David W. Hogg

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Education

PhD 1998, Physics, California Institute of Technology. SB 1992 (Physics), Massachusetts Institute of Technology.

Positions

current: Professor of Physics and Data Science, New York University, 2014–present. Associate Professor of Physics with tenure, New York University, 2007–2014. Assistant Professor of Physics, New York University, 2001–2007. Long-term member, Institute for Advanced Study, 1997–2001.

Short-term and part-time positions

current: Group Leader, Astronomical Data Group, Center for Computational Astrophysics, Flatiron Institute, New York, 2017—present.

current: Adjunct Senior Staff Scientist, Max-Planck-Institut für Astronomie, Heidelberg, Germany, 2012-present.

Consultant, Flatiron Institute, New York, 2016–2017.

Consultant, Simons Center for Data Analysis, Simons Foundation, New York, 2015–2016. Visiting Scientist, Max-Planck-Institut für Astronomie, Heidelberg, Germany, 2006–2011. Visiting Professor, Department of Astronomy and Astrophysics, Columbia University, 2008 Consultant, Google Inc., 2008.

Scholar in Residence, Spitzer Science Center, California Institute of Technology, 2006 Visiting Professor, Department of Physics, Massachusetts Institute of Technology, 2005 Lecturer (part-time), Department of Physics, Princeton University, 1998–2001.

Administrative roles

Executive Director, Moore–Sloan Data Science Environment at NYU, 2013–2015. Deputy Director, New York University Center for Data Science, 2014–2015. Director of Undergraduate Studies, Department of Physics, New York University, 2008–2015.

Service

Chair, Sloan Digital Sky Survey V Advisory Council, 2023-present.

Terra Hunting Experiment Board, 2019-present.

Sloan Digital Sky Survey V Technical Advisory Group, 2017–present.

Sloan Digital Sky Survey IV Collaboration Council, 2013–2022.

Spitzer Science Center Oversight Committee, 2008–2019.

Panel reviewer for the National Science Foundation (2019).

Founder and co-organizer of hands-on research and education workshops, including AAS Hack Together Day (annually in January, 2013–2020), AstroHackWeek (five events, 2014–2017, 2020) Preparing for TESS (2018), Telluric Line Hack Week (2019), and the Gaia Sprint (six week-long events, 2016–2022).

White House appointee to the US national Astronomy and Astrophysics Advisory Committee, 2014–2017.

NASA Extragalactic Database Users Committee, 2006–2013.

Sloan Digital Sky Survey III Collaboration Council, 2008–2011.

Panel Chair, Spitzer Space Telescope Time Allocation Committee, 2005.

Sloan Digital Sky Survey Collaboration Council, 1999–2004.

Leader, Sloan Digital Sky Survey Calibration Task Force, 2000–2003.

National Optical Astronomy Observatories Time Allocation Committee, 2000–2002.

Hubble Space Telescope Time Allocation Committee, 1999.

Honors

New York University "Golden Dozen" Teaching Award, 2004.

Princeton University Engineering Council Teaching Award, 2000.

Caltech Undergraduate Teaching Award, Associated Students of Caltech, 1996.

J. S. Stemple Memorial Prize, Caltech, for Physics PhD oral candidacy exam, 1995. Phi Beta Kappa, 1992. Sigma Xi, 1992.

Award of merit, International Physics Olympiad, Bad Ischl, Austria, 1988.

Grants

- NASA TESS Guest Investigator Grant (TBA; Angus, PI), Measuring long rotation periods from TESS's short light curves, 50,000 USD, 2019–2021.
- NASA TESS Guest Investigator Grant (TBA; Hogg, PI), Halo Photometry of Naked-Eye Stars with TESS, 50,000 USD, 2019–2021.
- NASA Astrophysics Data Analysis Grant (80NSSC19K0533; Bean, PI), Improving the sensitivity of radial velocity spectrographs with data-driven techniques, 308,326 USD, 2019–2021.
- NSF Cyberinfrastructure for Emerging Science and Engineering Research Grant (OAC-1841594; Hogg, PI), Collaborative Research: Community Planning for Scalable Cyberinfrastructure to Support Multi-Messenger Astrophysics, 36,469 USD, 2018–2019.
- NSF Astronomy and Astrophysics Research Grant (AST-1517237; Hogg, PI), New Probabilistic Methods for Observational Cosmology, 328,312 USD, 2015–2019.
- Moore Foundation and Sloan Foundation Joint Grant (LeCun, PI), The Moore-Sloan Data Science Environment at NYU, 12,600,000 USD (approx), 2013–2018.
- NASA K2 Guest Observer grant (NNX16AC70G; Hogg, PI), Ultra-precise photometry in crowded fields: A self-calibration approach, 100,000 USD, 2016–2017.
- NASA Astrophysics Data Analysis Grant (NNX12AI50G; Hogg, PI), The Lives and Deaths of Planets and Stars in the Value-Added UV Photon Catalog, 473,705 USD, 2012–2017.
- NSF Cyber-Enabled Discovery Type I Grant (IIS-1124794; Hogg, PI), A Unified Probabilistic Model of Astronomical Imaging, 675,000 USD, 2011–2016.
- NASA Hubble Space Telescope Archival Resarch grant (AR-13250; Hogg, PI), Probabilistic Self-Calibration of the WFC3 IR Channel, 119,988 USD, 2013–2016.
- NSF Astronomy and Astrophysics Research Grant (AST-0908357; Hogg, PI), Dynamical models from kinematic data: The Milky Way Disk and Halo, 147,000 USD, 2009–2011.
- Alexander von Humboldt Foundation Research Fellowship (Hogg, PI), Cosmology with the proper motions of stars, 32,000 EUR (approx), 2008–2011.
- NASA Astrophysics Data Analysis Grant (NNX08AJ48G; Hogg, PI), Multi-wavelength astrometric catalog built from NASA data, 277,415 USD, 2008–2011.
- Amazon Web Services Research Grant (Koposov, PI) Searching for tidal streams in the Milky Way Halo, 40,000 CPU-hours (approx), 2009–2010.
- NASA Spitzer Space Telescope General Observer Grant (Spitzer programs 50568 and 50569; Schiminovich, PI), S5: Spitzer–SDSS Statistical Spectroscopic Survey, 350,000 USD (approx), 2008–2010.
- Google Research Grant (Blanton, PI), Beautiful and correct SDSS images for Google Sky, 86,000 USD, 2008–2009.
- NASA Long-Term Space Astrophysics Grant (NAG5-11669; Hogg, PI), Tools for Galaxy Astrophysics in the Era of the Space Infrared Telescope Facility, 498,770 USD, 2002–2007.
- NSF Information Technology Research Grant (AST-0428465; Hogg, PI), Automated Astrometry for Time-Domain and Distributed Astrophysics, 504,140 USD, 2004–2007.
- NASA Spitzer Space Telescope General Observer Grant (Spitzer program 20120; Hogg, PI), A search for PAH emission in extremely low luminosity galaxies, 59,243 USD, 2005–2007.

NASA Galaxy Evolution Explorer Archival Research Grant (Blanton, PI), K-corrections for GALEX, 42,500 USD, 2004–2005.

NASA Hubble Space Telescope Archival Research Grant (Blanton, PI), Comparing the ACS Ultra Deep Field to Low Redshift Galaxy Observations, 70,000 USD, 2003–2004.

NSF Group Grant (PHY-0101738; Farrar, PI), Theoretical Particle Physics, Astrophysics and Cosmology, 686,000 USD (+16,000 USD in REU supplement), 2001–2004.

NASA Hubble Postdoctoral Fellowship, 1997–2000.

NSF Graduate Fellowship, 1992–1995.

PhDs supervised

Morad Masjedi, 2007, Massive galaxy merging and cosmogony, PhD thesis, New York University.

Dustin Lang, 2009, Astrometry.net: Automatic recognition and calibration of astronomical images, PhD thesis, University of Toronto (co-supervised by Sam Roweis at Toronto).

Ronin Wu, 2010, Tracing star formation in the mid-infrared, PhD thesis, New York University.

Jo Bovy, 2011, Dynamical inference in the Milky Way, PhD thesis, New York University.

Adi Zolotov, 2011, *The dual origin of stellar halos*, PhD thesis, New York University (co-supervised by Beth Willman at Haverford).

Tao Jiang, 2012, Galaxy mergers and galaxy evolution, PhD thesis, New York University.

Fengji Hou, 2014, Bayesian inference on stellar radial velocity data, PhD thesis, New York University (co-supervised by Jonathan Goodman at NYU).

Daniel Foreman-Mackey, 2015, Methods for the detection and characterization of exoplanets and their population, PhD thesis, New York University.

Mohammadjavad Vakili, 2017, Methods in computational cosmology, PhD thesis, New York University.

Dun Wang, 2018, Methods for the calibration of astronomical imaging data, PhD thesis, New York University.

Alex Malz, 2019, Probabilistic analysis methods for cosmology using uncertainty-dominated photometric data, PhD thesis, New York University.

Kate Storey-Fisher, current PhD student.

Matthew Daunt, current PhD student.

Postdoctoral scholars supervised and co-supervised

Lauren Anderson, Megan Bedell, Andreas A. Berlind, Michael R. Blanton, Katie Breivik, Lisa Bugnet, Gabriella Contardo, Trevor David, Nora Eisner, Ross Fadely, Richard Galvez, Daniela Huppenkothen, Boris Leistedt, Rodrigo Luger, Sarah Pearson, Gabe Perez-Giz, Benjamin J. S. Pope, Adrian M. Price-Whelan, Erin Sheldon, Beth Willman, Lily L. Zhao.

257 Refereed publications

- 1. Hogg, D. W., Quinlan, G. D., & Tremaine, S., 1991, Dynamical limits on dark matter in the Solar System, *Astron. J.* **101** 2274–2286.
- Hogg, D. W., Jackson, C., Żytkow, A. N., Irwin, M., Webster, R., & Tremaine, S., 1994, A photographic search for satellites of Neptune, *Icarus* 107 304–310.
- 3. Hogg, D. W. & Blandford, R. D., 1994, The gravitational lens system B1422+231: Dark matter, superluminal expansion and the Hubble Constant, *Mon. Not. R. Astr. Soc.* **268** 889–893.
- 4. Djorgovski, S. et al., 1995, Deep galaxy counts in the K band with the Keck Telescope, Astrophys. J. Lett. 438 L13–L16.
- Smail, I., Hogg, D. W., Yan, L., & Cohen, J. G., 1995, Deep optical galaxy counts with the Keck Telescope, Astrophys. J. Lett. 449 L105–L108.
- Smail, I., Hogg, D. W., Blandford, R., Cohen, J. G., Edge, A. C., & Djorgovski, S. G., 1995, Discovery of two giant arcs in the rich cluster A2219 with the Keck Telescope, Mon. Not. R. Astr. Soc. 277 1–10.
- Eisenhardt, P. R., Armus, L., Hogg, D. W., Soifer, B. T., Neugebauer, G., & Werner, M. W., 1996, *Hubble Space Telescope* observations of the luminous IRAS source FSC10214+4724: A gravitationally lensed infrared quasar, *Astrophys. J.* 461 72–83.

- 8. Cohen, J. G., Hogg, D. W., Pahre, M. A., & Blandford, R., 1996, Strong redshift clustering of distant galaxies, *Astrophys. J. Lett.* **462** L9–L12.
- Hogg, D. W., Blandford, R., Kundić, T., Fassnacht, C. D., & Malhotra, S., 1996, A candidate gravitational lens in the Hubble Deep Field, Astrophys. J. Lett. 467 L73–L75.
- 10. Cohen, J. G., Cowie, L. L., Hogg, D. W., Songaila, A., Blandford, R., Hu, E. M., & Shopbell, P., 1996, Redshift clustering in the Hubble Deep Field, Astrophys. J. Lett. 471 L5–L9.
- 11. Hogg, D. W., Neugebauer, G., Armus, L., Matthews, K., Pahre, M. A., Soifer, B. T., & Weinberger, A. J., 1997, Near infrared imaging of the Hubble Deep Field with the Keck Telescope, Astron. J. 113 474–482. Associated erratum: Astron. J. 113 2338.
- 12. Reid, I. N., Gizis, J. E., Cohen, J., Pahre, M. A., Hogg, D. W., Cowie, L., Hu, E., & Songaila, A., 1997, Faint M dwarfs and the structure of the Galactic disk, Pubs. Astr. Soc. Pac. 109 559–565.
- 13. Hogg, D. W., Pahre, M. A., McCarthy, J. K., Cohen, J. G., Blandford, R., Smail, I., & Soifer, B. T., 1997, Counts and colours of faint galaxies in the *U* and *R* bands, *Mon. Not. R. Astr. Soc.* 288 404–410.
- Hogg, D. W. & Phinney, E. S., 1997, The fading of young stellar populations and the luminosity functions of dwarf, irregular and starburst galaxies, Astrophys. J. Lett. 488 L95-L99.
- Kundić, T., Hogg, D. W., Blandford, R. D., Cohen, J. G., Lubin, L. M., & Larkin, J. E., 1997, The external shear acting on gravitational lens B1422+231, Astron. J. 114 2276-2283.
- Hogg, D. W., 1998, On the evolution of field galaxies, PhD thesis, California Institute of Technology.
- 17. Hogg, D. W. et al., 1998, A blind test of photometric redshift prediction, Astron. J. 115 1418–1422.
- 18. Hogg, D. W., & Turner, E. L., 1998, A maximum likelihood method for improving faint source flux and color estimates, *Pubs. Astr. Soc. Pac.* **110** 727–731.
- 19. Hogg, D. W., Cohen, J. G., Blandford, R., & Pahre, M. A., 1998, The O II luminosity density of the Universe, *Astrophys. J.* **504** 622–628.
- Sykes, C. M. et al., 1998, The complex gravitational lens system B1933+503, Mon. Not. R. Astr. Soc. 301 310-314.
- 21. Nguyen, H. T., Eisenhardt, P. R., Werner, M. W., Goodrich, R., Hogg, D. W., Armus, L., Soifer, B. T., & Neugebauer, G., 1998, Imaging polarimetry of the gravitational lens FSC10214+4724, Astron. J. 117 671-676.
- 22. Cohen, J. G., Blandford, R., Hogg, D. W., Pahre, M. A., & Shopbell, P. L., 1999, Caltech Faint Field Galaxy Redshift Survey. VIII. Analysis of the field J0053+1234, Astrophys. J. 512 30-47.
- 23. Cohen, J. G., Hogg, D. W., Pahre, M. A., Blandford, R., Shopbell, P., & Richberg, K., 1999, Caltech Faint Field Galaxy Redshift Survey. VII. Data analysis techniques and redshifts in the field J0053+1234, Astrophys. J. Suppl. Ser. 120 171-178.
- 24. Barkana, R., Blandford, R., & Hogg, D. W., 1999, A possible gravitational lens in the Hubble Deep Field South, *Astrophys. J. Lett.* **513** L91–L94.
- 25. Fruchter, A. S. et al., 1999, Hubble Space Telescope and Palomar imaging of GRB 990123: Implications for the nature of gamma-ray bursts and their hosts, Astrophys. J. Lett. 519 L13-L16.
- Hogg, D. W. & Fruchter, A. S., 1999, The faint-galaxy hosts of gamma-ray bursts, Astrophys. J. 520 54–58.
- 27. Carlberg, R. G. et al., 2000, Caltech Faint Galaxy Redshift Survey. XI. The merger rate to redshift 1 from kinematic pairs, Astrophys. J. Lett. **532** L1–L4.
- 28. Hogg, D. W., Pahre, M. A., Adelberger, K. L., Blandford, R., Cohen, J. G., Gautier, T. N., Jarrett, T., Neugebauer, G., & Steidel, C. C., 2000, Caltech Faint Field Galaxy Redshift Survey. IX. Source detection and photometry in the Hubble Deep Field region, Astrophys. J. Suppl. Ser. 127 1–9.
- 29. Hogg, D. W., Neugebauer, G., Cohen, J. G., Dickinson, M. E., Djorgovski, S. G., Matthews, K., & Soifer, B. T., 2000, Three-micron imaging of the Hubble Deep Field, Astron. J. 119 1519–1525.

- 30. Cohen, J. G., Hogg, D. W., Blandford, R., Cowie, L. L., Hu, E., Songaila, A., Shopbell, P., & Richberg, K., 2000, Caltech Faint Galaxy Redshift Survey. X. A redshift survey in the region of the Hubble Deep Field North, *Astrophys. J.* **538** 29–52.
- 31. van den Bergh, S., Cohen, J. G., Hogg, D. W., & Blandford, R., 2000, Caltech Faint Galaxy Redshift Survey. XIV. Galaxy morphology in the HDF (North) and its flanking fields to z=1.2, Astron. J. 120 2190–2205.
- 32. Hogg, D. W., Cohen, J. G., & Blandford, R., 2000, The Caltech Faint Galaxy Redshift Survey. XII. Clustering of galaxies, *Astrophys. J.* **545** 32–42.
- 33. Hogg, D. W., 2001, Confusion errors in astrometry and counterpart association, Astron. J. 121 1207–1213.
- 34. Blanton, M. R. et al., 2001, The luminosity function of galaxies in SDSS commissioning data, Astron. J. 121 2358–2380.
- 35. Smette, A. et al., 2001, Hubble Space Telescope/STIS observations of GRB 000301C: CCD imaging and NUV MAMA spectroscopy, Astrophys. J. **556** 70–76.
- 36. Yasuda, N. et al., 2001, Galaxy number counts from the Sloan Digital Sky Survey commissioning data, Astron. J. 122 1104–1124.
- 37. Hogg, D. W., Finkbeiner, D. P., Schlegel, D. J., & Gunn, J. E., 2001, A photometricity and extinction monitor at the Apache Point Observatory, *Astron. J.* **122** 2129–2138.
- 38. Eisenstein, D. J. et al., 2001, Spectroscopic target selection for the Sloan Digital Sky Survey: The Luminous Red Galaxy Sample, Astron. J. 122 2267–2280.
- 39. Stoughton, C. et al., 2002, Sloan Digital Sky Survey: Early Data Release, Astron. J. 123 485–548.
- Schneider, D. P. et al., 2002, The Sloan Digital Sky Survey Quasar Catalog. I. Early Data Release, Astron. J. 123 567–577.
- 41. Hogg, D. W. et al., 2002, The luminosity density of red galaxies, Astron. J. 124 646-651.
- 42. Eisenstein, D. J., Hogg, D. W., et al., 2003, Average spectra of massive galaxies in the SDSS, Astrophys. J. **585** 694–713.
- 43. Hogg, D. W. et al., 2003, The overdensities of galaxy environments as a function of luminosity and color, Astrophys. J. Lett. **585** L5–L9.
- 44. Bernardi, M. et al., 2003, Early-type galaxies in the SDSS. I. The sample, Astron. J. 125 1817–1848.
- 45. Bernardi, M. et al., 2003, Early-type galaxies in the SDSS. II. Correlations between observables, Astron. J. 125 1849–1865.
- 46. Bernardi, M. et al., 2003, Early-type galaxies in the SDSS. III. The fundamental plane, Astron. J. 125 1866–1881.
- 47. Blanton, M. R., Brinkmann, J., Csabai, I., Doi, M., Eisenstein, D., Fukugita, M., Gunn, J. E., Hogg, D. W., & Schlegel, D. J., 2003, Estimating fixed-frame galaxy magnitudes in the SDSS, Astron. J. 125 2348–2360.
- 48. Blanton, M. R. et al., 2003, The galaxy luminosity function and luminosity density at redshift z = 0.1, Astrophys. J. **592** 819–838.
- 49. Blanton, M. R., Hogg, D. W., et al., 2003, The broadband optical properties of galaxies with redshifts 0.02 < z < 0.2, Astrophys. J. **594** 186–207.
- Abazajian, K. et al., 2003, The First Data Release of the Sloan Digital Sky Survey, Astron. J. 126 2081–2086.
- Hogg, D. W. et al., 2004, The dependence on environment of the color-magnitude relation of galaxies, Astrophys. J. Lett. 601 L29-L32.
- 52. Quintero, A. D., Hogg, D. W., et al., 2004, Selection and photometric properties of K+A galaxies, Astrophys. J. 602 190–199.
- 53. Lupton, R., Blanton, M. R., Fekete, G., Hogg, D. W., O'Mullane, W., Szalay, A., & Wherry, N., 2004, Preparing red-green-blue images from CCD data, Pubs. Astr. Soc. Pac. 116 133–137.
- 54. Tegmark, M. et al., 2004, The three-dimensional power spectrum of galaxies from the Sloan Digital Sky Survey, Astrophys. J. 606 702–740.
- 55. Tegmark, M. et al., 2004, Cosmological parameters from SDSS and WMAP, Phys. Rev. D 69 103501.
- Abazajian, K. et al., 2004, The Second Data Release of the Sloan Digital Sky Survey, Astron. J. 128 502–512.

- 57. Finkbeiner, D. P. et al., 2004, Sloan Digital Sky Survey imaging of low Galactic latitude fields: Technical summary and data release, Astron. J. 128 2577–2592.
- 58. Abazajian, K. et al., 2005, The Third Data Release of the Sloan Digital Sky Survey, Astron. J. 129 1755–1759.
- 59. Zehavi, I., et al., 2005, The intermediate-scale clustering of luminous red galaxies, Astrophys. J. 621 22–31.
- 60. Hogg, D. W., Eisenstein, D. J., Blanton, M. R., Bahcall, N. A., Brinkmann, J., Gunn, J. E., & Schneider, D. P., 2005, Cosmic homogeneity demonstrated with luminous red galaxies, *Astrophys. J.* 624 54–58.
- 61. Hogg, D. W., Tremonti, C. A., Blanton, M. R., Finkbeiner, D. P., Padmanabhan, N., Quintero, A. D., Schlegel, D. J., & Wherry, N., 2005, Mid-infrared and visible photometry of galaxies: Anomalously low polycyclic aromatic hydrocarbon emission from low-luminosity galaxies, Astrophys. J. 624 162–167.
- 62. Blanton, M. R. et al., 2005, New York University Value-Added Galaxy Catalog: A galaxy catalog based on new public surveys, Astron. J. 129 2562–2578.
- 63. Willman, B., Blanton, M. R., West, A. A., Dalcanton, J. J, Hogg, D. W., Schneider, D. P., Wherry, N., Yanny, B., & Brinkmann, J., 2005, A new Milky Way companion: Unusual globular cluster or extreme dwarf satellite?, Astron. J. 129 2692–2700.
- 64. Willman, B. et al., 2005, A new Milky Way dwarf galaxy in Ursa Major, Astrophys. J. Lett. **626** L85–L88.
- 65. Blanton, M. R., Eisenstein, D. J., Hogg, D. W., Schlegel, D. J., & Brinkmann, J., 2005, The relationship between environment and the broad-band optical properties of galaxies in the Sloan Digital Sky Survey, Astrophys. J. 629 143–157.
- 66. Hogg, D. W., Blanton, M. R., Roweis, S. T., & Johnston, K. V., 2005, Modeling complete distributions with incomplete observations: The velocity ellipsoid from *Hipparcos* data, *Astrophys. J.* 629 268–275.
- 67. Berlind, A. A., Blanton, M. R., Hogg, D. W., Weinberg, D. H., Davé, R., Eisenstein, D. J., & Katz, N., 2005, Interpreting the relationship between galaxy luminosity, color and environment, Astrophys. J. 629 625–632.
- 68. Eisenstein, D. J., Zehavi, I., Hogg, D. W., et al., 2005, Detection of the baryon acoustic peak in the large-scale correlation function of Sloan Digital Sky Survey Luminous Red Galaxies, Astrophys. J. 633 560–574.
- Adelman-McCarthy, J. K. et al., 2006, The Fourth Data Release of the Sloan Digital Sky Survey, Astrophys. J. Suppl. Ser. 162 38–48.
- Farrar, G. F., Berlind, A. A., & Hogg, D. W., 2006, Foreground and source of a cluster of ultra-high-energy cosmic rays, Astrophys. J. 642 L89-L93.
- 71. Cool, R. J., Eisenstein, D. J., Hogg, D. W., Blanton, M. R., Schlegel, D. J., Brinkmann, J., Schneider, D. P., & Vanden Berk, D. E., 2006, SDSS pre-burst observations of recent gamma-ray burst fields, Pubs. Astr. Soc. Pac. 118 733–739.
- Masjedi, M., Hogg, D. W., et al., 2006, Very small-scale clustering and merger rate of luminous red galaxies, Astrophys. J. 644 54–60.
- 73. Blanton, M. R., Eisenstein, D. J., Hogg, D. W., & Zehavi, I. I., 2006, The scale-dependence of relative galaxy bias: Encouragement for the "halo model" description, Astrophys. J. 645 977–985.
- Tucker, D. L. et al., 2006, The Sloan Digital Sky Survey Monitor Telescope pipeline, Astron. Nachr. 327 821–843.
- 75. Hogg, D. W., Masjedi, M., Berlind, A. A., Blanton, M. R., Quintero, A. D., & Brinkmann, J., 2006, What triggers galaxy transformations? The environments of post-starburst galaxies, Astrophys. J. 650 763–769.
- 76. Berlind, A. A. et al., 2006, Percolation galaxy groups and clusters in the SDSS Redshift Survey: Identification, catalogs, and the multiplicity function, Astrophys. J. Suppl. Ser. 167 1–25.
- Tegmark, M., et al., 2006, Cosmological constraints from the SDSS Luminous Red Galaxies, Phys. Rev. D 74 123507.
- Schneider, D. P., et al., 2007, The Sloan Digital Sky Survey Quasar Catalog IV: Fifth Data Release, Astron. J. 134 102–117.
- 79. Padmanabhan, N., et al., 2007, The clustering of luminous red galaxies in the Sloan

- Digital Sky Survey imaging data, Mon. Not. R. Astr. Soc. 378 852-872.
- 80. Adelman-McCarthy, J. K. et al., 2007, The Fifth Data Release of the Sloan Digital Sky Survey, Astrophys. J. Suppl. Ser. 172 634-644.
- 81. Barron, J. T., Stumm, C., Hogg, D. W., Lang, D., & Roweis, S., 2008, Cleaning the *USNO-B Catalog* through automatic detection of optical artifacts, *Astron. J.* **135** 414–422.
- 82. Padmanabhan, N., et al., 2008, An improved photometric calibration of the Sloan Digital Sky Survey imaging data, Astrophys. J. 674 1217–1233.
- 83. Adelman-McCarthy, J. K. et al., 2008, The Sixth Data Release of the Sloan Digital Sky Survey, Astrophys. J. Suppl. Ser. 175 297–313.
- 84. Masjedi, M., Hogg, D. W., & Blanton, M. R., 2008, The growth of luminous red galaxies by merging, *Astrophys. J.* **679** 260–268.
- 85. Bell, E. F., et al., 2008, The accretion origin of the Milky Way's stellar halo, Astrophys. J. 680 295–311.
- 86. Barron, J. T., Hogg, D. W., Lang, D., & Roweis, S., 2008, Blind Date: Using proper motions to determine the ages of historical images, *Astron. J.* **136** 1490–1501.
- 87. Bovy, J., Hogg, D. W., & Moustakas, J., 2008, The transparency of galaxy clusters, *Astrophys. J.* **688** 198–207.
- 88. Maller, A. H., Berlind, A. A., Blanton, M. R., & Hogg, D. W., 2009, The intrinsic properties of SDSS galaxies, Astrophys. J. 691 394–406.
- 89. Marshall, P. J., Hogg, D. W., Moustakas, L. A., Fassnacht, C. D., Bradač, M., Schrabback, T., & Blandford, R. D., 2009, Automated detection of galaxy-scale gravitational lenses in high-resolution imaging data, Astrophys. J. 694 924–942.
- 90. Lang, D., Hogg, D. W., Jester, S., & Rix, H.-W., 2009, Measuring the undetectable: Proper motions and parallaxes of very faint sources, *Astron. J.* **137** 4400–4411.
- 91. More, S., Bovy, J., & Hogg, D. W., 2009, Cosmic transparency: A test with the baryon acoustic feature and type Ia supernovae, *Astrophys. J.* **696** 1727–1732.
- 92. Abazajian, K. N. et al., 2009, The Seventh Data Release of the Sloan Digital Sky Survey, Astrophys. J. Suppl. Ser. 182 543–558.
- 93. Bunn, E. F. & Hogg, D. W., 2009, The kinematic origin of the cosmological redshift, Am. J. Phys. 77(8) 688–694.
- 94. Bovy, J., Hogg, D. W., & Roweis, S., 2009, The velocity distribution of nearby stars from *Hipparcos* data I. The significance of the moving groups, *Astrophys. J.* **700** 1794–1819.
- 95. Zolotov, A., Willman, B., Brooks, A. M., Governato, F., Brook, C. B., Hogg, D. W., Quinn, T., & Stinson, G., 2009, The dual origin of stellar halos, *Astrophys. J.* **702** 1058–1067.
- Bovy, J., Hogg, D. W., & Rix, H.-W., 2009, Galactic masers and the Milky Way circular velocity, Astrophys. J. 704 1704–1709.
- 97. Price-Whelan, A. M. & Hogg, D. W., 2010, What bandwidth do I need for my image?, Pubs. Astr. Soc. Pac. 122 207–214.
- 98. Bovy, J., Murray, I., & Hogg, D. W., 2010, Dynamical inference from a kinematic snapshot: The force law in the Solar System, *Astrophys. J.* **711** 1157–1167.
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Invited talks

List available upon request.