Michele L. Silverstein, Ph.D.

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NASA Postdoctoral Program Fellow

Education

- **Georgia State University** — **Atlanta, GA**
  Doctor of Philosophy, Astronomy — *2012–2019*
- **Georgia State University** — **Atlanta, GA**
  Master of Science, Physics — *2012–2016*
- **Cornell University** — **Ithaca, NY**
  Bachelor of Arts, Physics, Astronomy Concentration — *2008–2012*

Professional Memberships and Affiliations

- NASA Postdoctoral Program Fellow at Goddard Space Flight Center
- Transiting Exoplanet Survey Satellite Follow-up Observing Program (TFOP) Working Group Member
- Research Consortium on Nearby Stars (RECONS) Affiliate
- American Astronomical Society Full Member
- International Astronomical Union Junior Member

Research Experience

- **NASA Postdoctoral Program Fellow** — **August, 2019 - present**
  NASA Postdoctoral Program, NASA Goddard Space Flight Center — *Advisor: Dr. Joshua E. Schlieder*

  My research centers on characterizing nearby low-mass stars and their planets, with a focus on individual systems discovered using the Transiting Exoplanet Survey Satellite (TESS), star-planet interactions, stellar activity, stellar parameter determination, and analysis of large samples. In addition to these topics and resulting publications to date, I now have experience with observational stellar flares research, the inner workings of the TESS Collaboration, TESS and ground-based lightcurve analysis, and exoplanet system discovery from detection to validation to deep characterization using an ensemble of telescopes and methods.

- **Graduate Researcher** — **Spring 2013 - Summer 2019**
  RECONS Institute & Georgia State University — *Advisor: Prof. Todd J. Henry*

  My PhD work is focused on characterizing the nearby stellar population - I have determined the fundamental properties (temperature, luminosity, radius) of ∼1500 red dwarfs within 25 parsecs using optical to mid-IR photometry, parallax data, and a spectral energy distribution fitting technique. This involved about 6 months of observing time with small telescopes in both hemispheres. Within this sample and using these data, I have detected a candidate subsample of young stars and subdwarfs, which stand out from ordinary main sequence stars due to their relatively large and small radii. I have also revealed trends in radius and effective temperature as a function of spectral type.

- **SMARTS Graduate Fellow** — **2015 - 2018**
  Georgia State University

- Advertise the SMARTS 1.5-m, 1.3-m,and 0.9-m telescopes at CTIO
- Schedule time on the SMARTS 0.9-m telescope
- Serve as 0.9-m user support
- Maintain 0.9-m computer disks
- Save and flat field+bias subtract all RECONS data
- Fully reduce all RECONS Photometry
- Modernize and update the SMARTS 0.9m manual
- Smooth transitions to updated systems and engineering

Second La Serena School for Data Science 2014 Participant **August, 2014**
AURA Campus, La Serena, Chile *Mentor: Prof. Amelia Bayo*

Week long intensive school devoted to introducing machine learning, Bayesian statistics, MySQL, Python, the Virtual Observatory and other relevant tools for working with big data.

Developed and worked through a group project searching for high proper motion objects using MySQL and various Virtual Observatory tools, including Aladin and TOPCAT, and identified brown dwarfs using machine learning.

NASA Intern **Summer 2012**
Goddard Spaceflight Center, Greenbelt, MD *Mentor: Dr. Negar Ehsan*

Completed the construction of a terahertz frequency light source used to (1) characterize silicon and other samples and (2) test properties of instrument components such as filters, antennas and dividers, particularly those related to the wafer-scale spectrometer known as MicroSpec.

Undergraduate Research Assistant **Fall 2010, Spring 2012**
Cornell University, Ithaca, NY *Mentor: Prof. Gordon Stacey*

Wrote a PID control loop using LabVIEW to maintain the bolometer temperature in the submillimeter spectrometer, ZEUS II. Integrated PID loop with existing software and hardware.

Wrote a stepper motor control LabVIEW program to improve control of ZEUS II's cooling system.

REU Fellow **Summer 2011**
SUNY Stony Brook, Stony Brook, NY *Mentor: Prof. Michal Simon*

Devised a method to check stars for cool debris disks using Microsoft Excel and the WISE database. Contributed to understanding of several cool debris disks in the nearby young moving group Eta/Epsilon Chameleon. *Publication.*

Undergraduate Research Assistant **Spring 2011**
Cornell University *Mentor: Dr. Kevin Covey*

Developed an IDL program to analyze NGC 752 open cluster data and search for transiting planets.

Skills, Tools, and Techniques

Observing and Data Processing
- Photometry to Derive Magnitudes
- Astrometry (Ground-based & Gaia)
- Time Series Photometry (Ground-based & TESS)
- Telescope Management (see SMARTS Graduate Fellowship)

Programming
- IDL
- Python (including numpy, astropy, matplotlib, lightkurve, etc.)
- *Elementary experience in* Bash, LabVIEW, HTML, MATLAB, & Java

Software and Packages
- IRAF
- LaTeX
- CDS Tools: Aladin, VizeR, Simbad
- TOPCAT & Stilts
- AutoCAD
- Microsoft Office

Operating Systems
- Linux
- Mac OS
- Windows

Areas of Expertise and/or Unique Experience within Astronomy

- Fundamental Properties of Late-Type Stars
- Transiting Exoplanets
- The Solar Neighborhood (especially within 25 parsecs)
- Young stars, subdwarfs, and unresolved binaries
- Photometry and astrometry – observations, data reduction, and utilization within research
- Solo observing runs, 7 nights+, with no telescope operator or assistant
- Telescope Management (see SMARTS Graduate Fellowship)
- Project Management – multi-year all-sky observational program for hundreds of stars

Observing Experience

- **WIYN 0.9m Telescope (32 nights)** **0.9m**
  Kitt Peak National Observatory (KPNO)
  (WIYN=Wisconsin, Indiana, Yale, NOAO)

  ◇ Photometry of Nearby Red Dwarfs
  – Project: PhD Thesis — *Sizing Up Red Dwarfs in the Solar Neighborhood*

  ◇ Time Series Photometry of Potentially Variable Red Dwarfs (backup project)

  ◇ Time Granted via NOAO Observing Proposals — 29 nights (+3 via private communication)
  2017B 14 nights | 2017A 5 nights (+3) | 2016B 7 nights

- **SMARTS 0.9m Telescope (87 nights)** **0.9m**
  Cerro Tololo Inter-American Observatory (CTIO)
  (SMARTS=Small and Moderate Aperture Research Telescope System)

  *As the **SMARTS Graduate Fellow** I helped schedule time, trained new observers from both our (during 2016A) and other institutions, updated the user's manual, and reduced several years worth of astrometric and photometric data for the RECONS team. Below is my observing experience at the SMARTS 0.9m at CTIO, most of which was done on solo 9- to 12-night observing runs.*

  ◇ Photometry of Nearby Red Dwarfs
  – Project: PhD Thesis — *Sizing Up Red Dwarfs in the Solar Neighborhood*
  – Time also spent on targets for the rest of the RECONS team and their various nearby star projects
  – One night spent on several galaxies and asteroids for other graduate student projects

  ◇ Astrometry of Nearby Stars
  – Project: CTIOPI program — The RECONS 25 Parsec Database and other related projects

  ◇ Time Series Photometry of Potentially Variable Red Dwarfs (backup project)

  ◇ Observing Time (purchased by RECONS team) — 87 nights (including 8 nights gifted by Dr. Bob Wing)
  2017A 22 nights | 2016B 12 nights | 2016A 9 nights | 2015B 12 nights
  2015A 10 nights | 2014B 12 nights | 2014A 10 nights

- **ARCSAT (70 nights)** **0.5m**
  Apache Point Observatory (APO)
  (ARCSAT=Astrophysical Research Consortium Small Aperture Telescope)

◇ Photometry of Nearby Red Dwarfs
– Project: PhD Thesis — *Sizing Up Red Dwarfs in the Solar Neighborhood*

◇ Time Series Photometry of Potentially Variable Red Dwarfs (backup project)

◇ Time Successfully Observed — 30 nights
(good weather, no maintenance issues)

◇ Time Granted via ARC Observing Proposals — 70 nights
(semesters reported rather than quarters due to quarter inconsistency)

2016B 7 nights | 2016A 11 nights | 2015B 14 nights | 2015A 14 nights
2014B 14 nights | 2014A 10 nights

Astrophysical Research Consortium 3.5-meter Telescope (2 half-nights) **3.5m**
Apache Point Observatory (APO)

◇ Echelle Spectroscopy of Nearby Red Dwarfs
– Project: PhD Thesis — *Sizing Up Red Dwarfs in the Solar Neighborhood*

◇ Time Granted via ARC Observing Proposals — 2 half-nights during 2016B, applied for by Dr. Tiffany Clements
(Observations during the January, 2017 half-night with good observing conditions were led by then-PhD-student Tiffany Clements.)

Gemini South Telescope (1 night) **8m**
Gemini Observatory, Cerro Pachon, Chile

◇ Speckle Imaging of Nearby Stars
– Project: Multiplicity fractions of K dwarfs and M dwarfs, other team projects

◇ Helped with 1 night of observations in June, 2016 as a guest of the DSSI instrument team

Hale Telescope (3 nights) **200in (5.1m)**
Palomar Observatory

◇ My first observing experience, thanks to then-graduate-student Phil Muirhead, involved 3 nights of spectroscopy and interferometry in February, 2011.

Teaching Experience

Undergraduate Research Mentor **Summer 2016**
Georgia State University, Atlanta, GA
Guided a first year undergraduate through his first experience in research and computer programming. He undertook a small project to analyze how/whether the WISE photometry data of several hundred stars were being affected by neighboring sources. The project exposed him to some of the basic, yet fundamental, ways of looking at and working with stellar data; he downloaded and worked with datasets from VizieR and manually examined and analyzed images using Aladin. He compiled a table of data containing all of the relevant stellar parameters, made notes about stars of particular interest or complexity, and created plots using Python that revealed the answer of how data for several hundred of our stars are influenced by their neighbors. I chose Python as his first programming language because not only is it growing in popularity among the astronomical community, but also among technical fields beyond academia. He learned and gained experience in basic data analysis, how to use several prominent online astronomy tools, the basics of coding in Python, and how to write up results, which he presented in a one-page document.

- **Graduate Teaching Assistant** **Fall 2012 - Spring 2016**
  Georgia State University, Atlanta, GA
  Taught up to three (varying by semester) 2-hour introductory astronomy laboratory sections per week. Responsibilities included grading, a short lecture at the start of each class, guiding students through each lab, and hosting an on-campus opportunity to use a telescope and experience observing.

Astronomy 1010 Laboratory Class	10 Semesters	15 Labs
Astronomy 1020 Laboratory Class	2 Semesters	4 Labs

Diversity, Equity, Inclusion, and Accessibility Efforts

Note that there is too much to include in a section like this, and this format does not do the topic justice. However, here are some of my more quantifiable/listable efforts in the work place.

- **LGBT Advisory Committee Member** **November 2019 - Present**
  NASA Goddard Space Flight Center
  - Bi-weekly virtual social hour lead
  - Ally Initiative co-lead

- **Anti-Racism Book Discussion Group Leadership and Participation** **2020-2021**
  NASA Goddard Space Flight Center
  - Leader and Participant (Spring 2021)
    - *How to Be an Antiracist by Ibram X. Kendi*
  - Leader (Fall 2020), Participant (Summer 2020)
    - *White Fragility: Why It's So Hard for White People to Talk About Racism by Robin DiAngelo*

- **Problematic Policies and Practices Document (NASA Internal)** **August 2020**
  NASA Goddard Space Flight Center
  - This document identified and proposed possible solutions to policies and practices that are a barrier to the well-being and productivity of civil servant and non-civil servant employees from underrepresented communities in the NASA GSFC Astrophysics Science Division (ASD). The issues raised in the document were crowdsourced from members of the ASD community. The document was presented several times, including once to the Division Director and Deputy Director and once to the ASD Inclusive Astronomy Roundtable discussion group.

- **Weekly/Bi-weekly DEIA-Related Announcements** **July 2020 - Present**
  NASA Goddard Space Flight Center
  - At each meeting of the NASA GSFC exoplanets group, I provide announcements of DEIA events and topics. These include events at Goddard, topics in the news, holiday and history month observances, and resources. These meetings usually include 20+ participants both internal and external to NASA and spanning a range of career levels, from undergraduates to permanent faculty and civil servants.

- **ASD Inclusive Astronomy Roundtable** **October 2019 - Present**
  NASA Goddard Space Flight Center
  - This is a biweekly meeting of folks mostly in the Astrophysics Science Division (ASD) to discuss current topics pertaining to diversity, equity, inclusion, and accessibility. These have included the killing of George Floyd, the possible renaming of the James Webb Space Telescope. During one meeting, I led a presentation of a problematic policies document crowdsourced from members of the community (described above).

- **See also STEM work with young women and girls in the Outreach section.**

- **Additional, more informal participation**: Asian Pacific American Advisory Committee (NASA GSFC), African American Advisory Committee (NASA GSFC), Women's Advisory Committee (NASA GSFC), Astrophysics Science Division Advisory Council (NASA GSFC), NASA Goddard Association of Postdoctoral and Early Career Scholars (NASA GSFC)
- **Awards and Nominations:**
  - **Nomination: LGBT Advisory Committee Co-Chair** **September, 2021**
    - Nominated to co-lead the LGBT Advisory Committee at NASA Goddard Space Flight Center. Duties include running monthly meetings, bringing guidance to and communicating with upper management at Goddard, organizing events, and making LGBT AC-related announcements to the entire Goddard community.
  - **NASA GSFC Special Act Team Award** **August 2021**
    - "For significant contributions to the Astrophysical Science Division Book Discussion Group"
  - **NASA GSFC Special Act Team Award** **August 2021**
    - "For significant contributions to the Astrophysical Science Division Inclusive Astronomy Roundtable"
  - **Nomination: "I'm Every Woman" Campaign** **March, 2021**
    - Led by the NASA GSFC Women's Advisory Committee: "In the spirit of not being silenced, our "I'm Every Woman" campaign embraces the behavior of the women celebrated, features the diversity of women across Goddard, and highlights women who are doing so much more than what you see from them in the workplace. We are every woman and we are working hard, showing courage and determination, and ensuring there are women in the workforce pipeline."

Outreach

- **AstroTerps Club Meeting Presentation and Discussion** **November 9, 2021**
  AstroTerps at University of Maryland, College Park (Virtual)
  Presented my research and career path, including ups and downs, at a meeting of the AstroTerps (similar to an astronomy club) at the University of Maryland. We engaged in discussion on both topics, with a group that included undergraduates in various fields of study.

- **Summer Intern Non-research Mentor** **Summer, 2021**
  NASA Goddard Space Flight Center (Virtual)
  Volunteered to be a NASA scientist that interns could meet and chat with as part of their summer experience and networking. Following an initial meeting, met weekly with two women interns just to chat about their experience and concerns, my career experience, and whatever came to mind. In addition to providing better immersion in the NASA community given the virtual environment, part of my goal was to be someone the interns could reach out to who wasn't their summer research advisor, as it is important to have a diversity of mentors.

- **Hard Labor Creek Observatory Open House** **2012-2018**
  Hard Labor Creek State Park, Rutledge, GA *organized by Georgia State University*
  Opened the Hard Labor Creek Observatory for public viewing of several astronomical objects on a variety of telescopes. Those who attend get the benefit of dark skies and 5+ astronomers to demonstrate how each telescope works and discuss what is being observed.

  Volunteer: 12 Nights Graduate Student Contact: 2 Nights

- **Total Solar Eclipse Viewing Party** **August 21, 2017**
  Rabun Gap-Nacoochee School, Rabun Gap, GA *organized in part by Georgia State University*
  - Co-scripted, narrated and performed in the ∼10 minute introduction and safety video shown to all attendees.
  - Prepared materials (drilled holes in tubes, etc.) for the children's pinhole camera activity at the event.
  - Volunteered at the event — setup and clean up, helping children build a pinhole camera, manning an Hα telescope, and talking to attendees.

- **Girl Scouts Astronomy Workshop** **2013-2017 (8 events)**
  Georgia State University, Atlanta, GA *organized by Prof. Misty Bentz*
  - A workshop exploring the Sun, the solar system and different types of light.
  - Led a craft where the girls built a spectroscope using materials that could be found at home and a small diffraction grating. The girls also explored using their spectroscopes on various light sources including an incandescent light bulb and spectrum tubes containing neon, hydrogen, and several other elements.
  - Led a craft creating a filter wheel using some plates and red, yellow, and blue transparent paper. The girls then got to look at a Lite-Brite to see how the filters changed what they could see.

- **Creative Lessons in Astronomy and Space Science (CLASS) Contest** **May 15, 2015**
  IAU Symposium 314: Young Stars & Planets Near the Sun, hosted by GSU
  Assisted middle school students in a workshop exploring astronomy and rocket launches using the Kerbal Space Program.

- **Girl Scouts Sky Badge Workshop** **March 2, 2013**
  Hard Labor Creek State Park, Rutledge, GA *organized by Prof. Misty Bentz*
  Introduced high school aged Girl Scouts to the local Hard Labor Creek Observatory and its telescopes. Explored how to use a sky chart, tell which way is north, and other skills. Answered any questions the girls had about astronomy or related topics.

- **Science Olympiad "Reach for the Stars" Activity** **February 16, 2013**
  Georgia State University, Atlanta, GA *organized by Dr. John Wilson*
  A regional competition between middle schools. Provided a fun way to test material the students had studied for the event, according to the "Reach for the Stars" theme.

- **Expand Your Horizons** **April, 2010**
  Cornell University, Ithaca, NY
  Utilized fun physics-related activities in an effort to impart an interest in science on middle school aged girls. The students constructed a small aluminum foil boat of their own design and tested each one to see which boat (and which design) would hold the most pennies before sinking in water.

Publications

In Preparation

1. **Michele L. Silverstein**, Joshua E. Schlieder, Thomas Barclay, ..., **2022**, *Transit Timing Variations in the LHS 1678 Exoplanet System and Validation of the Venus-Zone Planet LHS 1678 d*, in preparation
2. **Michele L. Silverstein**, Todd J. Henry, Serge B. Dieterich, ..., **2022**, *Sizing Up Red Dwarfs in the Solar Neighborhood: Radii of 1593 Low-Mass Stars Spanning an Unprecedented Range of Spectral Types*, in preparation
3. Laura D. Vega, Rishi R. Paudel, Thomas Barclay, **Michele L. Silverstein**, ..., **2022**, *Simultanous Multi-wavelength Observations of YZ CMi*, in preparation

4. Elisa V. Quintana, Emily A. Gilbert, Thomas Barclay, **Michele L. Silverstein**, ..., **2022**, *Two Warm Super-Earths Transiting the Nearby M Dwarf TOI-[xxxx]*, in preparation
5. Dana Louie, Thomas Barclay, Travis Berger, ..., **Michele L. Silverstein**, ..., **2022**, *Three sub-Neptunes transiting the young K dwarf TOI-[xxxx]*, in preparation
6. Benjamin Hord, Knicole Colón, ..., **Michele L. Silverstein**, ..., **2022**, *TOI-[xxx].02: A Small Nearby Companion to Hot Jupiter WASP-[xxx] b*, in preparation

Published

1. **Michele L. Silverstein**, Joshua E. Schlieder, Thomas Barclay, ..., **2022**, *The LHS 1678 System: Two Earth-Sized Transiting Planets and an Astrometric Companion Orbiting an M Dwarf Near the Convective Boundary at 20 pc*, AJ, 163, 151S
2. Rishi R. Paudel, Thomas Barclay, Joshua E. Schlieder, ..., **Michele L. Silverstein**, ..., **2021**, *Simultaneous Multiwavelength Flare Observations of EV Lacertae*, ApJ, 922, 31P
3. Justin H. Robinson, Misty C. Bentz, Hélène M. Courtois, ..., **Michele L. Silverstein**, ..., **2021**, *Tully-Fisher Distances and Dynamical Mass Constraints for 24 Host Galaxies of Reverberation-Mapped AGN*, ApJ, 912, 160R
4. William C. Waalkes, Zachory K. Berta-Thompson, Karen A. Collins, ..., **Michele L. Silverstein**, ..., **2020**, *TOI 122b and TOI 237b, two small warm planets orbiting inactive M dwarfs, found by TESS*, 2021, AJ, 161, 13W
5. Emily A. Gilbert, Thomas Barclay, Joshua E. Schlieder, ..., **Michele L. Silverstein**, ..., **2020**, *The First Habitable Zone Earth-sized Planet from TESS. I: Validation of the TOI-700 System*, AJ, 160, 116G
6. Jennifer G. Winters, Todd J. Henry, Wei-Chun Jao, John P. Subasavage, Joseph P. Chatelain, Ken Slatten, Adric R. Riedel, **Michele L. Silverstein**, and Matthew J. Payne, **2019**, *The Solar Neighborhood. XLV. The Stellar Multiplicity Rate of M Dwarfs within 25 pc*, AJ, 157, 216W
7. Roland Vanderspek, Chelsea X. Huang, Andrew Vanderburg, George R. Ricker, ..., **Michele L. Silverstein**, ..., **2019**, *The TESS Search for Exoplanets in the Solar Neighborhood: An Ultra-Short-Period Super-Earth Orbiting LHS 3844*, ApJL, 871, L24
8. Todd J. Henry, Wei-Chun Jao, Jennifer G. Winters, Sergio B. Dieterich, Charlie T. Finch, Philip A. Ianna, Adric R. Riedel, **Michele L. Silverstein**, John P. Subasavage, Eliot Halley Vrijmoet, **2018**, *The Solar Neighborhood. XLIV. RECONS Discoveries within 10 parsecs*, AJ, 155 265
9. Adric R. Riedel, **Michele L. Silverstein**, Todd J. Henry, Wei-Chun Jao, Jennifer G. Winters, John P. Subasavage, Lison Malo, Nigel C. Hambly, **2018**, *The Solar Neighborhood. XLIII. Discovery of New Nearby Stars with $\mu < 0.''18\ yr^{-1}$ (TINYMO sample)*, AJ, 156 49
10. Wei-Chun Jao, Todd J. Henry, Jennifer G. Winters, John P. Subasavage, Adric R. Riedel, **Michele L. Silverstein**, Philip A. Ianna, **2017**, *The Solar Neighborhood. XLII. Parallax Results from the CTIOPI 0.9 m Program—Identifying New Nearby Subdwarfs Using Tangential Velocities and Locations on the H-R Diagram*, ApJ, 154 191
11. Tiffany D. Clements, Todd J. Henry, Altonio D. Hosey, Wei-Chun Jao, **Michele L. Silverstein**, Jennifer G. Winters, Sergio B. Dieterich, and Adric R. Riedel, **2017**, *The Solar Neighborhood. XLI. A Study of the Wide Main Sequence for M Dwarfs — Long-Term Photometric Variability*, ApJ, 154 124

12. M. Simon, Joshua E. Schlieder, Ana-Maria Constantin, and **Michele Silverstein**, **2012**, *WISE Detection of the Circumstellar Disk Associated with 2MASS J0820-8003 in the η Cha Cluster*, ApJ, 751 114

Presentations

Talks, Seminars, and Colloquia

- M Dwarf Magnetic Activity Cycles and Flares – The Star-Planet Connection (**2021, 2022**)
  - ◇ Contributed Talk (7 min) - Sellers Exoplanet Environments Collaboration (SEEC) Meeting 2022, Virtual, Feb. 2022
  - ◇ Flash Talk (5 min) - SEEC Retreat 2021, Virtual, Feb. 2021
- LHS 1678: A Humble Exoplanet System in Peculiar Circumstances (and assorted titles) (**2020, 2021**)
  - ◇ Invited Talk (10 min) - NASA Postdoctoral Program Symposium, Virtual, Aug. 2021
  - ◇ Invited Talk (45 min) – New Mexico Tech Physics Colloquium, Virtual, Apr. 2021
  - ◇ Contributed Talk (10 min) — 237th Meeting of the American Astronomical Society, Virtual, Jan. 2021, Presentation #239.05
  - ◇ Contributed Talk (15 min) — Early Career Scientist Forum 2020 at NASA Goddard Space Flight Center, Virtual, Nov. 2020
  - ◇ Invited Talk (12 min) — NASA Goddard Space Flight Center Sciences and Exploration Directorate Director's Seminar, Virtual, Jun. 2020
- Small Stars, the LHS 1678 Exoplanet System, and My Astronomy Career Path (**2020**)
  - ◇ Invited Talk and Discussion (60 min) — University of Maryland AstroTerps Astronomy Club, Virtual, Nov. 2020
- Sizing Up Red Dwarfs in the Solar Neighborhood (**2019**)
  - ◇ Contributed Talk (5 min) — SEEC Symposium, NASA Goddard Space Flight Center, Nov. 2019
  - ◇ Invited Talk (45 min) — Weekly Seminar Series, Carnegie Institution of Washington Department of Terrestrial Magnetism, Oct. 2019
  - ◇ Contributed Talk (15 min) — Chesapeake Bay Area Exoplanet Meeting, University of Delaware, Sep. 2019
  - ◇ Invited Talk (45 min) — Exoplanets Seminar Series, NASA Goddard Space Flight Center, Jun. 2019
  - ◇ Dissertation Talk (20 min) — 233rd Meeting of the American Astronomical Society, Seattle, WA, Jan. 2019, Presentation 420.04D
- Hints of Planet Formation in Nearby Young Moving Groups, Michele Silverstein, Ana-Maria Constantin, Michal Simon, **2011**, Stony Brook University REU Physics & Astronomy Research Symposium, 2

Posters

- An Unusual History - Investigating Exoplanet System Trends at the M Dwarf Convective Boundary and Gaia Gap
  Michele L. Silverstein & Joshua E. Schlieder, **2022**, Exoplanets IV Conference, Poster #102.343
- Starspot Coverage and the Temperature-Dependent Radius Dispersion of Low-Mass Stars
  Michele L. Silverstein & Joshua E. Schlieder, **2022**, Fifty Years of the Skumanich Relations Meeting
- The LHS 1678 System: Two Small Planets and a Likely Brown Dwarf Orbiting a Nearby M Dwarf in Unconventional Circumstances

Michele L. Silverstein, Joshua E. Schlieder, Thomas Barclay, ..., **2021**, TESS Science Conference II, Zenodo Poster #5116835

- Discovery and Characterization of Two Earth-Sized TESS Planets Orbiting a Bright, Nearby M2 Dwarf
  Michele L. Silverstein, Joshua E. Schlieder, Thomas Barclay, ..., **2020**, 235th Meeting of the American Astronomical Society Poster Session, Poster #174.25
- Sizing Up Red Dwarfs in the Solar Neighborhood
  Michele L. Silverstein, Todd J. Henry, Sergio B. Dieterich, Wei-Chun Jao, Jennifer G. Winters, Tiffany D. Clements, Adric R. Riedel, Kenneth J. Slatten, **2019**,
  1. SEEC Symposium at NASA Goddard Space Flight Center
  2. Early Career Scientist Forum at NASA Goddard Space Flight Center, Poster P-25
- Sizing Up Southern Red Dwarfs in the Solar Neighborhood: First Results
  Michele L. Silverstein, Todd J. Henry, Wei-Chun Jao, Sergio B. Dieterich, Jennifer G. Winters, Adric R. Riedel, Kenneth J. Slatten, **2018**, Cool Stars 20 Poster Session, Poster #286
- Sizing Up Southern Red Dwarfs in the Solar Neighborhood
  Michele L. Silverstein, Todd J. Henry, Wei-Chun Jao, Adric R. Riedel, Sergio B. Dieterich, Jennifer G. Winters, Kenneth J. Slatten, Tiffany D. Clements, R. Andrew Sevrinsky, **2017**, 229th Meeting of the American Astronomical Society Poster Session, Poster #154.12
- Fundamental Parameters of Nearby Southern Red Dwarfs: Stellar Radius as an Indicator of Age
  Michele L. Silverstein, Todd J. Henry, Jennifer, G. Winters, Wei-Chun Jao, Adric R. Riedel, Sergio B. Dieterich, R. Andrew Sevrinsky, **2016**, 227th Meeting of the American Astronomical Society Poster Session, Poster #145.05, Chambliss Astronomy Achievement Student Award Winner
- SIRENS: The Search for InfraRed Excesses around Nearby Stars
  Michele L. Silverstein, Todd J. Henry, Wei-Chun Jao, Jennifer G. Winters, **2015**, IAU Symposium 314: Young Stars & Planets Near the Sun, Poster P1.16
- Circumstellar Environments of Southern M Dwarfs in the Solar Neighborhood,
  Michele L. Silverstein, Todd J. Henry, Wei-Chun Jao, and Jennifer G. Winters, **2015**, 225th Meeting of the American Astronomical Society Poster Session, Poster #138.03
- Completion of a Martin-Puplett Interferometer for Terahertz Frequency Characterization of Materials and Passive Components
  Michele Silverstein, Negar Ehsan, **2012**, Goddard Space Flight Center Summer Intern Poster Session

Miscellaneous Service

- *Subject-matter expert reviewer in a NASA peer review* (2021) - Reviewed four 5 to 10 page proposals
- *Abstract Sorter* - 237th and 240th Meetings of the American Astronomical Society (2020, 2022) - Sorted oral and poster abstracts into a variety of appropriately themed sessions
- *Chambliss Astronomy Achievement Student Awards Judge* - 235th Meeting of the American Astronomical Society (2019) - judged the posters and presentations of 3 graduate students and 1 undergraduate student

Grants and Awards

Ground-based observing proposals are listed under Observing Experience, with 9 successful proposals as principle investigator.

Diversity, equity, inclusion, and accessibility related awards are listed under that section.

Principal Investigator

- **SEEC Internal Scientist Funding Model Support FY-22** — **March, 2021**
  Sellers Exoplanet Environments Collaboration (SEEC) — *$65k for Stellar Activity & Exoplanets Study*
- **NASA Postdoctoral Program Fellowship** — **August, 2019**
  NASA Postdoctoral Program — *Two Years of Funding as a Postdoctoral Fellow*
- **Sigma Xi Grant-in-Aid of Research** — **December, 2016**
  Sigma Xi, The Scientific Research Society — *$2500 for Travel to CTIO*
- **Chambliss Astronomy Achievement Student Award** — **January, 2016**
  229^{th} American Astronomical Society Meeting — *Personalized Medal*
- **Outstanding Second Year Graduate Student Award in Astronomy** — **April, 2015**
  Georgia State University — *$100 + Certificate*

Co-Investigator

- **TESS Cycle 4 Guest Investigator Program G04222 (PI T. Monsue)** — **May, 2021**
  Project: "And Now for Something Completely Different: Flares and Oscillations" — *$70k*
- **TESS Cycle 4 Guest Investigator Program G04212 (PI R. Paudel)** — **May, 2021**
  Project: "Using Tess 20-S Cadence Data To Study Flares On M Dwarfs" — *$70k*
- **TESS Cycle 4 Guest Investigator Program G04247 (PI L. Vega)** — **May, 2021**
  Project: "Measuring the Highly Active Star Wolf 359 Using Optical, X-ray, and Ultra-Violet Observations" — *$70k*
- **NASA Astrophysics Data Analysis Program (ADAP) 2020 (PI J. Schlieder)** — **April, 2021**
  Project: "M Dwarf Flares Through Time" — *$59,336*
- **NICER Cycle 3 Guest Investigator Program (PI R. Paudel)** — **February, 2021**
  Project: "A Study of M Dwarf Flares Using Simultaneous High Cadence Multi-wavelength Data" — *$22k*
- **TESS Cycle 3 Guest Investigator Program G03195 (PI V. Kostov)** — **May, 2020**
  Project: "Discovering Circumbinary Planets With TESS" — *$50k*
- **TESS Cycle 3 Guest Investigator Program G03273 (PI L. Vega)** — **May, 2020**
  Project: "Exploring the Star-Planet Connection via Simultaneous TESS and Swift Observations of Highly Active M Dwarfs" — *$50k*
- **NICER Cycle 2 Guest Investigator Program (PI R. Paudel)** — **February, 2020**
  Project: "Multiwavelength observations of highly active M dwarfs" — *$22k*
- **NSF Stellar Astronomy & Astrophysics Program #1715551 (PI T. Henry)** — **August, 2017**
  Project: "RECONS Explores the Nearest Stars" — *$495,997*

Languages

German
some proficiency

Mandarin Chinese
minimal proficiency

Spanish
minimal proficiency

Mindfulness Meditation

Mindfulness-Based Stress Reduction (MBSR) Course — An 8 week course taught by Lineliz Vassallo that met for 2.5 hours once per week. Covered the basics of mindfulness and mindfulness meditation.

Mindful Ambassador Program — A weekly 1-hour course for graduates of the MBSR program to learn how to introduce mindfulness to those who are interested and lead meditations and discussions.

Martial Arts

Taekwondo	blue (6th) belt — both ITF & WT systems
Filipino Kali	orange (3rd) belt — World Modern Arnis Alliance (WMAA) member
Boxing	moderate experience
Additional Experience:	Muay Thai, Brazilian Jiu Jitsu, Jeet Kune Do, Tai Chi, Wing Chun, Aikido, Wushu, Hapkido