Seth Shearer Gossage

1800 Sherman Ave., Floor 8
Evanston, IL 60201
seth.gossage@northwestern.edu

Employment

- **Northwestern University/CIERA**, Evanston, IL
  CIERA Postdoctoral Fellow, Kalogera Group
  Sept. 2021 -

Education

- **Harvard University**
  Ph.D. Astronomy and Astrophysics, May 2021
  Advisor: Charlie Conroy

- **San Francisco State University**
  B.S. Physics (Concentration in Astrophysics), May 2014, *Magna Cum Laude*
  Advisor: Ron Marzke

Research Interests

Stellar astrophysics, stellar populations, stellar magnetic fields, statistics, compuational modeling, low mass x-ray binaries, magnetic braking, stellar angular momentum transport

Teaching & Leadership

Harvard University
Teaching Fellow (2020)

- Led office hours to assist students with course material.
- Held online help sessions
- Led interactive lab sessions
- Evaluated and assisted in design of assignments, exams, and graded problem sets.

Teaching Fellow (2018)

- Led office hours to assist students with course material.
- Evaluated and assisted in design of assignments and graded problem sets.

Banneker Institute
Mentor/Instructor (2015 - 2019)

- Instructed undergraduate students from minority backgrounds during the summer
- Advised students on the graduate school application process and research skills

CIERA REU Program
Mentor/Science Advisor (2023 -)

- Advised and mentored a student (physics/art double major) on a data visualization project.

Professional Activities

- *NASA* review panel member

Awards & Honors

2018 Bok Center Certificate for Teaching Excellence

2016 - 2020 NSF Graduate Research Fellowship

2014 Honors granted by SFSU Department of Physics & Astronomy for highest ranking undergraduate student, class of May 2014.

2012 Eden Academic Excellence Award; awarded twice (maximum allowed)

Talks, Posters, & Seminars

Talks

- Cool Stars 22, *San Diego, CA, USA* (July 2024)
- Cool Stars 21, *Toulouse, France* (July 2022)
- Thinkshop 16, *AIP, Potsdam, Germany* (September 2019)
- A synoptic view of the Magellanic Clouds: VMC, Gaia and beyond, *ESO, Garching, Germany* (September 2019)
- STScI Spring Symposium, *STScI, Baltimore, MD, USA* (April 2018)

Posters

- EWASS 2018, *Liverpool, United Kingdom* (April 2018)
- MODEST-23, *Evanston, IL, USA* (August 2023)

Workshops

- `XSEDE` HPC Workshop: BIG DATA and Machine Learning 2022, *Online*, (February 2022)
- `MESA` Summer School 2018, *UCSB, Santa Barbara, CA* (August 2018)

First Authored Publications

Age Determinations of the Hyades, Praesepe, and Pleiades via MESA Models with Rotation
Gossage, **S.**, Conroy, C., Dotter, A., et al. 2018, *ApJ, 863, 67*

Combined Effects of Rotation and Age Spreads on Extended Main-Sequence Turn Offs
Gossage, **S.**, Conroy, C., Dotter, A., et al. 2019, *ApJ, 887, 199*

MESA models with magnetic braking
Gossage, **S.**, Dotter, A., Garraffo, C., et al. 2021, *ApJ, 912, 65*

Magnetic Braking with MESA Evolutionary Models in the Single Star and Low-mass X-Ray Binary Regimes
Gossage, **S.**, Kalogera, V., Sun, M., et al. 2023, *ApJ, 950, 27*

Co-authored Publications

How stellar rotation shapes the colour-magnitude diagram of the massive intermediate-age star cluster NGC 1846
Kamann, S., Bastian, N., **Gossage**, **S.**, et al. 2020, *MNRAS, 492, 2177*

Extended main sequence turnoffs in open clusters as seen by Gaia - II. The enigma of NGC 2509
de Juan Ovelar, M., **Gossage**, **S.**, Kamann, S., et al. 2020, *MNRAS, 491, 2129*

Rotational Variation Allows for Narrow Age Spread in the Extended Main Sequence Turnoff of Massive Cluster NGC 1846
Lipatov, M., Brandt, T., **Gossage**, **S.**, 2022, *ApJ, 934, 105*

The effects of stellar rotation along the main sequence of the 100-Myr-old massive cluster NGC 1850
Kamann, S., Saracino, S., Bastian, N., **Gossage**, **S.** , et al. 2023, *MNRAS, 518, 1505*

Age-dating the young open cluster UBC 1 with g-mode asteroseismology, gyrochronology, and isochrone fitting
Fritzewitski, D., J., Van Reeth, T., Aerts, C., Van Beeck, J., **Gossage**, **S.** , Li, G. 2024, *A&A, 681, 18*

Wind Roche-lobe Overflow in Low-mass Binaries: Exploring the Origin of Rapidly Rotating Blue Lurkers
Sun, M., Levina, S., **Gossage**, **S.** , et al. 2024, *ApJ, 969, 14*

Stellar Spin Down in Post-Mass Transfer Binary Systems
Sun, M., **Gossage**, **S.** , et al. 2024, *accepted, ApJ*