17), and Advisor to the Executive Board (2018–19)</p> <p>University of Connecticut Summer 2018</p> <p>REU Participant, Department of Mathematics</p> <p>Fred Hutchinson Cancer Research Center Summer 2017</p> <p>Lead Intern, Department of Biostatistics</p> <p>Cray, Inc. (now HPE) Summer 2015</p> <p>Intern, Chapel language testing</p> |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EXPERT REPORTS | <p><i>Cubanos Pa'lante v. Florida House of Representatives</i> (U.S. District Court for the Southern District of Florida, Case No. 1:24-cv-21983). Testified by deposition.</p> <p><i>Hodges v. Albritton</i> (U.S. District Court for the Middle District of Florida, Case No. 8:24-cv-879). Testified by deposition and at trial.</p> <p><i>McClure et al. v. Jefferson County Commission</i> (U.S. District Court for the Northern District of Alabama, Case No. 2:23-cv-00443). Testified by deposition and at trial.</p> <p><i>Callais et al. v. Landry</i> (U.S. District Court for the Western District of Louisiana, Case No. 3:24-cv-00122). Testified by deposition and at trial.</p> <p><i>GRACE, Inc. et al. v. City of Miami</i> (U.S. District Court for the Southern District of Florida, Case No. 1:22-cv-24066). Testified by deposition and at trial.</p> <p><i>Nairne et al. v. Ardoin</i> (U.S. District Court for the Middle District of Louisiana, Case No. 3:22-cv-0017). Testified by deposition and at trial.</p> <p><i>League of Women Voters v. Ohio Redistricting Commission</i> (Ohio Supreme Court, Case Nos. 2021–1193 and 2021–1449). Consultant (with Prof. Kosuke Imai).</p> |
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