

**Gwendolyn M. Eadie**

50 St. George Street, Astronomy Building  
Toronto, ON, M5S 3H4  
Office phone: 416-978-1336  
Mobile: 416-732-0843

**Introduction**

I am currently an Assistant Professor of Astrostatistics at the University of Toronto, jointly appointed between the David A. Dunlap Department of Astronomy & Astrophysics and the Department of Statistical Sciences. My research spans a variety of topics in astronomy and statistics, covering the Milky Way Galaxy, globular clusters, fast radio bursts, and most recently, RR Lyrae stars and stellar flares in M-dwarf stars. My statistics interests and specialties are hierarchical Bayesian models, Bayesian inference, generalized linear models, and time series analysis.

**NOTE: I was on maternity/parental leave for 1 year (March 20, 2022 – March 19, 2023)**

**Degrees**

- 2013 – 2017 **Doctor of Philosophy**, Physics & Astronomy, *McMaster University*  
Thesis: “Lights in Dark Places: Inferring the Milky Way Mass Profile using Galactic Satellites and Hierarchical Bayes”  
Supervisor: William Harris
- Sep 2010 – Jun 2013 **Master of Science**, Physics, Engineering Physics, & Astronomy, *Queen’s University*  
Thesis: “Measuring the Mass of a Galaxy: An evaluation of the performance of Bayesian mass estimates using statistical simulation”  
Supervisors: Lawrence Widrow and Stephane Courteau
- 2005 – 2010 **Bachelor of Science**, Major in Physics, Minor in Publishing, *Simon Fraser University*  
Undergraduate thesis: “A PAndAS Project: Measuring structural parameters of globular clusters in M31”  
Supervisors: Michael Thewalt (SFU) and Harvey Richer (UBC)

**Employment**

- Aug 2019 – present **Assistant Professor**  
David A. Dunlap Department of Astronomy & Astrophysics (DADDAA, 51%)  
Department of Statistical Sciences (DoSS, 49%)  
University of Toronto, Toronto, ON
- Sep 2017 – Jul 2019 **Moore, Sloan, & WRF Postdoctoral Fellow**  
eScience Institute & Department of Astronomy, University of Washington, Seattle, WA
- Sep 2017 – Jul 2019 **DIRAC Postdoctoral Fellow**  
DIRAC Institute, Department of Astronomy University of Washington, Seattle, WA  
*Advisors*: Mario Juric, Tyler McCormick
- Apr 2019 – Jul 2019 **NSERC Postdoctoral Fellow**  
Department of Astronomy, University of Washington, Seattle, WA  
*Advisors*: Mario Juric, Tyler McCormick
- Sep 2013 – Aug 2017 **Teaching Assistant & Research Assistant** (during PhD)  
McMaster University, Hamilton, ON
- Sep 2010 – Mar 2013 **Teaching Assistant & Research Assistant** (during MSc)  
Queen’s University, Kingston, ON
- 2011 – 2017 **Physics and Mathematics Tutor** (during graduate school)
- Summer 2010 **Research Assistant** (after BSc)  
*Advisors*: Harvey Richer, Kristen Woodley

## Honours

- July 2024 **Marcel Grossman Award**  
→ awarded to the CHIME/FRB collaboration
- Oct 2022 **Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering**  
→ awarded to the CHIME/FRB collaboration
- Mar 2022 – Mar 2023 ————— *parental leave* —————
- Jan 2022 **Lancelot M. Berkeley - New York Community Trust Prize for Meritorious Work in Astronomy**  
→ awarded to the CHIME/FRB collaboration
- Jan 2022 **2021 Polanyi Prize in Physics**  
Council of Ontario Universities  
20,000 CAD
- Aug. 2019 **Best Speed Oral and Poster Presentation**  
Section on Statistics and Data Science Education of the American Statistical Association  
Joint Statistical Meetings (JSM) 2019, Denver, CO
- 2018 **J.S. Plaskett Medal (Most Outstanding PhD Thesis in the past two years)**  
Canadian Astronomical Society (CASCA) and the Royal Astronomical Society of Canada  
750 CAD, Gold Medal
- Apr. 2018 **NextProf: Science Participant (competitive program)**  
University of Michigan, Ann Arbor, MI
- Oct 2017 **Nominated, short-listed for Valedictorian**  
McMaster University, Hamilton, ON
- Jun. 2017 **Best Student Presentation (awarded by Board of Directors)**  
**Best Student Presentation (awarded by Graduate Student Board)**  
CASCA Meeting, Edmonton, AB
- Mar. 2017 **Best Poster Presentation**  
Galaxy Halos Conference, Puerto Ayora, Ecuador
- 2015 – 2016 **Marauder Scholar**  
McMaster University, Hamilton, ON
- 2015 – 2016 **Nominated, Leppman Teaching Assistance Excellence Award**  
Graduate Students Association, McMaster University, Hamilton, ON
- Aug. 2015 **Honourable Mention Presentation**  
Section on Physical & Engineering Sciences of the American Statistical Association  
JSM 2015, Seattle, WA
- Oct. 2014 **Best Student Poster**  
European Southern Observatory Workshop, Garching, Germany
- Aug. 2014 **Honourable Mention Presentation**  
Section on Physical & Engineering Sciences of the American Statistical Association  
JSM 2014, Boston, MA
- 2013 **SGPS Teaching Assistant/Teaching Fellow Excellence Award**  
Society of Graduate and Professional Students, Queen's University, Kingston, ON
- 2013 **Certificate of Achievement for Excellence in Teaching**  
Alma Mater Society, Queen's University, Kingston, ON
- 2013 **Finalist, Christopher Knapper Award for Excellence in Teaching**  
Alma Mater Society, Queen's University, Kingston, ON

## Research Awards (Grants, contracts, fellowships, etc.)

**NOTE:** Where these were awarded at Canadian institutions, there is usually 0% overhead and all money goes directly to research endeavors.

- May 2024 – present **Scialog Fellow, Early Science for LSST**

- May 2024 – present Heising-Simons Foundation, Research Corporation for Science Advancement  
approx. 5,000 CAD (conference hotel and lodging for 3-day Scialog meeting)  
**Canadian Foundation for Innovation Grant, Project Number 43393**  
Team Leader: Calvin Netterfield  
Team Members: Steven Benton, Jo Bovy, Alis Deason, Maria Drout, **Gwendolyn Eadie**, William Jones, Ting Li, Richard Massey, Calvin Netterfield, Jason Rhodes)  
“GigaBIT: A high resolution, wide field telescope operating on the edge of space”  
3,400,000 CAD
- Feb 2022 – present **DSI Catalyst Grant (Principal Investigator)**  
Data Sciences Institute (DSI), University of Toronto  
91,000 CAD
- Nov. 2020 – present **CANSSI Collaborative Research Team Grant (Principal Investigator)**  
Canadian Statistical Sciences Institute (CANSSI)  
200,000 CAD
- Apr 2020 – present **Discovery Grant and Discovery Grant Launch Supplement (Principal Investigator)**  
Natural Sciences & Engineering Research Council (NSERC), 5 years  
132,500 CAD
- 2024 **Gemini 2024A Proposal, GMOS-S (co-I)**  
“The mass of the Milky Way with RR Lyrae in the Galactic outskirts”  
14 hr through Canadian time, NGO Proposal ID: CA\_2024A\_049
- 2023 **HST Cycle 31 Proposal (Co-I)**  
“A candidate nearly-dark galaxy with 4 globular clusters”
- Mar 2022 – Mar 2023 ————— *parental leave* —————
- May 2020 – Apr 2022 **Connaught New Researcher Award (Principal Investigator)**  
Connaught Fund, University of Toronto  
20,000 CAD
- Apr 2019 – Jul 2019 **NSERC Postdoctoral Fellowship** (took up faculty position in Aug 2019)  
45,000 CAD per year
- Sep 2017 – Jul 2019 **Moore, Sloan, and WRF Innovation in Data Science Postdoctoral Fellowship**  
eScience Institute, University of Washington, Seattle, WA  
65,000 USD salary, plus 25,000 USD research budget
- Sep 2017 – Jul 2019 **Data Intensive Research in Astrophysics & Cosmology (DIRAC) Postdoctoral Fellow**  
DIRAC Institute, University of Washington, Seattle, WA
- May 2016 – Aug 2017 **NSERC Alexander Graham Bell Canadian Graduate Scholarship**  
3-year award (completed PhD Aug 2017)  
35,000 CAD per year
- Aug 2015 **Student Travel Grant**  
IAU XXIX General Assembly, International Astronomical Union  
800USD
- May 2015 – Aug 2015 **Yates Scholarship Travel Award**  
School of Graduate Studies, McMaster University  
500 CAD
- May 2015 – May 2016 **NSERC Postgraduate Scholarship**  
3 year award (upgraded to CGS in 2016)  
21,000 CAD per year
- Sep 2014 – May 2015 **Ontario Graduate Scholarship**  
3-year award (upgraded to NSERC Postgraduate Scholarship in May 2015)  
15,000 CAD

## Publications

A list of my publications in astronomy can also be found here: [https://bit.ly/ADSPublications\\_EadieGwendolyn](https://bit.ly/ADSPublications_EadieGwendolyn)

### Published and Accepted (complete list)

\* Trainees I directly supervised

1. (Aug 2024) Li, Dayi\*; Stringer, A.; Brown, P.; **Eadie, Gwendolyn**; Abraham, R. (2023) , “Poisson cluster process models for detecting ultra-diffuse galaxies”, *accepted to the Annals of Applied Statistics, in press*  
<https://imstat.org/journals-and-publications/annals-of-applied-statistics/annals-of-applied-statistics-n>
2. (Aug 2024) Mckinven, Ryan; Bhardwaj, Mohit; Eftekhari, Tarraneh; Kilpatrick, Charles D. ; Kirichenko, Aida; Pal, Arpan; Cook, Amanda M.; Gaensler, B. M.; Giri, Utkarsh; Kaspi, Victoria M.; Michilli, Daniele; Nimmo, Kenzie ; Pearlman, Aaron B.; Pleunis, Ziggy; Sand, Ketan R.; Stairs, Ingrid; Andersen, Bridget C.; Andrew, Shion; Bandura, Kevin; Brar, Charanjot; Cassanelli, Tomas; Chatterjee, Shami; Curtin, Alice P.; Dong, Fengqiu Adam; **Eadie, Gwendolyn**; Fonseca, Emmanuel; Ibik, Adaeze L.; Kaczmarek, Jane F.; Kharel, Bikash; Lazda, Mattias; Leung, Calvin; Li, Dongzi; Main, Robert; Masui, Kiyoshi W.; Mena-Parra, Juan; Ng, Cherry; Pandhi, Ayush ; Shivraj Patil, Swarali; Prochaska, J. Xavier; Rafiei-Ravandi, Masoud; Scholz, Paul; Shah, Vishwangi; Shin, Kaitlyn search by orcid; Smith, Kendrick, “A pulsar-like swing in the polarisation position angle of a nearby fast radio burst”, *accepted to Nature*
3. (Aug 2024) Fengqing Yu; Li, Ting S.; Speagle, Joshua S.; Medina, Gustavo E. Kuposov, Sergey E.; Bland-Hawthorn, Joss ; Cullinane, Lara R. **Eadie Gwendolyn M.**; Erkal, Denis; Lewis, Geraint F.; Limberg, Guilherme; Daniel B. Zucker, (2024) “The Power of High Precision Broadband Photometry: Tracing the Milky Way Density Profile with Blue Horizontal Branch stars in the Dark Energy Survey”, *accepted to The Astrophysical Journal*  
<https://arxiv.org/abs/2402.00104>
4. (Aug 2024), H. Lin, P. Scholz,C. Ng, U. Pen, M. Bhardwaj, P. Chawla, A. Curtin, D. Li,L. Newburgh, A. Reda, K.R. Sand, S. Tendulkar, B. Anderson, K. Bandura, C. Brar, T. Cassanelli, A. Cook, M. Dobbs, F.A. Dong, **Gwendolyn Eadie**, E. Fonesca, B.M. Gaensler, U. Giri, A. Herrera-Martin, A. Hill,Jane Kkaczmarek, J. Kania, V. Kaspi, K. Khairy, A.Lanman, C. Leung, K. MasuiJ. Mena-Parra, B. Meyers,D. Michilli, N. Milutinovic A. Ordog, A.Pearlman, Z. Pleunis, M. Rafiei-Ravandi, M. Rahman, S. Ransom, P.Sanghavi K.Shin, K. Smith, I. Stairs, D.Stenning, K.Vanderlinde, and D. Wulf, “Do All Fast Radio Bursts Repeat? Constraints from CHIME/FRB Far Side-Lobe FRBs”, *accepted to The Astrophysical Journal*  
<https://arxiv.org/abs/2307.05261>
5. (Aug 2024) Cook, A.\* , Scholz, P.; Gaensler, B.; **Eadie, Gwendolyn**, and the CHIME/FRB Collaboration, “Contemporaneous X-ray Observations of 30 Bright Radio Bursts from the Prolific Fast Radio Burst Source FRB 20220912A”, accepted to *The Astrophysical Journal* (refereed)  
<https://arxiv.org/abs/2408.11895>
6. (Jul 2024) Patil, Aarya\*; **Eadie, Gwendolyn**; Speagle, Joshua\*; Thomson, David, “Improving Power Spectral Estimation using Multitapering: Precise asteroseismic modeling of stars, exoplanets, and beyond”, *accepted to The Astrophysical Journal*  
<https://arxiv.org/abs/2209.15027>
7. (Jul 2024) Berek, S.\*; **Eadie, Gwendolyn**; Speagle, J.; Wang, Y.S; “Should zeros count? Modeling the galaxy-globular cluster scaling relation with(out) zero-inflated count models”, *The Astrophysical Journal*, , 972:104, 10pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/ad6147/meta>
8. (Jul 2024) Speagle, Joshua S.\*; Zucker, Catherine; Bonaca, Ana; Cargile, Phillip A.; Johnson, Benjamin D.; Beane, Angus; Conroy, Charlie; Finkbeiner, Douglas P.; Green, Gregory M.; Kamdar, Harshil M.; Naidu, Rohan; Rix, Hans-Walter; Schlafly, Edward F.; Dotter, Aaron; **Eadie, Gwendolyn**; Eisenstein, Daniel J.; Goodman, Alyssa A.; Han, Jiwon Jesse; Saydjari, Andrew K.; Ting, Yuan-Sen; and Ioana A. Zelko, (2024) “Mapping the Milky Way in 5D with 170 Million Stars”, *The Astrophysical Journal*, 970:121, 22pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/ad2b62>
9. (Jul 2024) The CHIME/FRB Collaboration: Mandana Amiri, Bridget C. Andersen, Shion Andrew, Kevin Bandura, Mohit Bhardwaj, P.J. Boyle, Charanjot Brar, Daniela Breitman, Tomas Cassanelli, Pragya Chawla, Amanda M. Cook\*, Alice P. Curtin, Matt Dobbs, Fengqiu Adam Dong, **Gwendolyn Eadie**, Emmanuel Fonseca, B. M. Gaensler, Utkarsh Giri, Antonio Herrera-Martin, Hans Hopkins, Adaeze L. Ibik, Ronniy C. Joseph, J. F. Kaczmarek, Zarif Kader,

- Victoria M. Kaspi, Adam E. Lanman, Mattias Lazda, Calvin Leung, Siqi Liu, Juan Mena-Parra, Marcus Merryfield, Daniele Michilli, Cherry Ng, Kenzie Nimmo, Gavin Noble, Ayush Pandhi, Chitrang Patel, Aaron B. Pearlman, Ue-Li Pen, Emily Petroff, Ziggy Pleunis, Masoud Rafiei-Ravandi, Mubdi Rahman, Scott M. Ransom, Ketan R. Sand, Paul Scholz, Vishwangi Shah, Kaitlyn Shin, Yuliya Shpunarska, Seth R. Siegel, Kendrick Smith, Ingrid Stairs, David C. Stenning, Keith Vanderlinde, Haochen Wang, Henry White, Dallas Wulf (2024), “Updating the first CHIME/FRB catalog of fast radio bursts with baseband data”, *The Astrophysical Journal*, 969:145, 17pp.  
<https://doi.org/10.3847/1538-4357/ad464b>
10. (Jun 2024) Jakob T. Faber, Daniele Michilli, Ryan Mckinven, Jianing Su, Aaron B. Pearlman, Kenzie Nimmo, Robert A. Main, Victoria Kaspi, Mohit Bhardwaj, Shami Chatterjee, Alice P. Curtin, Matt Dobbs, **Eadie, Gwendolyn**; B. M. Gaensler, Zarif Kader, Calvin Leung, Kiyoshi W. Masui, Ayush Pandhi, Emily Petroff, Ziggy Pleunis, Masoud Rafiei-Ravandi, Ketan R. Sand, Paul Scholz, Kaitlyn Shin, Kendrick Smith, Ingrid Stairs “Morphologies of Bright Complex Fast Radio Bursts with CHIME/FRB Voltage Data”, accepted to *The Astrophysical Journal*  
<https://arxiv.org/abs/2312.14133>
  11. (Jun 2024) Dong, Fengqiu Adam; Herrera-Martin, Antonio; Ingrid, Stairs; Craiu, Radu V.; Crowter, Kathryn; **Eadie, Gwendolyn M.**; Fonseca, Emmanuel, Good, Deborah; Mckee, James W.; Meyers, Bradley W.; Pearlman, Aaron B.; and David C. Stenning, “Constraining the selection corrected luminosity function and total pulse count for radio transients”, *The Astrophysical Journal*, Volume 971:97, 18pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/ad53c5>
  12. Masoud Rafiei-Ravandi, Kendrick M. Smith, D. Michilli, Ziggy Pleunis, Mohit Bhardwaj, Matt Dobbs, **Eadie, Gwendolyn M.**, Emmanuel Fonseca, B. M. Gaensler, Jane Kaczmarek, Victoria M. Kaspi, Calvin Leung, Dongzi Li, Kiyoshi W. Masui, Ayush Pandhi, Aaron B. Pearlman, Mubdi Rahman, Paul Scholz, David C. Stenning (2024) “Statistical association between the candidate repeating FRB 20200320A and a galaxy group”, *The Astrophysical Journal*, Volume 961, 177-187.  
<https://doi.org/10.3847/1538-4357/ad0c59>
  13. Wen, R.\*; Speagle, J.; Webb, J., **Eadie, Gwendolyn** (2024), “Hierarchical Bayesian inference of globular cluster properties”, *Monthly Notices of the Royal Astronomical Society*, 527(2), 4193-4208.  
<https://doi.org/10.1093/mnras/stad3536>
  14. Sand, Ketan R., D. Breitman, ; D. Michilli, V. M. Kaspi, P. Chawla, E. Fonseca, R. Mckinven, K. Nimmo, Z. Pleunis, K. Shin, B. C. Andersen, M. Bhardwaj, P. J. Boyle, C. Brar, T. Cassanelli, A. M. Cook\*, A. P. Curtin, F. A. Dong, **Gwendolyn M. Eadie**, B. M. Gaensler, J. Kaczmarek, Adam Lanman, Calvin Leung, Kiyoshi W. Masui, Mubdi Rahman, Ayush Pandhi, Aaron B. Pearlman, Emily Petroff, Masoud Rafiei-Ravandi, Paul Scholz, Vishwangi Shah, Kendrick Smith, Ingrid Stairs, and David C. Stenning (2023) “A CHIME/FRB study of burst rate and morphological evolution of the periodically repeating 5 FRB 20180916B”, *The Astrophysical Journal*, Volume 956, Issue 1, id.23, 19 pp.  
<https://doi.org/10.3847/1538-4357/acf221>
  15. Berek, S.\*; **Eadie, Gwendolyn**; Speagle, J.; Harris, W. (2023) “The HERBAL model: a hierarchical errors-in-variables Bayesian lognormal hurdle model for galactic globular cluster populations”, *The Astrophysical Journal*, Volume 955, Issue 1, id.22, 16 pp.  
<https://doi.org/10.3847/1538-4357/ace7b7>
  16. Berek, S.\*; Reina-Campos, M.; Sill, A.; **Eadie, Gwendolyn** (2023) “Galactic properties that favour star cluster formation: a statistical view”, *Monthly Notices of the Royal Astronomical Society*, 525(2), 1902-1911.  
<https://doi.org/10.1093/mnras/stad2302>
  17. Cook, Amanda\*; Bhardqaj, M.; Gaensler, B.; Scholz, P.; **Eadie, Gwendolyn**, and the CHIME/FRB Collaboration (2023) “An FRB sent me a DM: Constraining the Electron Column of the Milky Way Halo with Fast Radio Burst Dispersion Measures from CHIME/FRB”, *The Astrophysical Journal*, Volume 946, Issue 58, 14pp.  
<https://doi.org/10.3847/1538-4357/acbbd0>

————— Mar 2022 – Mar 2023 parental leave —————

18. Li, Dayi David\*; **Eadie, Gwendolyn**; Abraham, R.; Brown, P.; Harris, W.; Janssens, S.; Romanowsky, A.; van Dokkum, P.; Danieli, S., (2022) “Light from the Darkness: Detecting Ultra-diffuse Galaxies in the Perseus Cluster through Over-densities of Globular Clusters with a Log-Gaussian Cox Process”, *The Astrophysical Journal*, Volume

- 935, Issue 3, 28pp.  
<https://doi.org/10.3847/1538-4357/ac7b22>
19. **Eadie, Gwendolyn M.**; Webb, Jeremy J.; Rosenthal, Jeffrey S. (2022) “Bayesian Inference of Globular Cluster Properties Using Distribution Functions”, *The Astrophysical Journal*, Volume 926, Issue 2, id.211, 18pp.  
<https://doi.org/10.3847/1538-4357/ac4494>
  20. **Eadie, Gwendolyn**; Harris, William; Springford, Aaron (2022) “Clearing the Hurdle: The Mass of Globular Cluster Systems as a Function of Host Galaxy Mass”, *The Astrophysical Journal*, Volume 926, Issue 2, id.162, 19pp  
<https://doi.org/10.3847/1538-4357/ac33b0>
  21. Patil, Aarya\*; Bovy, Jo; **Eadie, Gwendolyn**; Jaimungal, Sebastian, “Functional Data Analysis for Extracting the Intrinsic Dimensionality of Spectra: Application to Chemical Homogeneity in the Open Cluster M67”, *The Astrophysical Journal*, Volume 926, Issue 1, id.51, 24 pp. <https://doi.org/10.3847/1538-4357/ac35d6> (2022).
  22. Shen, Jeff\*; **Eadie, Gwendolyn M.**; Murray, Norman; Zaritsky, Dennis; Speagle, Joshua S.\*; Ting, Yuan-Sen; Conroy, Charlie; Cargile, Phillip A.; Johnson, Benjamin D.; Naidu, Rohan P.; Han, Jiwon Jesse (2022) “The Mass of the Milky Way from the H3 Survey”, *The Astrophysical Journal*, Volume 925, Issue 1, id.1, 19 pp.  
<https://doi.org/10.3847/1538-4357/ac3a7a> .
  23. Slizewski, Anika\*; Dufresne, Xander\*; Murdock, Keslen\*; **Eadie, Gwendolyn**; Sanderson, Robyn; Wetzel, Andrew; Jurić, Mario (2022) “Galactic Mass Estimates Using Dwarf Galaxies as Kinematic Tracers”, *The Astrophysical Journal*, Volume 924, Issue 2, id.131, 12 pp.  
<https://doi.org/10.3847/1538-4357/ac390b>
  24. The CHIME/FRB Collaboration: Amiri, Mandana; Andersen, Bridget C. ; Bandura, Kevin ; Berger, Sabrina ; Bhardwaj, Mohit search by orcid ; Boyce, Michelle M. search by orcid ; Boyle, P. J.; Brar, Charanjot; Breitman, Daniela; Cassanelli, Tomas; Chawla, Pragma; Chen, Tianyue; Cliche, J. -F.; Cook, Amanda\*; Cubranic, Davor; Curtin, Alice P.; Deng, Meiling; Dobbs, Matt; (Adam) Dong, Fengqiu; **Eadie, Gwendolyn**; Fandino, Mateus; Fonseca, Emmanuel; Gaensler, B. M.; Giri, Utkarsh; Good, Deborah C.; Halpern, Mark; Hill, Alex S.; Hinshaw, Gary; Josephy, Alexander; Kaczmarek, Jane F.; Kader, Zarif; Kania, Joseph W.; Kaspi, Victoria M.; Landecker, T. L.; Lang, Dustin; Leung, Calvin; Li, Dongzi; Lin, Hsiu-Hsien; Masui, Kiyoshi W.; McKinnon, Ryan; Mena-Parra, Juan; Merryfield, Marcus; Meyers, Bradley W.; Michilli, Daniele; Milutinovic, Nikola; Mirhosseini, Arash; Münchmeyer, Moritz; Naidu, Arun; Newburgh, Laura; Ng, Cherry; Patel, Chitrang; Pen, Ue-Li; Petroff, Emily; Pinsonneault-Marotte, Tristan; Pleunis, Ziggy; Rafiei-Ravandi, Masoud; Rahman, Mubdi; Ransom, Scott M.; Renard, Andre; Sanghavi, Pranav; Scholz, Paul; Shaw, J. Richard; Shin, Kaitlyn; Siegel, Seth R.; Sikora, Andrew E.; Singh, Saurabh; Smith, Kendrick M.; Stairs, Ingrid; Tan, Chia Min; Tendulkar, S. P.; Vanderlinde, Keith; Wang, Haochen; Wulf, Dallas; Zwaniga, A. V.; CHIME/FRB Collaboration (2021) “The First CHIME/FRB Fast Radio Burst Catalog”, *The Astrophysical Journal Supplement Series*, Volume 257, Issue 2, id.59, 41 pp.  
<https://doi.org/10.3847/1538-4365/ac33ab>
  25. Huppenkothen, D; **Eadie, Gwendolyn** (2020) “Teaching the Foundations of Machine Learning with Candy”, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Refereed, accepted, presented  
<https://openreview.net/forum?id=a37DEwWs1wu>
  26. Gootkin, Keyan\*; Dorn-Wallenstein, Trevor; Lomax, Jamie R.; **Eadie, Gwendolyn**; Levesque, Emily M.; Babler, Brian; Hoffman, Jennifer L.; Meade, Marilyn R.; Nordsieck, Kenneth; Wisniewski, John P. (2020) “13 yr of P Cygni Spectropolarimetry: Investigating Mass Loss through H $\alpha$ , Periodicity, and Ellipticity”, *The Astrophysical Journal*, ApJ, Volume 900, Issue 2, id. 162, 20 pp  
<https://doi.org/10.3847/1538-4357/abad32>
  27. Springford, Aaron; **Eadie, Gwendolyn M.**; Thomson, David J. (2020) “Improving the Lomb-Scargle Periodogram with the Thomson Multitaper”, *The Astronomical Journal*, ApJ, Volume 159, Issue 5, 12 pp.  
<https://doi.org/10.3847/1538-3881/ab7fa1>
  28. **Eadie, Gwendolyn**; Huppenkothen, Daniela; Springford, Aaron; McCormick, Tyler (2019) “Introducing Bayesian Analysis with m&m’s: an active learning exercise for undergraduates”, *Journal of Statistics Education*, JSE, Volume 27, Issue 2, 8 pp.  
<https://doi.org/10.1080/10691898.2019.1604106>
  29. **Eadie, Gwendolyn**; Jurić, Mario (2019) “The Cumulative Mass Profile of the Milky Way as Determined by Globular Cluster Kinematics from Gaia DR2”, *The Astrophysical Journal*, Volume 875, Issue 2, article id. 159, 9 pp.

<https://doi.org/10.3847/1538-4357/ab0f97>

30. Graham, Matthew J.; Kulkarni, S. R.; Bellm, Eric C.; Adams, Scott M.; Barbarino, Cristina; Blagorodnova, Nadejda; Bodewits, Dennis; Bolin, Bryce; Brady, Patrick R.; Cenko, S. Bradley; Chang, Chan-Kao; Coughlin, Michael W.; De, Kishalay; **Eadie, Gwendolyn**; Farnham, Tony L.; Feindt, Ulrich; Franckowiak, Anna; Fremling, Christoffer; Gezari, Suvi; Ghosh, Shaon Goldstein, Daniel A.; Golkhou, V. Zach; Goobar, Ariel; Ho, Anna Y. Q.; Huppenkothen, Daniela; Ivezić, Željko; Jones, R. Lynne; Juric, Mario; Kaplan, David L.; Kasliwal, Mansi M.; Kelley, Michael S. P.; Kupfer, Thomas; Lee, Chien-De; Lin, Hsing Wen; Lunnan, Ragnhild; Mahabal, Ashish A.; Miller, Adam A.; Ngeow, Chow-Choong; Nugent, Peter; Ofek, Eran O.; Prince, Thomas A.; Rauch, Ludwig; van Roestel, Jan; Schulze, Steve; Singer, Leo P.; Sollerman, Jesper; Taddia, Francesco; Yan, Lin; Ye, Quan-Zhi; Yu, Po-Chieh; Barlow, Tom; Bauer, James; Beck, Ron; Belicki, Justin; Biswas, Rahul; Brinnel, Valery; Brooke, Tim; Bue, Brian; Bulla, Mattia; Burruss, Rick; Connolly, Andrew; Cromer, John; Cunningham, Virginia; Dekany, Richard; Delacroix, Alex; Desai, Vandana; Duev, Dmitry A.; Feeney, Michael; Flynn, David; Frederick, Sara; Gal-Yam, Avishay; Giomi, Matteo; Groom, Steven; Hacopians, Eugene; Hale, David; Helou, George; Henning, John; Hover, David; Hillenbrand, Lynne A.; Howell, Justin; Hung, Tiara; Imel, David; Ip, Wing-Huen; Jackson, Edward; Kaspi, Shai; Kaye, Stephen; Kowalski, Marek; Kramer, Emily; Kuhn, Michael; Landry, Walter; Laher, Russ R.; Mao, Peter; Masci, Frank J.; Monkewitz, Serge; Murphy, Patrick; Nordin, Jakob; Patterson, Maria T.; Penprase, Bryan; Porter, Michael; Rebbapragada, Umaa; Reiley, Dan; Riddle, Reed; Rigault, Mickael; Rodriguez, Hector; Rusholme, Ben; van Santen, Jakob; Shupe, David L.; Smith, Roger M.; Soumagnac, Maayane T.; Stein, Robert; Surace, Jason; Szkody, Paula; Terek, Scott; Van Sistine, Angela; van Velzen, Sjoert; Vestrand, W. Thomas; Walters, Richard; Ward, Charlotte; Zhang, Chaoran; Zolkower, Jeffry (2019) "The Zwicky Transient Facility: Science Objectives", *Proceedings of the Astronomical Society of the Pacific*, PASP, Volume 131, Number 1001, 1-23 pp.  
<https://iopscience.iop.org/article/10.1088/1538-3873/ab006c/meta>
31. Bellm, Eric C.; Kulkarni, Shrinivas R.; Graham, Matthew J.; Dekany, Richard; Smith, Roger M.; Riddle, Reed; Masci, Frank J.; Helou, George; Prince, Thomas A.; Adams, Scott M.; Barbarino, C.; Barlow, Tom; Bauer, James; Beck, Ron; Belicki, Justin; Biswas, Rahul; Blagorodnova, Nadejda; Bodewits, Dennis; Bolin, Bryce; Brinnel, Valery Brooke, Tim; Bue, Brian; Bulla, Mattia; Burruss, Rick; Cenko, S. Bradley; Chang, Chan-Kao; Connolly, Andrew; Coughlin, Michael; Cromer, John; Cunningham, Virginia; De, Kishalay; Delacroix, Alex; Desai, Vandana; Duev, Dmitry A.; **Eadie, Gwendolyn**; Farnham, Tony L.; Feeney, Michael; Feindt, Ulrich; Flynn, David; Franckowiak, Anna; Frederick, S.; Fremling, C.; Gal-Yam, Avishay; Gezari, Suvi; Giomi, Matteo; Goldstein, Daniel A.; Golkhou, V. Zach; Goobar, Ariel; Groom, Steven; Hacopians, Eugene; Hale, David; Henning, John; Ho, Anna Y. Q.; Hover, David; Howell, Justin; Hung, Tiara; Huppenkothen, Daniela; Imel, David; Ip, Wing-Huen; Ivezić, Željko; Jackson, Edward; Jones, Lynne; Juric, Mario; Kasliwal, Mansi M.; Kaspi, S.; Kaye, Stephen; Kelley, Michael S. P.; Kowalski, Marek; Kramer, Emily; Kupfer, Thomas; Landry, Walter; Laher, Russ R.; Lee, Chien-De; Lin, Hsing Wen; Lin, Zhong-Yi; Lunnan, Ragnhild; Giomi, Matteo; Mahabal, Ashish; Mao, Peter; Miller, Adam A.; Monkewitz, Serge; Murphy, Patrick; Ngeow, Chow-Choong; Nordin, Jakob; Nugent, Peter; Ofek, Eran; Patterson, Maria T.; Penprase, Bryan; Porter, Michael; Rauch, Ludwig; Rebbapragada, Umaa; Reiley, Dan; Rigault, Mickael; Rodriguez, Hector; van Roestel, Jan; Rusholme, Ben; van Santen, Jakob; Schulze, S.; Shupe, David L.; Singer, Leo P.; Soumagnac, Maayane T.; Stein, Robert; Surace, Jason; Sollerman, Jesper; Szkody, Paula; Taddia, F.; Terek, Scott; Van Sistine, Angela; van Velzen, Sjoert; Vestrand, W. Thomas; Walters, Richard; Ward, Charlotte; Ye, Quan-Zhi; Yu, Po-Chieh; Yan, Lin; Zolkower, Jeffry (2019) "The Zwicky Transient Facility: System Overview, Performance, and First Results", *Publications of the Astronomical Society of the Pacific*, PASP, Volume 131, Issue 995, 19 pp.
32. **Eadie, Gwendolyn**; Keller, Benjamin; Harris, William E. (2018) "Estimating the Milky Way's Mass via Hierarchical Bayes: A Blind Test on MUGS2 Simulated Galaxies", *The Astrophysical Journal*, ApJ, Volume 865, Issue 1, article id. 72, 17 pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/aadb95/meta>
33. **Eadie, Gwendolyn M.**; Springford, Aaron; Harris, William E. (2017) "Erratum: 'Bayesian Mass Estimates of the Milky Way: Including Measurement Uncertainties with Hierarchical Bayes' 2017, ApJ, 835, 167", *The Astrophysical Journal*, ApJ, Volume 838, Issue 1, article id. 76, 3 pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/aa64db>
34. **Eadie, Gwendolyn M.**; Springford, Aaron; Harris, William E. (2017) "Bayesian Mass Estimates of the Milky Way: Including Measurement Uncertainties with Hierarchical Bayes", *The Astrophysical Journal*, ApJ, Volume 835, Issue 2, article id. 167, 9 pp.

- <https://iopscience.iop.org/article/10.3847/1538-4357/835/2/167>
35. Harris, William E.; Ciccone, Stephanie M.; **Eadie, Gwendolyn M.**; Gnedin, Oleg Y.; Geisler, Douglas; Rothberg, Barry; Bailin, Jeremy (2017) “Globular Cluster Systems in Brightest Cluster Galaxies. III: Beyond Bimodality”, *The Astrophysical Journal*, ApJ, Volume 835, Issue 1, article id. 101, 21 pp.  
<https://iopscience.iop.org/article/10.3847/1538-4357/835/1/101>
  36. **Eadie, Gwendolyn M.**; Harris, William E. (2016), “Bayesian Mass Estimates of the Milky Way: The Dark and Light Sides of Parameter Assumptions”, *The Astrophysical Journal*, ApJ, Volume 829, Issue 2, article id. 108, 18 pp.  
<https://iopscience.iop.org/article/10.3847/0004-637X/829/2/108/meta>
  37. **Eadie, Gwendolyn**; Harris, William; Widrow, Lawrence; Springford, Aaron (2016), “Tracing the Galactic Halo: Obtaining Bayesian mass estimates of the Galaxy in the presence of incomplete data”, *The General Assembly of Galaxy Halos: Structure, Origin and Evolution*, Proceedings of the International Astronomical Union, IAU Symposium, Volume 317, pp. 296-297.  
<https://doi.org/10.1017/S1743921315008625>
  38. **Eadie, Gwendolyn M.**; Harris, William E.; Widrow, Lawrence M. (2015), “Estimating the Galactic Mass Profile in the Presence of Incomplete Data”, *The Astrophysical Journal*, ApJ, Volume 806, Issue 1, article id. 54, 14 pp.  
<https://iopscience.iop.org/article/10.1088/0004-637X/806/1/54/meta>

### Submitted

1. (Sep 2024) Li, Dayi\*; **Eadie, Gwendolyn M.**; Brown, P.; Harris, W.; Abraham, R.; van Dokkum, P.; Janssens, S.R.; Berek, S.C.\*; Danieli, S.; Romanowsky, A.J.; and Speagle, J.S., “Discovery of Two Ultra-Diffuse Galaxies with Unusually Bright Globular Cluster Luminosity Functions via a Mark-Dependently Thinned Point Process (MATHPOP)”, submitted to *The AAS Journals*, (refereed)
2. (July 2024) D. J. Whitworth, S. Srinivasan, R.E. Pudritz, M.M. Mac Low, K. Pattle, R.J. Smith, A. Palau, **Gwendolyn M. Eadie**, H. Robinson, R. Pilsworth, J. Wadsley, N. Brucey, P. Hennebelle, P. Girichidis, F.A J. Marin, L. Sánchez Valido, V. Camacho, R. S. Klessen, and E. Vázquez-Semadeni, “On the relation between magnetic field strength and gas density in the interstellar medium: A multiscale analysis”, submitted to *Monthly Notices of the Royal Astronomical Society*
3. (May 2024) Esquivel, A.\*; Shen, Y.\*; Leos-Barajas, V.; **Eadie, Gwendolyn (PI)**; Medina, A.; Speagle, J.; Craiu, R., James Davenport, “Stellar flare detection from photometric data using hidden Markov models”, submitted to *The AAS Journals*, (refereed)  
<https://arxiv.org/abs/2404.13145>
4. (May 2024) Patil, Aarya\*; **Eadie, Gwendolyn**; Speagle, Joshua; Thomson, David; “Improving Harmonic Analysis using Multitapering: Precise frequency estimation of stellar oscillations using the harmonic F-test”, submitted to *The AAS Journals* (refereed)  
<https://arxiv.org/abs/2405.18509>
5. (May 2024) Sasseville, G.; Hlavacek-Larrondo, J.; Berek, S.\*; **Eadie, Gwendolyn**; Rhea, C.L.; Springford, A.; Mezcuca, M., Haggard, D. “A novel approach to understanding the link between supermassive black holes and host galaxies”, submitted to *The AAS Journals*
6. Speagle, Joshua\*; Zucker, Catherine; Beane, Angus; Cargile, Phillip A. ; Dotter, Aaron ; Johnson, Benjamin D. ; Finkbeiner, Douglas P. ; Green, Gregory M. ; Schlafly, Edward F. ; Bonaca, Ana; Conroy, Charlie; **Eadie, Gwendolyn**; Eisenstein, Daniel J.; Goodman, Alyssa A.; Han, Jiwon Jesse ; Kamdar, Harshil M. ; Mudur, Nayantara ; Naidu, Rohan ; Rix, Hans-Walter ; Saydjari, Andrew K. ; Ting, Yuan-Sen ; Zelko, Ioana A. (2022) “Deriving Stellar Properties, Distances, and Reddenings using Photometry and Astrometry with BRUTUS”, accepted to *The Astrophysical Journal*

### In Prep

1. **Eadie, Gwendolyn M.**, “Distribution functions for stellar systems: opportunities and challenges for statistics”, *Annual Reviews of Applied Statistics and Its Applications* (invited)
2. Cook, A.\*; Bingham, Derek; Stenning, David; **Eadie, Gwendolyn**; Scholz, Paul; Gaensler, Bryan, “Kth Nearest Neighbor Distance for Noisy, Nonhomogenous Spatial Point Data, with Application to Repeating Fast Radio Burst Sources from CHIME/FRB”, in preparation for *Annals of Applied Statistics* (refereed)
3. Herrera-Martin, A.\*; Craiu, R.; **Eadie, Gwendolyn**; Stenning, David, “Rare Event Classification with Weighted Logistic Regression for Identifying Repeating Fast Radio Bursts Observed with CHIME”, in preparation for *The AAS Journals* (refereed)



4. Su, Jenny\*, **Gwendolyn Eadie**, Aarya Patil, Aaron Springford, Gustavo Medina “Significantly improved period estimates for RR Lyrae stars: using the Multitaper F-test and paving the way for the Rubin/LSST survey”, in preparation for *The AAS Journals*

#### Non-Refereed Publications

1. van Dokkum, Pieter; Li, Dayi David; Abraham, Roberto ; Danieli, Shany; **Eadie, Gwendolyn M.**; Harris, William E.; Romanowsky, Aaron J. **Eadie, Gwendolyn** (2024) “Deep HST/UVIS Imaging of the Candidate Dark Galaxy CDG-1”, *Research Notes of the AAS*, 8, 135.  
<https://doi.org/10.3847/2515-5172/ad4be6>
2. **Eadie, Gwendolyn**; Speagle, Joshua\*; Cisewski-Kehe, Jessi; Forman-Mackey, Dan; Huppenkothen, Daniela; Jones, David; Springford, Aaron; Tak, Hyungsak (2023), “Practical Guidance for Bayesian Inference in Astronomy”, posted to arxiv  
<https://arxiv.org/abs/2302.04703>
3. Speagle, Joshua\* and **Gwendolyn Eadie** (2021), “Making the sum greater than its parts”, *Nature Astronomy*, Invited Comment, volume 5, pages 971–972, 2pp.  
<https://doi.org/10.1038/s41550-021-01509-7>
4. Patil, A.\*, J. Bovy, and **Gwendolyn Eadie** (2020) “Likelihood-free Inference of Chemical Homogeneity in Open Clusters”. *2020 Joint Statistical Meetings (JSM) Proceedings*, American Statistical Association (ASA), 1838-1844, 7pp.
5. **Eadie, Gwendolyn** (2019) ”Statistics for Stellar Systems: From Globular Clusters to Clusters of Galaxies.” *CHANCE - Special Issue on Astrostatistics (invited article)* 32.3: 27-34, 7pp.  
<https://chance.amstat.org/files/2019/09/CHANCE32.3.pdf>
6. **Eadie, Gwendolyn**; Bahramian, Arash; Barmby, Pauline; Craiu, Radu; Bingham, Derek; Hložek, Renée; Kavelaars, JJ; Stenning, David; Thomas, Guillaume; Thanjavur, Karun; Bovy, Jo; Cami, Jan; Carlberg, Ray; Lawler, Sam; Liu, Adrian; Ngo, Henry; Rahman, Mubdi; Rupen, Michael, (2019) ”Astrostatistics in Canada”, *Canadian Long Range Plan for Astronomy and Astrophysics White Papers, LRP2020, id.10*, 11 pp.  
<https://www.zenodo.org/communities/lrp2020>
7. Hall, Pat; Balogh, Michael; Barmby, Pauline; Blakeslee, John; Bovy, Jo; Bradley, Colin; Bridges, Terry; Cami, Jan; Chapman, Scott; Chateaufort, Francois; Cowan, Nick; Cote, Patrick; Damjanov, Ivana; Drout, Maria; **Eadie, Gwendolyn**; Ellison, Aara; Ferrarese, Laura; Fraser, Wesley; Gaensler, Bryan; Gallagher, Sarah Haggard, Daryl; Hénault-Brunet, Vincent; Herwig, Falk; Hill, Alexis; Hlavacek-Larrondo, Julie; Hudson, Mike; Johnson, Matt; Khatu, Viraja; Laporte, Chervin; McConnachie, Alan; McNamara, Brian; Mohammad, Faizan; Muzzin, Adam; Neilson, Hilding; Nemec, James; O’dea, Christopher; Parker, Laura; Patton, David; Percival, Will; Rogerson, Jesse; Ruan, John J.; Sakara, Charli; Sawicki, Marcin; Simons, Doug; Sivakoff, Greg; Szeto, Kei; Tesfamariam, Solomon; Thanjavur, Karun; Thibault, Simon; Thomas, Guillaume; Van Waerbeke, Ludovic; Venn, Kim; Webb, Tracy; Willis, Jon; Woo, Joanna, (2019) ”The Maunakea Spectroscopic Explorer”, *Canadian Long Range Plan for Astronomy and Astrophysics White Papers, LRP2020, id.30*, 13 pp.  
<https://www.zenodo.org/communities/lrp2020>
8. Hénault-Brunet, Vincent; Bahramian, Arash; Côté, Patrick; **Eadie, Gwendolyn**; Haggard, Daryl; Harris, Bill; Heinke, Craig; Lamb, Masen; Pudritz, Ralph; Roediger, Joel; Sills, Alison; Venn, Kim; Webb, Jeremy J.; Woods, Tyrone E. ”Star Clusters Near and Far”, *Canadian Long Range Plan for Astronomy and Astrophysics White Papers, LRP2020, id.24*, 10 pp.,  
<https://www.zenodo.org/communities/lrp2020>
9. Hložek, Renee; Albert, Justin; Balogh, Michael; Barmby, Pauline; Blakeslee, John; Bovy, Jo; Cote, Patrick; Cote, Stephanie; Di Francesco, James; Drout, Maria; **Eadie, Gwendolyn**; Fabbro, Sebastien; Fraser, Wesley; Gaensler, Bryan; Gallagher, Sarah; Graham, Melissa; Haggard, Daryl; Hall, Pat; Heinke, Craig; Hudson, Michael Hutchings, John; Kavelaars, JJ; Lawler, Sam; Leahy, Denis; McConnachie, Alan; Percival, Will; Pritchet, Chris; Rahman, Mubdi; Ruan, John; Sawicki, Marcin; Sivakoff, Greg; Taylor, James; Thanjavur, Karun; Wiegert, Paul, ”Science with the Large Synoptic Telescope, (2019)*Canadian Long Range Plan for Astronomy and Astrophysics White Papers, LRP2020, id.51*, 10 pp.  
<https://www.zenodo.org/communities/lrp2020>
10. Ngo, Henry; Kirk, Helen; Brown, Toby; Woods, Tyrone E.; **Eadie, Gwendolyn**; Lawler, Samantha; Spencer, Locke,

- (2019) "Opportunities and Outcomes for Postdocs in Canada", Canadian Long Range Plan for Astronomy and Astrophysics White Papers, LRP2020, id.63, 10 pp.  
<https://www.zenodo.org/communities/lrp2020>
11. Venn, Kim; Fabbro, Sebastien; Liu, Adrian; Hezaveh, Yashar; Levasseur, Laurence; **Eadie, Gwendolyn**; Ellison, Sara; Woo, Joanna; Kavelaars, JJ; Moo Yi, Kwang; Hlozek, Renee; Boyv, Jo; Teimoorinia, Hossen; Ravanbakhsh, Siamak; Spencer, Locke (2019) "Machine Learning Advantages in Canadian Astrophysics", *Canadian Long Range Plan for Astronomy and Astrophysics White Papers*, LRP2020, id.5, 10 pp.  
<https://www.zenodo.org/communities/lrp2020>
  12. **Eadie, Gwendolyn**; Loredo, Tom; Mahabal, Ashish A.; Siemiginowska, Aneta; Feigelson, Eric D.; Ford, Eric; Djorgovski, S. G.; Graham, Matthew; Ivezić, Zeljko; Borne, Kirk; Cisewski-Kehe, Jessi; Peek, Joshua E. Goldston; Schafer, Chad; Young, C. Alex, (2019) "Realizing the potential of astrostatistics and astroinformatics", *Astro2020: Decadal Survey on Astronomy and Astrophysics*, APC white papers, no. 233; *Bulletin of the American Astronomical Society*, Vol. 51, Issue 7, id. 233, 14pp.
  13. Siemiginowska, Aneta; **Eadie, Gwendolyn**; Czekala, Ian; Feigelson, Eric; Ford, Eric B.; Kashyap, Vinay; Kuhn, Michael; Loredo, Tom; Ntampaka, Michelle; Stevens, Abbie; Avelino, Arturo; Borne, Kirk; Budavari, Tamas; Burkhart, Blakesley; Cisewski-Kehe, Jessi; Civano, Francesca; Chilingarian, Igor; van Dyk, David A.; Fabbiano, Giuseppina; Finkbeiner, Douglas P. Foreman-Mackey, Daniel; Freeman, Peter; Fruscione, Antonella; Goodman, Alyssa A.; Graham, Matthew; Guenther, Hans Moritz; Hakkila, Jon; Hernquist, Lars; Huppenkothen, Daniela; James, David J.; Law, Casey; Lazio, Joseph; Lee, Thomas; López-Morales, Mercedes; Mahabal, Ashish A.; Mandel, Kaisey; Meng, Xiao-Li; Moustakas, John; Muna, Demitri; Peek, J. E. G.; Richards, Gordon; Portillo, Stephen K. N.; Scargle, Jeff; de Souza, Rafael S.; Speagle, Joshua S.; Stassun, Keivan G.; Stenning, David C.; Taylor, Stephen R.; Tremblay, Grant R.; Trimble, Virginia; Yanamandra-Fisher, Padma A.; Young, C. Alex, (2019) "The Next Decade of Astroinformatics and Astrostatistics", *Astro2020: Decadal Survey on Astronomy and Astrophysics*, science white papers, no. 355; *Bulletin of the American Astronomical Society*, Vol. 51, Issue 3, id. 355, 15pp.
  14. Graham, M. L.; Bellm, E.; Bektsev, D.; **Eadie, G.**; Huppenkothen, D.; Davenport, J. R. A.; Fremling, C.; Sharma, Y.; Kulkarni, S. R.; Walters, R.; Blagorodnova, N.; Neill, J.; Miller, A. A.; Taddia, F.; Lunnan, R.; Taggart, K.; Perley, D. A.; Goobar, A., (2018) "ZTF Bright Transient Survey classifications", *The Astronomer's Telegram*, No. 11745, 1pp.

## Talks and Presentations

### Invited Lectures, Colloquia, and Seminars

Oct 2024	STAMPS (STAtistical Methods for the Physical Sciences Research Center), Carnegie Mellon University, Pittsburg, PA ( <b>Colloquium</b> )
Sep 2023	University of Minnesota, Minneapolis, MN ( <b>Colloquium</b> )
Apr 2023	University of Surrey, Guildford, UK ( <b>Astronomy Seminar</b> )
Mar 2022 – Mar 2023	————— <i>parental leave</i> —————
Jan 2022	Université de Montréal's Astrophysics Research Group ( <b>Seminar Series</b> )
Dec 2021	David A. Dunlap Dept. of Astronomy & Astrophysics, University of Toronto ( <b>Colloquium</b> )
Oct 2021	Department of Statistical Sciences, University of Toronto ( <b>Seminar Series</b> )
Apr 2021	Dominion Radio Astronomical Observatory, Okanagan Falls, BC ( <b>Seminar Series</b> )
Dec 2020	Department of Astronomy and Astrophysics, University of California Santa Cruz, Santa Cruz, CA ( <b>Galaxy-IGM Seminar</b> )
Nov 2020	Women in Data Science Symposium, University of Minnesota, MN ( <b>Invited Speaker &amp; Panelist</b> )
Oct 2020	Department of Physics & Astronomy, Bishops University, Sherbrooke, QC ( <b>Colloquium</b> )
Aug 2020	Center for Astrophysics—Harvard Smithsonian, Cambridge, MA ( <b>Seminar</b> )
Feb 2020	Waterloo Centre for Astrophysics, University of Waterloo, Waterloo, ON ( <b>Seminar</b> )
Jan 2020	Centre for Computational Astrophysics, Flatiron Institute, New York, NY ( <b>Colloquium</b> )
Dec 2019	Dept. of Physics and Astronomy, University of Oklahoma ( <b>Colloquium</b> )
Nov 2019	Royal Military College, Kingston, ON ( <b>Colloquium</b> )
Nov 2019	Dept. of Physics, Eng. Physics, & Astronomy, Queen's University, Kingston, ON ( <b>Seminar</b> )

Oct 2019	Dominion Astronomical Observatory Colloquium, NRC Herzberg, Victoria, BC <b>(Colloquium)</b>
May 2019	eScience Institute, University of Washington, Seattle, WA <b>(Community Seminar)</b>
Feb 2019	Department of Astronomy & Astrophysics, Pennsylvania State University, State College, PA <b>(Colloquium)</b>
Jan 2019	Department of Statistical Sciences, University of Toronto, Toronto, ON <b>(Seminar)</b>
Sep 2018	Department of Statistics and Actuarial Science, Simon Fraser University, Burnaby, BC <b>(Seminar)</b>
Apr 2019	eScience Institute Advanced Topics in Data Science Seminar, University of Washington, Seattle, WA <b>(Guest Instructor)</b>
May 2018	ASTR 324 Lecture on Bayesian Statistics, University of Washington, Seattle, WA <b>(Guest Lecturer)</b>
May 2018	Department of Astronomy, University of Washington, Seattle, WA <b>(Colloquium)</b>
Mar 2018	ASTR 598 Lectures on Hierarchical Bayes, University of Washington, Seattle, WA <b>(Guest Lecturer)</b>
Oct 2017	Department of Physics, Simon Fraser University, Burnaby, BC <b>(Cosmology Seminar)</b>
Sep 2016	Department of Physics and Astronomy, University of British Columbia, Vancouver, BC <b>(Colloquium)</b>
Sep 2016	Herzberg Institute for Astrophysics, NRC Herzberg, Saanich, BC <b>(Colloquium)</b>
Oct 2015	Department of Physics & Astronomy, University of Waterloo, Waterloo, ON <b>(Seminar)</b>
Mar 2015	Topics in Astrostatistics Seminar, Harvard University, Boston, NY (via Skype), <b>(Skype Seminar)</b>

#### Invited Conference Presentations

Jan 2025	(declined due to family obligations and teaching), AI/ML applications to Astronomy and Astrophysics at the Inter-University Centre for Astronomy and Astrophysics, Pune, India
May 2024	Keynote, Canadian Association of Physicists 2024 Congress
July 2023	Symposium on Computational Advances in Astrophysics and Cosmology (DTP & DNP)
May 2023	Women in Physics Canada (WIPC) 2023 Conference, Winnipeg, MN (Workshop)
Mar 2022 – Mar 2023	International Mathematics Society Spring Research Conference, Banff, AB
Aug 2021	————— <i>parental leave</i> —————
Feb 2021	Joint Statistical Meetings 2021, online due to covid
Jan 2020	SEDS Conference: Ascension 2021
Nov.4-7 2019	Students for the Exploration and Development of Space (SEDS), Toronto, ON
June 2019	Canadian Undergraduate Women in Physics Conference, Toronto, ON <b>(Invited Panelist)</b>
Aug 2018	1st IAA-CSIC Severo Ochoa School on Statistics, Data Mining and Machine Learning
Jul 2018	Instituto de Astrofísica de Andalucía, Granada, Spain, <b>(full day workshop)</b>
Aug 2018	Open Digital Infrastructure in Astrophysics Conference
Jul 2018	Kavli Institute for Theoretical Physics, Santa Barbara, CA
Jun 2018	Joint Statistical Meetings 2018, Vancouver, BC
May 2018	Institute of Mathematical Statistics Annual Meeting on Probability & Statistics, Vilnius, Lithuania
Jan 2017	Joint Research Conference on Statistics in Quality, Industry and Technology, Sante Fe, NM
Aug 2017	Canadian Astronomical Society AGM, Victoria, BC <b>(Plaskett Prize Lecture)</b>
July 2015	229th Meeting of the American Astronomical Society, Grapevine, TX <b>(Press Conference)</b>
	Joint Statistical Meetings, Baltimore, MD <b>(invited poster)</b>
	Joint Statistical Meetings, Seattle, WA

#### Contributed Conference Presentations

*NOTE: all talks unless noted otherwise*

Aug 2024	Joint Statistical Meetings 2024, Portland, OR
Jul 2024	8th TESS/15th Kepler Asteroseismic Science Consortium Workshop, Porto, Portugal <b>Poster</b>
Aug 2023	Great Lakes Clusters & Streams Conference, Univ. of Michigan, Ann Arbor, MI ( <b>talk &amp; workshop</b> )
Mar 2022 – Mar 2023	————— <i>parental leave</i> —————
June 2021	Canadian Astronomical Society (CASCA) AGM, ( <b>poster and lightning talk</b> )
Jun 2021	Statistical Challenges in Modern Astronomy VII ( <b>poster</b> )
Aug 2020	Joint Statistical Meetings 2020, online due to covid
Aug 2019	Joint Statistical Meetings, Denver, CO
Jun 2019	CASCA AGM, Montreal, QB
Jan 2019	233rd Meeting of the American Astronomical Society (AAS)
May 2017	CASCA AGM, Edmonton, AB ( <b>2 talks: 1 research, 1 education</b> )
Jan 2017	229th Meeting of the AAS, Grapevine, TX ( <b>dissertation talk</b> )
Jun 2016	Statistical Challenges in Modern Astronomy VI, Pittsburg, PA ( <b>talk and poster</b> )
May 2016	Spring Symposium, Space Telescope Science Institute, Baltimore, MD ( <b>poster</b> )
Jun 2016	CASCA AGM, Winnipeg, ON
May 2015	CASCA AGM, Hamilton, ON
Aug 2015	International Astronomical Union General Assembly, Meeting #29, Honolulu, HI ( <b>poster</b> )
Jun 2014	CASCA AGM, Quebec City, QB

#### Mentoring Talks

2024	”Designing Presentation Slides and Posters”, Summer Undergraduate Research Program, DADDAA ( <b>seminar</b> )
Jun 2023	”How to give effective talks”, Summer Undergraduate Research Program, DADDAA ( <b>seminar</b> )
Mar 2022 – Mar 2023	————— <i>parental leave</i> —————
Oct 2021	”How to Give Talks”, Astro Tea, DADDAA ( <b>seminar</b> )
Jul 2021	Summer Undergraduate Research Program, DADDAA ( <b>Webinar</b> )
Sep 2020	”Developing a Teaching Dossier”, Dunlap Institute, DADDAA ( <b>Training and Mentoring Session</b> )
Aug 2020	”How to Give Talks”, Summer Undergraduate Research Program Lecture, DADDAA ( <b>seminar</b> )

#### Media, Public Outreach, and Public Talks

Oct 2023	Q&A Feature, <i>Significance Magazine</i> , “Gwen Eadie: The University of Toronto astrostatistician ” started out as a figure skater” <a href="https://doi.org/10.1093/jrssig/qmad085">https://doi.org/10.1093/jrssig/qmad085</a>
Mar 2022 – Mar 2023	————— <i>parental leave</i> —————
July 2020	Invited Speaker, Star Talk: Statistics Meets Astronomy, Astronomy & Space Exploration Society (undergraduate run), University of Toronto
Apr. 2020	Public Talk, Cosmos from your Couch, Dunlap Institute, Toronto, ON
Oct. 2019	Public Talk, Nerd Nite, Victoria, BC
Oct. 2019	Interview with Chris Sasaki, ”In the age of (really) big data, astrostatistician Gwen Eadie is exploring the cosmos with telescopes and statistics”, A&S News, published online Nov. 1, 2019.
Sep. 2016	Invited Speaker, Thinklandia Festival, Victoria, BC
Sep. 2016	Invited Speaker, McMaster Science Café, McMaster University, Hamilton, ON
2014 – 2016	Volunteer Telescope Operator, Westfield Heritage Village, McMaster Sidewalk Astronomy, Rockton, ON

Jun 2015, June 2014	Invited Speaker, Niagara Chapter of the Royal Astronomical Society of Canada, St. Catherine's, ON
Aug. 2014	Invited Speaker on Public Outreach, Centre for Research in Astrophysics Quebec, Montreal, QB
July 2013, Dec. 2013 2011 – 2017	Guest Speaker, Queen's Observatory Open House, Queen's University, Kingston, ON Volunteer Magazine Columnist, Vista Magazine → the monthly publication of the Seniors Association Kingston Region, Kingston, ON. Over 40 articles written

## Memberships in Scientific Collaborations

2024 – present	UNIONS
2024 – present	LSST-DA
2024 – present	DESI (external collaborator)
2022 – present	GigaBIT
2021 – present	CHIME/FRB

## Select Service, Administrative Positions, and Professional Affiliations

(sensitive positions removed)

### Within the University of Toronto

DADDAA = David A. Dunlap Department of Astronomy & Astrophysics

DoSS = Department of Statistical Sciences

May 2023 – present	<b>Colloquium Organizing Committee</b> , DADDAA
Sep 2023 – Jun 2024	<b>Local Organizing Committee</b> , “STATSTRO” Workshop, hosted by UofT, DADDAA and DoSS
Sep 2023 – Jun 2024	<b>Local Organizing Committee</b> , CASCA 2024 (hosted by Toronto & York), DADDAA
Sep 2023 – Jun 2024	<b>Organizer</b> , CASCA 2024 Harvey Richer Special Memorial Session
May 2023 – Apr 2024	<b>Organizing Committee</b> , Applied Research & Education Seminar (ARES) Seminar, DoSS
Sep 2023 – Feb 2024	<b>Local Organizing Committee</b> , “Globular Clusters and Their Tidal Tails” Workshop, Clusters and Tidal Tails (hosted by Toronto), DADDAA
Apr 2023	<b>Co-Organizer</b> , 3rd Annual Stellar Stats Workshop, DADDAA/DoSS
Mar 2022 – Mar 2023	————— <i>parental leave</i> —————
Oct 2021 – Mar 2022	<b>Co-Organizer</b> , 2nd Annual Stellar Stats Workshop, DADDAA/DoSS
Sep 2020 – Mar 2022	<b>Undergraduate Curriculum Committee</b> , DADDAA
Mar 2020 – Mar 2022	<b>CANSSI-Ontario Faculty Liaison</b> , DADDAA
Aug 2020 – Mar 2022	<b>Organizing Committee</b> , Applied Research (ARES) Seminar, DoSS
Oct 2020 – May 2021	<b>Co-Organizer</b> , (inaugural) Stellar Stats Workshop, DADDAA/DoSS
Sep. 2019 – Oct 2020	<b>Graduate Committee member</b> , DoSS

### Outside the University of Toronto

Society memberships:

2024 – present	Canadian Association of Physicists (CAP)
2020 – present	Statistical Society of Canada (SSC)
2019 – present	International Astrostatistics Association (IAA)
2016 – present	American Astronomical Society (AAS) → also a member of the <i>Working Group on Astroinformatics and Astrostatistics (WGAA)</i>
2014 – present	American Statistical Association (ASA)

Also a member of the following ASA sections and interest groups:

- Astrostatistics Interest Group (AIG) of the ASA
- Section on Physics and Engineering Sciences (SPES)
- Section on Bayesian Statistical Science
- Section on Statistics and Data Science Education

2013 – present Canadian Astronomical Society (CASCA)

### Service and Administration

- Aug 2024 – present **Invited Member**, AAS Task Force on developing a policy for Artificial Intelligence
- Jun 2024 **Chair**, Astrostatistics & Astroinformatics Session, CASCA 2024
- Spring 2024 **Review Panel**, Cycle 32 Hubble Space Telescope Proposals
- 2024 – present **Elected Council Member**, International Astrostatistics Association
- 2023 – present **Chair-Elect**, Astrostatistics Interest Group, American Statistical Association
- 2023 – present **Committee Member**, ad hoc Strategic Planning Committee, SSC
- 2023 – present **Associate Editor**, Canadian Journal of Physics
- 2023 – present **Chair**, WGAA of the AAS
- 2019 – present **Scientific Organizing Committee**, Astrostatistics in Canada and Beyond, Banff International Research Station Workshop
- Aug 2023 **Session Chair**, “True North Strong and Amazing at Astrostatistics!”, Joint Statistical Meetings, Toronto, ON
- Mar 2022 – Mar 2023 ————— *parental leave* —————
- 2021 – 2022 **Co-chair**, WGAA of the AAS
- Jan 2021 **Co-organizer and Co-Chair**, WGAA Splinter Session on Education in Astrostatistics & Astroinformatics at the AAS Meeting
- 2018 – 2021 **Steering Committee**, WGAA of the AAS
- 2019 – 2021 **Founding Member**, CASCA Postdoc Committee
- Jan 2020 **Co-organizer and Chair**, WGAA Splinter Session at the AAS Meeting
- 2020 **Co-organizer**, “Machine Learning in Astronomy: Possibilities and Pitfalls”, International Astronomical Union General Assembly Symposium, Busan, Republic of Korea
- Co-wrote proposal, proposal accepted June 2020
  - Symposium postponed to August 2022 due to covid, could not attend due to mat leave at the Joint Statistical Meetings (JSM) 2020
- Aug 2020
- **Session Organizer**, “Statistical Inference for Solar and Geophysical Data”
  - **Session Chair**, “Astronomical(ly) Big Data for Statisticians”
  - **Session Organizer**, “Astrostatistics Interest Group: Student Paper Award”
- 2019 – 2020 **Program Chair**, AIG, ASA
- Coordinated the submission of six session proposals for the annual Joint Statistical Meetings 2020 (all accepted)
- 2018 – 2019 **Program Chair-Elect**, Astrostatistics Interest Group, ASA
- 2018 – 2019 **Postdoc Representative**, Department of Astronomy, University of Washington (UW)
- 2018 – 2019 **Chair**, Visitors Committee, DIRAC Institute, Department of Astronomy, UW
- 2017 – 2018 **Co-organizer**, Invited session, Joint Statistical Meetings (JSM) 2018, Vancouver, BC
- Jul 2017 **Session Chair**, Statistical Education Session, JSM 2017, Baltimore, MD
- 2013 – 2017 **President and Executive Committee Member**, Graduate Women in Physics & Astronomy (GWIPA), Department of Physics & Astronomy, McMaster University
- Organized annual “Girls in Science Day” for Grade 10 girls from greater Toronto area
- Aug. 2016 **Session Chair**, Topic-Contributed Session, Section on Physical & Engineering Sciences, JSM 2016, Chicago, IL
- 2014 – 2015 **Graduate Student Representative**, Local Organizing Committee, CASCA Annual Meeting
- Organized, Chaired Graduate Student Workshop, invited guest speaker
  - Designed conference program

**Teaching****Undergraduate Courses**

<b>Course</b>	<b>Semester(s)</b>	<b>Enroll.</b>	<b>Title/Description</b>	<b>Teaching Methods/Approaches</b>
STA220	Fall 2020 Fall 2021	209 151	<b>The Practice of Statistics I</b> <i>Exploratory data analysis for univariate and bivariate data; sampling and experimental designs; basic probability models; estimation and tests of hypothesis in one-sample and comparative two-sample studies</i>	Synchronous online course (due to covid); partial flipped-classroom approach combined with traditional lectures; think-pair-share; project-based learning.
AST222	Winter 2021 Winter 2022	~30 ~30	<b>Galaxies &amp; Cosmology</b> <i>Astrophysics of stellar systems, galaxies, and the Universe, their structure, formation, and evolution.</i>	For each instance of this course, I gave two <b>guest lectures</b> on basic statistics concepts, and designed one homework assignment
AST199	Fall 2023	24	<b>Astronomy at the Frontier</b> <i>Seminar course in astronomy for non-science majors; general scientific literacy; selected topics in current astronomy, cosmology, and space science.</i>	project-based learning, peer-instruction, flipped classroom, think-pair-share
STA442	Winter 2024	27	<b>Methods of Applied Statistics</b> <i>Diagnostics and residuals in linear models, introduction to generalized linear models, graphical methods, random effects models, designed experiments, model selection, analysis of censored data.</i>	problem-based learning, experiential learning, active learning strategies

**Graduate Courses**

<b>Course</b>	<b>Semester(s)</b>	<b>Enroll.</b>	<b>Title/Description</b>	<b>Teaching Methods/Approaches</b>
JAS1101	Winter 2020 Winter 2021 Winter 2022	9 9 6	<b>Topics in Astrostatistics</b> <i>regression, hierarchical Bayesian analysis, time series analysis, cluster analysis, generalized linear models, in the context of galaxies, globular clusters, exoplanets, and stellar populations.</i>	Project-based learning, interdisciplinary collaboration, peer-instruction
STA2101	Fall 2023	29*	<b>Methods of Applied Statistics I</b> <i>planning of studies, review of linear models; analysis of random and mixed effects models; model building and model selection; theory and methods for generalized linear models; nonparametric regression.</i>	Problem-based learning, group work, real-world applications, think-pair-share
AST1501	Fall 2023		<b>Research Course</b> <i>introduction to statistics</i>	Problem-based learning, think-pair-share, <b>two guest lectures</b>