Richard J Patterson

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EDUCATION

University of Virginia, Charlottesville VA

Ph.D. in Astronomy, 1995

Dissertation: "An Optical Study of Dwarf Galaxies with Narrow HI linewidths: Dark Matter and the Tully-Fisher Relation at the Faint End"

University of Virginia, Charlottesville VA

M.A. in Astronomy, 1989

Thesis: "A Hyades Distance Modulus Determined by Trigonometric Parallaxes from both the Northern and Southern Hemispheres"

University of Virginia, Charlottesville VA

B.A. in Astronomy-Physics, 1984

Echols Scholar

EMPLOYMENT

2021-PRESENT	Dir., Research Data Sciences +Social, Natural, & Engineering Sciences, University of Virginia Library
2020-2021	Assoc. Dir., RDS+SNE, University of Virginia Library
2018-2020	Assoc. Dir., Campus Partnerships & Services, RDS+SNE, University of Virginia Library
2015-2018	Research Librarian for Science and Engineering, University of Virginia Library
2013-2015	Data Consultant, Research Data Services, University of Virginia Library
2012-2015	Lecturer, Department of Astronomy, University of Virginia
2002-2015	Senior Scientist, Department of Astronomy, University of Virginia
1998-2002	Research Scientist, Department of Astronomy, University of Virginia
1996-1998	Research Associate, Department of Astronomy, University of Virginia
1996-1997	Visiting Scholar, Mount Stromlo Observatory, Australian National University

GRANTS

As PI

- "Fundamental Properties of Northern and Southern Hemisphere Stars" NSF AST-9820711, \$330,000 (1999-2005)
- "An Astrometric Calibration of the Cepheid Period-Luminosity Relation" NASA STScI GO-10106, \$20,158 (2003-2004)

As Co-PI

- "A Survey of Distant Halo Giant Stars for the SIM Astrometric Grid" NASA/JPL 1201670, \$250,000 (1999-2001)
- "The Grid Giant Star Survey for the SIM Astrometric Grid: Northern Hemisphere Extension" NASA/JPL 1222563 \$430,755 (2000-2002)
- "Taking Measure of the Milky Way: A Key Project for the Space Interferometry Mission" NASA/JPL 1228235, \$2,989,785 (2001-2012)
- "Explorations of the Milky Way's 'New' Halo" NSF AST-0307851, \$390,000 (2003-2006)
- "Collaborative Research: Probing Phase-Space Structure in the Galaxy: Kapteyn's Selected Areas" NSF AST-0407207, \$228,361 (2004-2008)
- "Lifting the Dusty Veil with Spitzer" NASA/Spitzer Observatory, Program 20499, \$71,749 (2005-2008)

- "Collaborative Research: The Assembly History of the Andromeda Spiral Galaxy" NSF AST-0607726, \$192,645 (2006-2010)
- "Galactic Structure and Star Formation in Vela-Carina" NASA/Spitzer Observatory, Program 40791, \$102,000 (2007-2010)
- "Dissecting the Sub-structure Halo" NSF AST-0807945, \$748,432 (2008-2013)
- "Collaborative Research: M31 Satellites Past and Present" NSF AST-1009882, \$48,684 (2010-2014)
- "Collaborative Research: Age-Dating M31's Halo and Satellites Testing the Lambda CDM Paradigm" NSF AST-1413269, \$436,757 (2014-2017)

COMPUTER SKILLS

OPERATING SYSTEMS

- UNIX/Linux and Mac OS X- User and System Administrator (for network of 80+ linux systems)
- Windows User and some System Administration Experience

PRODUCTIVITY SOFTWARE

- · Microsoft Office (Word, Excel, PowerPoint, Outlook), and SharePoint
- · Google Forms, Docs, Sheets, Calendar
- Atlassian Confluence and Jira
- OpenOffice/LibreOffice
- Adobe (Acrobat, Illustrator, Photoshop, InDesign, Dreamweaver)
- · Collab, Dropbox, Google Drive, OneDrive, Box, Git, Github
- Open Science Framework (Trainer, and COS ambassador)

SCIENTIFIC AND UTILITY SOFTWARE

- Extensive experience with LaTeX, ShareLaTeX, Overleaf, IRAF, Emacs, Perl, Fortran, MySQL/PHP
- Some experience with Matlab, Python, IDL, R, C, PGPLOT, CFITSIO, LabArchives, Dedoose, Tableau

DATABASE MANAGEMENT SYSTEMS

- Extensive experience with MySQL
- Some experience with other forms of SQL, SAS, Filemaker Pro, Microsoft Access

TEACHING AND OUTREACH

- Taught Research Data Services Workshops (3-4 per semester) on topics such as Introduction to Unix, Introduction to LaTeX (and ShareLaTeX/Overleaf), Funding Discovery Tools, Introduction to ORCID, Introduction to Version Control with Git/GitHub/GitLab
- Taught workshop on the Open Science Framework (after completing a two day Train the Trainer session at the Center for Open Science) in coordination with the Data Science Institute and the University Library in Spring 2018.
- Worked with Library colleagues as well as Margo Smith, director of the Kluge-Ruhe Aboriginal Art Collection, and Stephen Macko, Professor of Environmental Sciences, for a successful opening presentation for the Ghost Nets exhibit in Brown Science and Engineering Library, at the start of the Fall 2017 semester. The presentation, featuring talks by both Margo Smith and Stephen Macko highlighted both the art and the science behind the exhibit, which brought together a diverse audience.
- Working with Library IT to maintain and upgrade the NASA/ViewSpace video presentation on the first floor of Brown SEL.
- Organized "sold-out" presentations by Ed Murphy on the August 2017 Solar Eclipse in Harrison Auditorium and April 2024 Solar Eclipse in Shannon Library.
- Worked with library colleagues in Scholarly Communications, Collections and other areas to organize and host Endangered Data Week events in the library (April 17-21, 2017). Recruited speakers for five local events (Libra Data, Git/GitHub, DocNow, Webscraping with R, and Preserving Artifacts and Architecture), and hosted an EDW webinar.
- Worked closely with the VPR office and Health Sciences Library to develop training materials for the funding discovery tools, Pivot and Grant Forward (summer 2016). Continued to offer workshops on using the tools, in coordination with both the VPR office and HSL.
- Hosted astronomy-themed events at five Library Winter Carnivals (solar observing, planetarium tour, virtual tour of the night sky).

- Hosted two Library family nights at McCormick Observatory, with viewing through the large telescope, and a tour of the night sky.
- Science and Society 1st Year orientation sessions (2-3 per semester, assisting Maggie Nunley)
- Patent Instruction sessions (for Science and Society students) (2/semester, assisting Maggie Nunley)
- Recorded short orientation video (for Harrison/Small space) for Science and Society 1st Year orientation with the Aurasma app.
- Taught Data Management Workshops in Fall 2013 and Spring 2014, targeting graduate students and early career researchers
- Presentation on Data Management for Daphna Bassock's EDLF 5310 DATA MANAGEMENT FOR SOCIAL SCIENCE RESEARCH class (Fall 2013, with Michele Claibourn)
- Taught two sessions on Data Management for Nitya Kallivayalil's ASTR 8500 CURRENT ASTRONOMICAL TOPICS (Spring 2014, with Sherry Lake)
- Co-organized Data Management Bootcamp J-Term sessions with Library and HSL colleagues, as well as counterparts at VT, GMU, JMU, VCU, ODU, and William & Mary
- Assisted with in-class exercises for the Data Management Bootcamp (January 2014, January 2015)
- Co-taught SEAS Graduate Student Seminar on Best Practices in Data Management (Spring 2014, with Sherry Lake)
- USEM 1570 Measuring the Stars (co-taught with Ed Murphy in Fall 2016 and upcoming Spring 2018)
- ASTR 1210 Introduction to the Night Sky and Solar System (5 semesters)
- ASTR 1230 INTRODUCTION TO ASTRONOMICAL OBSERVATIONS (3 semesters)
- USEM 1570 Re-Journey to Mount Jefferson, co-taught in Spring 2013 with Nancy Takahashi (Architecture),
 Garth Anderson (Facilities Resource Center), Jeff Sitler (FM), Julia Monteith (Office of the Architect) and others.
- OLLI at UVA (Osher Lifelong Learning Institute) CURRENT TOPICS IN ASTRONOMY (2 semesters)
- Hosted students from Jerry Stenger's OLLI class on weather forecasting for a tour of the McCormick Observatory weather station.
- Delivered numerous lectures at McCormick Observatory, with audiences of different backgrounds, ranging from preschool, through K-12, undergrad, graduate students, University staff, alumni, and other lifelong learners.
- Hosted a "Microcinema" at McCormick Observatory for the 2008 "Aliens"-themed Virginia Film.
- Coordinated "Under Southern Skies" exhibit at McCormick Observatory in partnership with the Kluge-Ruhe Aboriginal Art Collection, pairing aboriginal art with scientific photographic views of the night sky.
- Reviewed UVA Engineering student proposals for the Virginia Space Grant Consortium.
- Judged University-wide Teaching Assistant awards for Teaching Resource Center.
- Judged Graduate student presentations at a number of Huskey Graduate Student Research Exhibitions.
- Mentored astronomy students in the Louis Stokes Alliance for Minority Participation and judged LSAMP student presentations.
- Worked on the Education and Public Outreach NSF Communication Research to a Public Audience (CRPA) proposal for the Center for the Chemistry of the Universe center with colleagues from Chemistry, School of Education, NRAO, and UVA Diversity Office.
- Worked with the Center for Diversity in Engineering to host ExxonMobile Bernard Harris Summer Science Camp
 participants at McCormick Observatory for a number of summers and taught lessons to this group of secondary
 school students.
- Assisted with the BLAST (Building Leaders for Advancing Science and Technology) Program since it's inception.
 The program reaches 160 middle school students from across Virginia working on STEM projects with faculty
 and grad students in Astronomy, Chemistry, Physics and Mechanical Engineering during a 4-day summer visit to
 UVA.

OTHER LIBRARY WORK

- Liaison for the departments of Astronomy (2015-present), Chemical Engineering (2015), Chemistry (2015), Electrical and Computer Engineering (2015-2017), Environmental Sciences (2016-2020), Mathematics (2015-present), Physics (2018-present) and Mechanical and Aerospace Engineering (2015-2017). Lead a team of liaisons that served Chemistry, Chemical Engineering, and Materials Science and Engineering (2020-2021).
- Worked with faculty and graduate students in a number of departments to assist them in developing and implement data management plans for grant-funded research (2015-present).
- University Library, Research Partners Pilot (2014-2015).
- University Library, Research and Scholarship Area of Focus (2014-2016).

- As part of Research Software Support, worked with users in different disciplines (Radiology, Environmental Sciences, Engineering Physics, Chemistry and Astronomy) to help them all migrate to a new license server for IDL (imaging processing software from Exelis) (2015-2016).
- Worked with University Library administration and vendor to purchase a university-wide site license for ShareLaTeX, a collaborative LaTeX editing platform. Provide support and training for university community in the use of ShareLaTeX and working with the vendor after the merger of ShareLaTeX and Overleaf to ensure a smooth transition for current ShareLaTeX and Overleaf users at the university (2016-present).
- University Library, Faculty Collections Survey group (2017).
- Worked with Library Administration to ensure UVA Library participation (by Chip German) in the Libraries+ Network May 8-9, 2017 meeting to discuss and plan for the long-term preservation and access of federally produced data.
- Chaired the search committee for a new Social Sciences Research Librarian (2017).
- University Library, Sustainability Working Group (2017-2018).
- Chaired the search committee for a new Education Research Librarian (2018).
- Working with Special Collections and the Department of Astronomy on a plan to process materials from the department and McCormick Observatory.
- Working with the DPG, Preservation and Special Collections on scanning and preserving some 19th century materials from McCormick Observatory, for use in an upcoming exhibit at the observatory.
- University Library, Open Access Journal Publishing Implementation Team (2017-2018).
- Worked with RDS group to make 1Figr dataset accessible to other librarians to help make informed decisions about journal subscriptions (2018-2019).
- University Library, Collections and Services Working Group (COVID-19) (2020-present).
- UVA member, and chair of VRL Data Analytics Committee. This work was preceded by my work with Beth Blanton-Kent to use the 1Figr dataset, as well as trialing the Unsub app to better understand usage of Elsevier journals by UVA researchers. After becoming chair of the VRL DA Committee, I worked closely with the members from the other VRL schools and VIVA to test the newly available consortial dashboard within Unsub while we attempted to create a core title list for all VRL schools. When this approach was abandoned, I continued to work closely with the VRL members to help all of them devise their own title lists, using Unsub along with data from Elsevier and 1Figr. (2020-present).
- University Library, Sustainable Scholarship Working Group. As part of this group, I led the effort to create a survey to gather feedback on journal usage from researchers. Working with Mira Waller (who helped to obtain the survey instrument from UNC-CH), Annette Stalnaker (who helped with exploratory work with Qualtrics), and Jack Kelly (who did the hard work of modifying and bringing online the UNC-CH survey), as well as liaisons and Elyse Girard who helped promote the survey, we received responses from 1068 researchers, who left 11,757 responses. These responses were used to add 35 journals (subscription cost \$150,000) which weren't identified through the usage data alone. In early 2021, I worked with members of JISC who were negotiating with Elsevier and wanted to use the survey, as well as Unsub to inform their decision-making. (2020-present).
- RLS Leadership Team member (2020-present).
- VRL Group meetings (attend as chair of DA Committee) (2021-present)

UNIVERSITY COMMITTEES

- Astronomy Department Local Observatories Committee, Chair (2000-2016)
- Astronomy Department Public Night Committee (2000-2016)
- Astronomy Department Computing Committee (2004-2016)
- Astronomy Department Library Committee, Chair (2006-present)
- General Faculty Council (2007-2013)
 - o General Faculty Council Chair (2010-2011)
 - Data Management Committee Chair (2008-2013)
 - GFC Representative on Employee Council Parking Committee (2007-2008) this work led to a meeting with Leonard Sandridge which helped to bring about the Supplemental Benefit Credit (current employees making \$42,000 or less receive a \$450 (now \$550) annual benefit credit to help offset the costs of benefit deductions).
 - o Joint Faculty Senate-GFC Committee on Expectation of Continued Employment (2008)
- UVA Diversity Council (2010-2011)
- UVA Historically Black Colleges and Universities Planning Committee (2010-2011)
- Provost's and Human Resources Committee on Professional Research Staff (2010-2015)

- Policy Committee of the Faculty Senate (2011-2015)
- UVA Computing Sciences Advisory Committee (2014)
- University Committee on Sustainability (2019-2021)
 - Teaching & Research Subcommittee (2021-)
 - Environmental Stewardship Subcommittee (2012-2018, 2021-2022)
 - Co-chair of the Light Pollution Working Group (2012-2018)
- Astronomy Department Diversity, Equity, and Inclusion Committee (2020-2022)

OTHER SERVICE WITHIN THE UNIVERSITY

- Record and report daily weather observations for the National Weather Service at the McCormick Observatory "Charlottesville 2W" station (in operation since 1890). Share data with the State Climatology Office, Facilities Management and the local media (8am every day of the week, 2002-2022).
- Have worked with HBCU Norfolk State University and the Provost's Office to construct and bring into operation NSU's robotic telescope located at UVA's Fan Mountain Observatory. (2004-2010)
- Review Facilities Management Construction Projects to assess the potential contribution to light pollution, to protect the night sky for astronomical research, education, and public enjoyment. (2009-present)
- Helped to develop and review the Office of the Architect's University Exterior Lighting Plan. (2010)
- Revised the Facility Design Guidelines to lessen the impact of building interior lighting on the night sky. (2012)
- Worked with the Office of the Architect and the Landscape and Arboretum Committee to fund and develop an Historic Landscape Plan for the area atop Observatory Mountain (2016-2017).
- Worked with the Director of UVA's Historic Preservation Program, Andrew Johnston and several of his students on background research on project to obtain National Landmark listing for McCormick Observatory (2015-2018)
- Worked with Historic Preservation personnel in Facilities Management, Office of the Architect and the School of Architecture on the Historic Structures Report for "Alden House," the Observatory Director's House on Observatory Mountain (2017-2018). Some work still ongoing.

SUPERVISORY WORK

- Served as the supervisor for 6 data analysts in the Department of Astronomy (1999-2015). This involved hiring, onboarding, weekly meetings, and working with each one to allow for professional development, and encourage a career path on to graduate school and work as a professional astronomer/physicist for those wishing to pursue that career (three have since earned their PhDs and are working in the field, while the other three choose to pursue other career paths, one is still working in the Astronomy Department). I also cosupervised 4 postdoctoral scholars during this same period.
- Served as an informal supervisor for the 16 graduate students in our research group, as well as the 20 undergraduate students to work on research projects with the group. This included training in observational techniques while on observing runs in Texas, Arizona, and Chile, as well as data reduction and analysis techniques back in Charlottesville. However, it also involved offering career mentoring for a number of students as they struggled with the decision to remain in graduate school or to pursue a job. While it wasn't called for often, I feel that this was some of the most meaningful work that I did in this role helping the student to step back and find some space so they can determine whether they really wanted to pursue a PhD, or to leave graduate school and pursue another career.
- Served as supervisor for 3 members of the Research Data Services team within the University Library (2018-2020).
- Serve as supervisor for 5-6 members of the Social, Natural & Engineering Sciences team with the University Library (2020-present).
- Oversaw the onboarding of four members of the RDS+SNE team (2020-present)

PROFESSIONAL ACTIVITIES AND SERVICE

- Science Team Member, NASA's Space Interferometry Mission (2000-2010)
- IAU Colloquium 183 (Kenting, Taiwan), Invited Speaker (2001)
- NSF Review Panelist, MPS-AST, Stellar Astronomy & Astrophysics Panel (2002)
- AAS Workshop on Preserving Astronomical Photographic Data, Invited Participant (2007)
- AAS/IAU North American Astronomical Plates Census Committee, Member (2007-2008)
- Division of Dynamical Astronomy, Student Fellowship Review Committee (2008, 2009)
- Virginia Space Grant Consortium, Session Chair and Judge of Student Presentations

- NASA/JPL Reviewer SIMLite Proposals (2009)
- AAS SIMLite Special Session, Chair (2010)
- AAS/AIP Workshop on A Plan for Preserving Astronomy's Archival Records. Invited Participant (2012)
- AAS Working Group on the Preservation of Astronomical Heritage (2018-Present)
- Astronomical Glass Plates and Observing Logbooks Group, Member (International group of Astronomers, Archivists, Librarians, and Historians) (2020-Present)
- Unified Astronomy Thesaurus Steering Committee member (2022-2023)
- Data Curation Network Governance Board member (2022-2024)
- Member: American Astronomical Society (1989-present); AAS Division of Dynamical Astronomy; AAS -History of Astronomy Division

PUBLICATONS: BOOK CHAPTER

"Data Management", Sallans, A. L. and Patterson, R. J. 2015, in Implementing a Comprehensive Research Compliance Program: A Handbook for Research Officers, ed. A. Dade, L. Olafson, and S. M. DiBella (Charlotte, NC: Information Age Publishing).

REFEREED PUBLICATIONS

"Testing Metal-Poor Stellar Models and Isochrones with HST Parallaxes of Metal-Poor Stars", Chaboyer, B., McArthur, B. E., O'Malley, E., Benedict, G. F., Feiden, G. A., Harrison, T. E., McWilliam, A., Nelan, E. P., Patterson, R. J., and Sarajedini, A. 2017, The Astrophysical Journal, 835, 152, 24 pages.

"Global Properties of M31's Stellar Halo from the SPLASH Survey. II. Metallicity Profile", Gilbert, K. M., Kalirai, J. S., Guhathakurta, P., Beaton, R. L., Geha, M. C., Kirby, E. N., Majewski, S. R., Patterson, R. J., Tollerud, E. J., Bullock, J. S., Tanaka, M., and Chiba, M. 2014, The Astrophysical Journal, 796, 76, 20 pages.

"Open Clusters in the Milky Way Outer Disk: Newly Discovered and Unstudied Clusters in the Spitzer GLIMPSE-360, CYG-X, and SMOG Surveys", Zasowski, G., Beaton, R. L., Hamm, K. K., Majewski, S. R., Babler, B., Benjamin, R. A., Churchwell, E., Meade, M., Patterson, R. J., Watson, C., and Whitney, B. A. 2013, The Astronomical Journal, 146, 64, 20 pages.

"Identifying Contributions to the Stellar Halo from Accreted, Kicked-out, and In Situ Populations", Sheffield, A. A., Majewski, S. R., Johnston, K. V., Cunha, K., Smith, V. V., Cheung, A. M., Hampton, C. M., David, T. J., Wagner-Kaiser, R., Johnson, M. C., Kaplan, E., Miller, J., and Patterson, R. J. 2012, The Astrophysical Journal, 761, 161, 16 pages.

"Global Properties of M31's Stellar Halo from the SPLASH Survey. I. Surface Brightness Profile", Gilbert, K. M., Guhathakurta, P., Beaton, R. L., Bullock, J., Geha, M. C., Kalirai, J. S., Kirby, E. N., Majewski, S. R., Ostheimer, J. C., Patterson, R. J., Tollerud, E. J., Tanaka, M., and Chiba, M. 2012, The Astrophysical Journal, 760, 76, 21 pages.

"A 2MASS All-sky View of the Sagittarius Dwarf Galaxy. VII. Kinematics of the Main Body of the Sagittarius dSph", Frinchaboy, P. M., Majewski, S. R., Muñoz, R. R., Law, D. R., Łokas, E. L., Kunkel, W. E., Patterson, R. J., and Johnston, K. V. 2012, The Astrophysical Journal, 756, 74, 19 pages.

"The SPLASH Survey: Spectroscopy of 15 M31 Dwarf Spheroidal Satellite Galaxies", Tollerud, E. J., Beaton, R. L., Geha, M. C., Bullock, J. S., Guhathakurta, P., Kalirai, J. S., Majewski, S. R., Kirby, E. N., Gilbert, K. M., Yniguez, B., Patterson, R. J., Ostheimer, J. C., Cooke, J., Dorman, C. E., Choudhury, A., and Cooper, M. C. 2012, The Astrophysical Journal, 752, 45, 29 pages.

"Exploring Halo Substructure with Giant Stars: Substructure in the Local Halo as Seen in the Grid Giant Star Survey Including Extended Tidal Debris from ω Centauri," Majewski, S. R., Nidever, D. L., Smith, V. V., Damke, G. J., Kunkel, W. E., Patterson, R. J., Bizyaev, D., and García Pérez, A. E. 2012, The Astrophysical Journal Letters, 747, 37, 6 pages.

"Kinematics and Chemistry of Stars along the Sagittarius Trailing Tidal Tail and Constraints on the Milky Way Mass Distribution," Carlin, J. C., Majewski, S. R., Casetti-Dinescu, D. I., Law, D. R., Girard, T. M., and Patterson, R. J. 2012, The Astrophysical Journal, 744, 25, 29 pages.

"Discovery of a Large Stellar Periphery Around the Small Magellanic Cloud," Nidever, D. L., Majewski, S. R., Muñoz, R. R., Beaton, R. L., Patterson, R. J., and Kunkel, W. E. 2011, The Astrophysical Journal Letters, 733, 10, 6 pages.

"The Frequency of Rapid Rotation Among K Giant Stars," Carlberg, J. K., Majewski, S. R., Patterson, R. J., Bizyaev, D., Smith, V. V., and Cunha, K. 2011, The Astrophysical Journal, 732, 39, 10 pages.

"First Chemical Analysis of Stars in the Triangulum--Andromeda Star Cloud," Chou, M.-Y., Majewski, S. R., Cunha, K., Smith, V., Patterson, R. J., and Martínez-Delgado D. 2011, The Astrophysical Journal Letters, 731, L30, 6 pages.

"The Chemical Evolution of the Monoceros Ring/Galactic Anticenter Stellar Structure," Chou, M.-Y., Majewski, S. R., Cunha, K., Smith, V., Patterson, R. J., and Martínez-Delgado D. 2010, The Astrophysical Journal Letters, 720, L5-L10

"The SPLASH Survey: Internal Kinematics, Chemical Abundances, and Masses of the Andromeda I, II, III, VII, X, and XIV Dwarf Spheroidal Galaxies," Kalirai, J. S., Beaton, R. L., Geha, Marla, C., Gilbert, K. M., Guhathakurta, P., Kirby, E. N., Majewski, S. R., Ostheimer, J. C., Patterson, R. J., and Wolf, J. 2010, The Astrophysical Journal, 711, 671-692

"A Two Micron All Sky Survey View of the Sagittarius Dwarf Galaxy. VI. s-Process and Titanium Abundance Variations Along the Sagittarius Stream," Chou, M.-Y., Cunha, K., Majewski, S. R., Smith, V., Patterson, R. J., Martínez-Delgado, D., and Geisler, D. 2010, The Astrophysical Journal, 708, 1290-1309

"Lifting the Dusty Veil with Near- and Mid-Infrared Photometry. II. A Large-Scale Study of the Galactic Infrared Extinction Law," Zasowski, G., Majewski, S. R., Indebetouw, R., Meade, M. R., Nidever, D. L., Patterson, R. J., Babler, B., Skrutskie, M. F., Watson, C., Whitney, B. E., and Churchwell, E. 2009, The Astrophysical Journal, 707, 510-523

"Astrometry with the Hubble Space Telescope: Trigonometric Parallaxes of Planetary Nebula Nuclei NGC 6853, NGC 7293, Abell 31, and DeHt 5," Benedict, G. F., McArthur, B. E., Napiwotzki, R., Harrison, T. E., Harris, H. C., Nelan, E., Bond, H. E., Patterson, R. J., and Ciardullo, R. 2009, The Astronomical Journal, 138, 1969-1984

"The Carnegie Astrometric Planet Search Program," Boss, A. P., Weinberger, A. J., Anglada-Escudé, G., Thompson, I. B., Burley, G., Birk, C., Pravdo, S. H., Shaklan, S. B., Gatewood, G. D., Majewski, S. R., and Patterson, R. J., 2009, Publications of the Astronomical Society of the Pacific, 121, 1218-1231

"The Splash Survey: A Spectroscopic Portrait of Andromeda's Giant Southern Stream, "Gilbert, K. M., Guhathakurta, P., Kollipara, P., Beaton, R. L., Geha, M. C., Kalirai, J. S., Kirby, E. N., Majewski, S. R., and Patterson, R. J. 2009, The Astrophysical Journal, 805, 1275-1297

"Kinematics of Stars in Kapteyn Selected Area 71: Sampling the Monoceros and Sagittarius Tidal Streams," Casetti-Dinescu, D. I., Carlin, J. L., Girard, T. M., Majewski, S. R., Peñarrubia, J. and Patterson, R. J., 2008, Astronomical Journal, 135, 2013-2023

"Taking the Measure of the Universe: Precision Astrometry with SIM PlanetQuest," Unwin, S. C., Shao, M., Tanner, A. M., Allen, R. J., Beichman, C. A., Boboltz, D., Catanzarite, J. H., Chaboyer, B. C., Ciardi, D. R., Edberg, S. J., Fey, A. L., Fischer, D. A., Gelino, C. R., Gould, A. P., Grillmair, C., Henry, T. J., Johnston, K. V., Johnston, K. J., Jones, D. L., Kulkarni, S. R., Law, N. M., Majewski, S. R., Makarov, V. V., Marcy, G. W., Meier, D. L., Olling, R. P., Pan, X., Patterson, R. J., Pitesky, J. E., Quirrenbach, A., Shaklan, S. B., Shaya, E. J., Strigari, L. E., Tomsick, J. A., Wehrle, A. E. and Worthey, G., 2008, Publications of the Astronomical Society of the Pacific, 120, 38-88

"Unveiling the Boxy Bulge and Bar of the Andromeda Spiral Galaxy," Beaton, R. L., Majewski, S. R., Guhathakurta, P., Skrutskie, M. F., Cutri, R. M., Good, J., Patterson, R. J., Athanassoula, E. and Bureau, M., 2007, Astrophysical Journal, 658, L91-L94

"Hubble Space Telescope Fine Guidance Sensor Parallaxes of Galactic Cepheid Variable Stars: Period-Luminosity Relations," Benedict, G. F., McArthur, B. E., Feast, M. W., Barnes, T. G., Harrison, T. E., Patterson, R. J., Menzies, J. W., Bean, J. L. and Freedman, W. L., 2007, Astronomical Journal, 133, 1810-1827

"A 2MASS All-Sky View of the Sagittarius Dwarf Galaxy. V. Variation of the Metallicity Distribution Function along the Sagittarius Stream," Chou, M., Majewski, S. R., Cunha, K., Smith, V. V., Patterson, R. J., Martínez-Delgado, D., Law, D. R., Crane, J. D., Muñoz, R. R., Garcia López, R., Geisler, D. and Skrutskie, M. F., 2007, Astrophysical Journal, 670, 346-362

"Stellar Kinematics in the Complicated Inner Spheroid of M31: Discovery of Substructure along the Southeastern Minor Axis and Its Relationship to the Giant Southern Stream," Gilbert, K. M., Fardal, M., Kalirai, J. S., Guhathakurta, P., Geha, M. C., Isler, J., Majewski, S. R., Ostheimer, J. C., Patterson, R. J., Reitzel, D. B., Kirby, E. and Cooper, M. C., 2007, Astrophysical Journal, 668, 245-267

"Discovery of Andromeda XIV: A Dwarf Spheroidal Dynamical Rogue in the Local Group?" Majewski, S. R., Beaton, R. L., Patterson, R. J., Kalirai, J. S., Geha, M. C., Muñoz, R. R., Seigar, M. S., Guhathakurta, P., Gilbert, K. M., Rich, R. M., Bullock, J. S. and Reitzel, D. B., 2007, Astrophysical Journal, 670, L9-L12

"Exploring Halo Substructure with Giant Stars. X. Extended Dark Matter or Tidal Disruption?: The Case for the Leo I Dwarf Spheroidal Galaxy," Sohn, S. T., Majewski, S. R., Muñoz, R. R., Kunkel, W. E., Johnston, K. V., Ostheimer, J. C., Guhathakurta, P., Patterson, R. J., Siegel, M. H. and Cooper, M. C., 2007, Astrophysical Journal, 663, 960-989

"The Space Interferometry Mission Astrometric Grid Giant Star Survey. I. Stellar Parameters and Radial Velocity Variability," Bizyaev, D., Smith, V. V., Arenas, J., Geisler, D., Majewski, S. R., Patterson, R. J., Cunha, K., Del Pardo, C., Suntzeff, N. B. and Gieren, W., 2006, Astronomical Journal, 131, 1784-1796

"A Deep Proper-Motion Survey in Kapteyn Selected Areas. I. Survey Description and First Results for Stars in the Tidal Tail of Sagittarius and in the Monoceros Ring," Casetti-Dinescu, D. I., Majewski, S. R., Girard, T. M., Carlin, J. L., van Altena, W. F., Patterson, R. J. and Law, D. R., 2006, Astronomical Journal, 132, 2082-2098

"A New Method for Isolating M31 Red Giant Stars: The Discovery of Stars out to a Radial Distance of 165 kpc," Gilbert, K. M., Guhathakurta, P., Kalirai, J. S., Rich, R. M., Majewski, S. R., Ostheimer, J. C., Reitzel, D. B., Cenarro, A. J., Cooper, M. C., Luine, C. and Patterson, R. J., 2006, Astrophysical Journal, 652, 1188-1212

"Dynamics and Stellar Content of the Giant Southern Stream in M31. I. Keck Spectroscopy of Red Giant Stars," Guhathakurta, P., Rich, R. M., Reitzel, D. B., Cooper, M. C., Gilbert, K. M., Majewski, S. R., Ostheimer, J. C., Geha, M. C., Johnston, K. V. and Patterson, R. J., 2006, Astronomical Journal, 131, 2497-2513

"The Metal-poor Halo of the Andromeda Spiral Galaxy (M31)," Kalirai, J. S., Gilbert, K. M., Guhathakurta, P., Majewski, S. R., Ostheimer, J. C., Rich, R. M., Cooper, M. C., Reitzel, D. B. and Patterson, R. J., 2006, Astrophysical Journal, 648, 389-404

"Measuring Fundamental Galactic Parameters with Stellar Tidal Streams and SIM PlanetQuest," Majewski, S. R., Law, D. R., Polak, A. A. and Patterson, R. J., 2006, Astrophysical Journal, 637, L25-L28

"Exploring Halo Substructure with Giant Stars: The Dynamics and Metallicity of the Dwarf Spheroidal in Boötes," Muñoz, R. R., Carlin, J. L., Frinchaboy, P. M., Nidever, D. L., Majewski, S. R. and Patterson, R. J., 2006, Astrophysical Journal, 650, L51-L54

"Exploring Halo Substructure with Giant Stars. XI. The Tidal Tails of the Carina Dwarf Spheroidal Galaxy and the Discovery of Magellanic Cloud Stars in the Carina Foreground," Muñoz, R. R., Majewski, S. R., Zaggia, S., Kunkel, W. E., Frinchaboy, P. M., Nidever, D. L., Crnojevic, D., Patterson, R. J., Crane, J. D., Johnston, K. V., Sohn, S. T., Bernstein, R. and Shectman, S., 2006, Astrophysical Journal, 649, 201-223

"The Dog on the Ship: The Canis Major Dwarf Galaxy as an Outlying Part of the Argo Star System," Rocha-Pinto, H. J., Majewski, S. R., Skrutskie, M. F., Patterson, R. J., Nakanishi, H., Muñoz, R. R. and Sofue, Y., 2006, Astrophysical Journal, 640, L147-L150

"Exploring Halo Substructure with Giant Stars. VIII. The Extended Structure of the Sculptor Dwarf Spheroidal Galaxy," Westfall, K. B., Majewski, S. R., Ostheimer, J. C., Frinchaboy, P. M., Kunkel, W. E., Patterson, R. J. and Link, R., 2006, Astronomical Journal, 131, 375-406

"The Fan Observatory Bench Optical Spectrograph (FOBOS)," Crane, J. D., Majewski, S. R., Patterson, R. J., Skrutskie, M. F., Adams, E. Y. and Frinchaboy, P. M., 2005, Publications of the Astronomical Society of the Pacific, 117, 526-535

"Exploring Halo Substructure with Giant Stars. VI. Extended Distributions of Giant Stars around the Carina Dwarf Spheroidal Galaxy: How Reliable Are They?" Majewski, S. R., Frinchaboy, P. M., Kunkel, W. E., Link, R., Muñoz, R. R., Ostheimer, J. C., Palma, C., Patterson, R. J. and Geisler, D., 2005, Astronomical Journal, 130, 2677-2700

"Exploring Halo Substructure with Giant Stars: The Velocity Dispersion Profiles of the Ursa Minor and Draco Dwarf Spheroidal Galaxies at Large Angular Separations," Muñoz, R. R., Frinchaboy, P. M., Majewski, S. R., Kuhn, J. R., Chou, M., Palma, C., Sohn, S. T., Patterson, R. J. and Siegel, M. H., 2005, Astrophysical Journal, 631, L137-L141

"Star Clusters in the Galactic Anticenter Stellar Structure and the Origin of Outer Old Open Clusters," Frinchaboy, P. M., Majewski, S. R., Crane, J. D., Reid, I. N., Rocha-Pinto, H. J., Phelps, R. L., Patterson, R. J. and Muñoz, R. R., 2004, Astrophysical Journal, 602, L21-L24

"A Two Micron All Sky Survey View of the Sagittarius Dwarf Galaxy. II. Swope Telescope Spectroscopy of M Giant Stars in the Dynamically Cold Sagittarius Tidal Stream," Majewski, S. R., Kunkel, W. E., Law, D. R., Patterson, R. J., Polak, A. A., Rocha-Pinto, H. J., Crane, J. D., Frinchaboy, P. M., Hummels, C. B., Johnston, K. V., Rhee, J., Skrutskie, M. F. and Weinberg, M., 2004, Astronomical Journal, 128, 245-259

"Detection of the Main-Sequence Turnoff of a Newly Discovered Milky Way Halo Structure in the Triangulum-Andromeda Region," Majewski, S. R., Ostheimer, J. C., Rocha-Pinto, H. J., Patterson, R. J., Guhathakurta, P. and Reitzel, D., 2004, Astrophysical Journal, 615, 738-743

"Exploring Halo Substructure with Giant Stars: A Diffuse Star Cloud or Tidal Debris around the Milky Way in Triangulum-Andromeda," Rocha-Pinto, H. J., Majewski, S. R., Skrutskie, M. F., Crane, J. D. and Patterson, R. J., 2004, Astrophysical Journal, 615, 732-737

"Astrometry with The Hubble Space Telescope: A Parallax of the Central Star of the Planetary Nebula NGC 6853,"
Benedict, G. F., McArthur, B. E., Fredrick, L. W., Harrison, T. E., Skrutskie, M. F., Slesnick, C. L., Rhee, J., Patterson, R. J., Nelan, E., Jefferys, W. H., van Altena, W., Montemayor, T., Shelus, P. J., Franz, O. G., Wasserman, L. H., Hemenway, P. D., Duncombe, R. L., Story, D., Whipple, A. L. and Bradley, A. J., 2003, Astronomical Journal, 126, 2549-2556

"Exploring Halo Substructure with Giant Stars. IV. The Extended Structure of the Ursa Minor Dwarf Spheroidal Galaxy," Palma, C., Majewski, S. R., Siegel, M. H., Patterson, R. J., Ostheimer, J. C. and Link, R., 2003, Astronomical Journal, 125, 1352-1372

"Astrometry with the Hubble Space Telescope: A Parallax of the Fundamental Distance Calibrator RR Lyrae," Benedict, G. F., McArthur, B. E., Fredrick, L. W., Harrison, T. E., Lee, J., Slesnick, C. L., Rhee, J., Patterson, R. J., Nelan, E., Jefferys, W. H., van Altena, W., Shelus, P. J., Franz, O. G., Wasserman, L. H., Hemenway, P. D., Duncombe, R. L., Story, D., Whipple, A. L. and Bradley, A. J., 2002, Astronomical Journal, 123, 473-484

"Astrometry with the Hubble Space Telescope: A Parallax of the Fundamental Distance Calibrator δ Cephei," Benedict, G. F., McArthur, B. E., Fredrick, L. W., Harrison, T. E., Slesnick, C. L., Rhee, J., Patterson, R. J., Skrutskie, M. F., Franz, O. G., Wasserman, L. H., Jefferys, W. H., Nelan, E., van Altena, W., Shelus, P. J., Hemenway, P. D., Duncombe, R. L., Story, D., Whipple, A. L. and Bradley, A. J., 2002, Astronomical Journal, 124, 1695-1705

"Exploring Halo Substructure with Giant Stars. III. First Results from the Grid Giant Star Survey and Discovery of a Possible Nearby Sagittarius Tidal Structure in Virgo," Kundu, A., Majewski, S. R., Rhee, J., Rocha-Pinto, H. J., Polak, A. A., Slesnick, C. L., Kunkel, W. E., Johnston, K. V., Patterson, R. J., Geisler, D., Gieren, W., Seguel, J., Smith, V. V., Palma, C., Arenas, J., Crane, J. D. and Hummels, C. B., 2002, Astrophysical Journal, 576, L125-L129

"Interferometric Astrometry with Hubble Space Telescope Fine Guidance Sensor 3: The Parallax of the Cataclysmic Variable TV Columbae," McArthur, B. E., Benedict, G. F., Lee, J., van Altena, W. F., Slesnick, C. L., Rhee, J., Patterson, R. J., Fredrick, L. W., Harrison, T. E., Spiesman, W. J., Nelan, E., Duncombe, R. L., Hemenway, P. D., Jefferys, W. H., Shelus, P. J., Franz, O. G. and Wasserman, L. H., 2001, Astrophysical Journal, 560, 907-911

"Exploring Halo Substructure with Giant Stars. I. Survey Description and Calibration of the Photometric Search Technique," Majewski, S. R., Ostheimer, J. C., Kunkel, W. E. and Patterson, R. J., 2000, Astronomical Journal, 120, 2550-2568

"Exploring Halo Substructure with Giant Stars. II. Mapping the Extended Structure of the Carina Dwarf Spheroidal Galaxy," Majewski, S. R., Ostheimer, J. C., Patterson, R. J., Kunkel, W. E., Johnston, K. V. and Geisler, D., 2000, Astronomical Journal, 119, 760-776

"An Internal Second-Parameter Problem in the Sculptor Dwarf Spheroidal Galaxy," Majewski, S. R., Siegel, M. H., Patterson, R. J. and Rood, R. T., 1999, Astrophysical Journal, 520, L33-L36

"The Solar Neighborhood. V. VRI Photometry of Southern Nearby Star Candidates," Patterson, R. J., Ianna, P. A. and Begam, M. C., 1998, Astronomical Journal, 115, 1648-1652

"Surface Photometry of Low Surface Brightness Dwarf Irregular Galaxies: Erratum," Patterson, R. J. and Thuan, T. X., 1998, Astrophysical Journal Supplement Series, 117, 633

"The Intrinsic Shapes of Low Surface Brightness Dwarf Irregular Galaxies and Comparison to Other Types of Dwarf Galaxies," Sung, E., Han, C., Ryden, B. S., Patterson, R. J., Chun, M., Kim, H., Lee, W. and Kim, D., 1998, Astrophysical Journal, 505, 199-206

"Parallaxes and Proper Motions From the McCormick Observatory: List 47," Ianna, P. A., Patterson, R. J. and Swain, M. A., 1996, Astronomical Journal, 111, 492

"Surface Photometry of Low Surface Brightness Dwarf Irregular Galaxies," Patterson, R. J. and Thuan, T. X., 1996, Astrophysical Journal Supplement Series, 107, 103 "UGC 7636 and NGC 4472 - Tidal interaction between a stripped dwarf irregular and a giant elliptical galaxy," Patterson, R. J. and Thuan, T. X., 1992, Astrophysical Journal, 400, L55-L58

"Blue galaxies identified with submilliJansky radio sources in the 1300 + 3034 field," Thuan, T. X., Patterson, R. J., Condon, J. J. and Mitchell, K. J., 1992, Astronomical Journal, 104, 1331-1338

"A Hyades distance modulus from trigonometric parallaxes from Northern and Southern Hemisphere observatories," Patterson, R. J. and Ianna, P. A., 1991, Astronomical Journal, 102, 1091-1102