Rose A. Finn

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EDUCATION

University of Virginia	Astronomy-Physics	B.A. 1992
Dartmouth College	Physics	M.S. 1994
University of Arizona	Astronomy	Ph.D. 2003

APPOINTMENTS

Siena College	Professor of Physics	2016-present
Siena College	Associate Professor of Physics	2011-2016
Siena College	Assistant Professor of Physics	2005-2011
University of Massachusetts	NSF Astronomy & Astrophysics Postdoctoral Fellow	2003-2005
Albany Academy for Girls	Science Teacher	1994-1997

TEACHING

Albany Academy for Girls 1994-1997

Instructed middle and high school lab-based science classes in Earth Science, Physical Science, Conceptual and A.P. Physics.

University of Arizona

- *Project Astro Partner*, Tucson Unified School District 1997-1999
- *Volunteer Instructor*, Cholla High School Summer Institute Summer 1998, 1999
- *Counselor*, Astronomy Camp for Teachers Summer 1998, 1999

University of Massachusetts 2003-2005

Designed and taught a project-based course consisting of two modules on distance indicators to undergraduates from the University of Massachusetts and Amherst, Mount Holyoke, Hampshire and Smith Colleges during spring semester of 2004 and 2005.

Siena College 2005-Present

- *Courses Taught*
  1. PHYS 010 Astronomy
  2. PHYS 101 Introductory Astronomy for Scientists
  3. PHYS 110 Physics IA
  4. PHYS 120 Physics IIA
  5. PHYS 130 Physics I
  6. PHYS 140 Physics II
  7. PHYS I/II Lab
  8. PHYS 250 Computational Physics
  9. PHYS 400 Topics in Astrophysics
  10. PHYS 310 Mechanics I
- *Courses Developed*
  1. ASTR 110 – Introductory Astronomy for Scientists
  2. ASTR/PHYS 390 – Astrophysics I
  3. ASTR/PHYS 392 – Astrophysics II
  4. ASTR 380 – Observational Astronomy

RESEARCH

Refereed Publications (reverse chronological)

1. **Finn, Rose A.** and Vulcani, Benedetta and Rudnick, Gregory and Balogh, Michael L. and Desai, Vandana and Jablonka, Pascale and Zaritsky, Dennis,"The Local Cluster Survey II: disc-dominated cluster galaxies with suppressed star formation", MNRAS, 2023, 521, 3, 4614-4629,

2. Castignani G, Vulcani B, **Finn R**, Combes F, Jablonka P, Rudnick G, Zaritsky D, Whalen K, Conger K, De Lucia G, Desai V, Koopmann R, Moustakas J, Norman D, Townsend M. Virgo Filaments. II. Catalog and First Results on the Effect of Filaments on Galaxy Properties. The Astrophysical Journal Supplement Series. 2022 April 1; 259:43. Available from: https://ui.adsabs.harvard.edu/abs/2022ApJS..259...43C DOI: 10.3847/1538-4365/ac45f7

3. Cooper, Jennifer R. and Rudnick, Gregory H. and Brammer, Gabriel G. and Desjardins, Tyler and Mann, Justin L. and Weiner, Benjamin J. and Aragón-Salamanca, Alfonso and De Lucia, Gabriella and Desai, Vandana and **Finn, Rose A.** and Jablonka, Pascale and Jaffé, Yara L. and Moustakas, John and Spérone-Longin, Damien and Teplitz, Harry I. and Vulcani, Benedetta and Zaritsky, Dennis, "H α-based star formation rates in and around z 0.5 EDisCS clusters", MNRAS, 2022,509, 4, 5382-5398

4. Castignani G, Combes F, Jablonka P, **Finn R**, Rudnick G, Vulcani B, Desai V, Zaritsky D, Salomé P. Virgo filaments. I. Processing of gas in cosmological filaments around the Virgo cluster. Astronomy and Astrophysics. 2022 January 1; 657:A9. Available from: https://ui.adsabs.harvard.edu/abs/2022A&A...657A...9C DOI: 10.1051/0004-6361/202040141

5. Spérone-Longin, D. and Jablonka, P. and Combes, F. and Castignani, G. and Krips, M. and Rudnick, G. and Desjardins, T. and Zaritsky, D. and **Finn, R. A.** and De Lucia, G. and Desai, V., "SEEDisCS. II. Molecular gas in galaxy clusters and their large-scale structure: low gas fraction galaxies, the case of CL1301.7−1139", A&A, 2021, 654,A69, doi = 10.1051/0004-6361/202140941

6. Spérone-Longin, D. and Jablonka, P. andCombes, F. and Castignani, G. and Krips, M. and Rudnick, G. and Zaritsky, D. and Finn, R. A. and DeLucia, G. and Desai, V., "SEEDisCS. I. Molecular gas in galaxy clusters and their large-scale structure: The case of CL1411.1−1148 at z$\sim$ 0.5", A&A, 2021,647, A156, doi = 10.1051/0004-6361/202038904

7. Durbala A, **Finn R**, Crone Odekon M, Haynes M, Koopmann R, O'Donoghue A. The ALFALFA-SDSS Galaxy Catalog. The Astronomical Journal. 2020 December 1; 160:271. Available from: https://ui.adsabs.harvard.edu/abs/2020AJ....160..271D DOI: 10.3847/1538-3881/abc018

8. Brunker, Samantha W., Salzer, John J.,Janowiecki, Steven, **Finn, Rose A.**, and Helou, George, title = "Properties of the KISS Green Pea Galaxies", Astrophysical Journal, 2020, 898, 1, 68, doi = 10.3847/1538-4357/ab9ec0

9. Just, Dennis W. and Kirby, Matthew and Zaritsky, Dennis and Rudnick, Gregory and Desjardins, Tyler and Cool, Richard and Moustakas, John and Clowe, Douglas and De Lucia, Gabriella and Aragón-Salamanca, Alfonso and Desai, Vandana and **Finn, Rose** and

Halliday, Claire and Jablonka, Pascale and Mann, Justin and Poggianti, Bianca and Bian, Fu-Yan and Liebst, Kelley,"Preprocessing among the Infalling Galaxy Population of EDisCS Clusters", Astrophysical Journal, 2019, 885,1, 6, doi = 10.3847/1538-4357/ab44a0

10. **Finn R. A.**, Desai V, Rudnick G, Balogh M, Haynes M, Jablonka P, Koopmann R, Moustakas J, Peng C, Poggianti B, Rines K, Zaritsky D. The Local Cluster Survey. I. Evidence of Outside-in Quenching in Dense Environments. The Astrophysical Journal. 2018 August 1; 862:149. Available from: https://ui.adsabs.harvard.edu/abs/2018ApJ...862..149F

11. Cantale, N. and Jablonka, P. and Courbin, F. and Rudnick, G. and Zaritsky, D. and Meylan, G. and Desai, V. and De Lucia, G. and Aragon-Salamanca, A. and Poggianti, B. M. and **Finn, R.** and Simard, L., Disc colours in field and cluster spiral galaxies at 0.5 $< z <$ 0.8, 2016, arXiv.1601.05192

12. Odekon, M. C. and Koopmann, R. A. and Haynes, M. P. and **Finn, R. A.** and McGowan, C. and Micula, A. and Reed, L. and Giovanelli, R. and Hallenbeck, G. "The HI Content of Galaxies in Groups as Measured by ALFALFA", 2015, *Astrophysical Journal*, submitted

13. de los Reyes, M. A. and Ly, C. and Lee, J. C. and Salim, S. and Peeples, M. S. and Momcheva, I. and Feddersen, J. and Dale, D. A. and Ouchi, M. and Ono, Y. and **Finn, R.**, "The Relationship between Stellar Mass, Gas Metallicity, and Star Formation Rate for Hα-Selected Galaxies at z $\sim$ 0.8 from the NewHα Survey", 2015, *Astronomical Journal*, 149, 79

14. Jablonka, P. and Combes, F. and Rines, K. and **Finn, R.** and Welch, T., "Cold gas in the inner regions of intermediate redshift clusters", 2013, *Astronomy & Astrophysics*, 557, 103

15. Momcheva, I. G. and Lee, J. C. and Ly, C. and Salim, S. and Dale, D. A. and Ouchi, M. and **Finn, R.** and Ono, Y., "Nebular Attenuation in Hα-selected Star-forming Galaxies at z = 0.8 from the NewHα Survey", 2013, *Astronomical Journal*, 145, 47

16. Nakajima, K. and Ouchi, M. and Shimasaku, K. and Ono, Y. and Lee, J. C. and Foucaud, S. and Ly, C. and Dale, D. A. and Salim, S. and **Finn, R.** and Almaini, O. and Okamura, S. , "Average Metallicity and Star Formation Rate of Lyα Emitters Probed by a Triple Narrowband Survey", 2012, *Astrophysical Journal*, 745, 12

17. Ly, C. and Lee, J. C. and Dale, D. A., and Salim, S. and Momcheva, I. and Staudaher, S. and Moore, C. and **Finn, R. A.** "The Hα Luminosity Function and Star Formation Rate Volumne Density at $z \simeq 0.8$ From the NEWFIRM Hα Survey", 2010 *Astrophysical Journal*, 726, 109

18. **Finn, R. A.** and Desai, V. and Rudnick, G. and Poggianti, B. and Bell, E. F. and Hinz, J. and Jablonka, P. and Milvang-Jensen, B. and Moustakas, J. and Rines, K. and Zaritsky, D. "Dust-Obscured Star-Formation in Intermediate Redshift Galaxy Clusters", 2010, *Astrophysical Journal*, 720, 87

19. Poggianti, B. M. and De Lucia, G. and Varela, J. and Aragon-Salamanca, A. and **Finn, R.** and Desai, V. and von der Linden, A. and White, S. D. M., "The evolution of the density of galaxy clusters and groups: denser environments at higher redshifts", 2010, MNRAS, 405, 995

20. Vulcani, B. and Poggianti, B. M. and **Finn, R. A.** and Rudnick, G. and Desai, V. and Bamford, S., "Comparing the Relation Between Star Formation and Galaxy Mass in Different Environments", 2010, *Astrophysical Journal Letters*, 710, L1

21. Poggianti, B. M. and Desai, V. and **Finn, R.** and Bamford, S. and De Lucia, G. and Varela, J. and Aragón-Salamanca, A. and Halliday, C. and Noll, S. and Saglia, R. and Zaritsky, D. and Best, P. and Clowe, D. and Milvang-Jensen, B. and Jablonka, P. and Pelló, R. and Rudnick, G. and Simard, L. and von der Linden, A. and White, S., "The Relation between Star Formation, Morphology, and Local Density in High-Redshift Clusters and Groups" 2008, *Astrophysical Journal*, 684, 888
22. **Finn, R. A.**, Balogh, M., Zaritsky, D., Miller, C. J., Nichol, R. C., "Mass and Redshift Dependence of Star Formation in Relaxed Galaxy Clusters", 2008, *Astrophysical Journal*, 679, 279
23. Jacobi, I. C. and Newberg, H. J. and Broder, D. and **Finn, R. A.** and Milano, A. J. and Newberg, L. A. and Weatherwax, A. T. and Whittet, D. C. B., "Effect of Night Laboratories on Learning Objectives for a Nonmajor Astronomy Class" 2008, *Astronomy Education Review* 7, 66
24. Rines, K., **Finn, R. A.**, & Vikhlinin, A., "An Extremely Massive Dry Merger in a Moderate Redshift Cluster", 2007, *Astrophysical Journal Letters*, 665, 9
25. **Finn, R. A.**, Zaritsky, D., McCarthy, D.W., Poggianti, B., Rudnick, G., Halliday, C., Milvang-Jensen, B., Pello, R., & Simard, L., "Hα-Derived Star-Formation Rates for three $z = 0.75$ EDisCS Galaxy Clusters", 2005, *Astrophysical Journal*, 630, 206
26. **Finn, R. A.**, Zaritsky, D., & McCarthy, D.W., "Hα-Derived Star-Formation Rates for the $z = 0.845$ Galaxy Cluster CLJ0023+0423B", 2004, *Astrophysical Journal*, 604, 141
27. McCarthy, D. W., Ge. J., Hinz, J. L., **Finn, R. A.**, & de Jong, R. S., "PISCES A Wide Field, 1 - 2μm Camera for Large Aperture Telescopes", 2001, *Proceedings of the Astronomical Society of the Pacific*, 113, 353
28. **Finn, R. A.**, Impey, C. D. & Hooper, E.J., "WFPC2 Imaging of Quasar Environments A Comparison of Large Bright Quasar Survey and Hubble Space Telescope Archive Quasars", 2001, *Astrophysical Journal*, 557, 578
29. Hall, P. B., Sawicki, M., Martini, P., **Finn, R. A.**, Pritchet, C. J., Osmer, P.S., McCarthy, D. W., Evans, A. S., Lin, H. & Hartwick, F. D. A., "Galaxies in the Fields of $z \approx 1.5$ Radio-Loud Quasars", 2001, *Astronomical Journal*, 121, 1840
30. **Finn, R. A.**, Fesen, R. A., Darling, G. W, Thorstensen, J. R., Worthey, G. S., "Optical Spectra of SN 1993J During the First 500 Days", 1995, *Astronomical Journal*, 110, 300

Grants Awarded (chronological)

1. H-alpha Derived Star-Formation Rages of $z \sim 0.5$ and $z \sim 0.8$ Galaxy Clusters (PI), NSF Astronomy and Astrophysics Postdoctoral Fellowship, **$180,000**
   award period: 08/01/03 - 07/31/07
2. Integrated H-alpha and Far Infrared Star Formation Rates of High Redshift Galaxy Clusters (PI), Spitzer Space Telescope, NASA/JPL, **$49,754**
   award period: 07/01/05 - 06/30/08
3. Evolution of Star Formation in the 400 Square Degree Galaxy Cluster Survey (Co-I) Spitzer Space Telescope, NASA/JPL, **$17,103**
   award period: 02/01/06 - 06/30/08
4. Star-Formation Rates of 9 Intermediate-Redshift Galaxy Clusters (PI), Spitzer Space Telescope, NASA/JPL, **$35,670**
   award period: 07/01/06 - 06/30/09

5. Evolution of Star Formation in Galaxy Clusters at z=0.8 (co-I), Spitzer Space Telescope, NASA/JPL, **$5,460**
   award period: 07/01/06 - 06/30/09
6. Evolution of Star Formation in the 400 Square Degree Galaxy Cluster Survey (Co-I), Spitzer Space Telescope, NASA/JPL, **$15,960**
   award period: 07/01/07 - 06/30/10
7. Probing Gas Stripping in Low-Redshift Groups and Clusters Using Wide-Area 24μm Imaging (PI), Spitzer Space Telescope, NASA/JPL, **$145,140**
   award period: 07/01/08 - 06/30/11
8. NSF CAREER: Gas Stripping in Low-Redshift Groups and Clusters (PI), National Science Foundation, **$471,460**
   award period: 08/15/09-07/31/14
9. Educating Scientists for Tech Valley: A Cohort Scholars Program (co-PI), NSF DUE Award Number:0728452, **$598,852**
   date:05/01/2008
10. RUI: Collaborative Research: The Effect of Filaments on the Gas in Galaxies, Award Number:1716657 (PI), National Science Foundation, **$229,558**
    date: 01/01/2018 - 12/31/2022
11. Probing Quenching in the Cosmic Web using Spatially-Resolved Star-formation Maps from WISE and GALEX, Principal Investigator, NASA 20-ADAP20-0188, **$60,884**
    date: 06/02/2021 - 05/31/2023
12. Sherman Fairchild Foundation Science Equipment Program Grant, Co-Principal Investigator, Sherman Fairchild Foundation, **$486,000**
    date: 6/1/2017 - 12/31/2022
13. Collaborative Research: RUI: Tracing Galaxy Quenching in the Cosmic Web With Spatially-Resolved Star-Formation Maps, Principal Investigator, National Science Foundation, **$291,606**
    date:08/15/2023 - 8/14/2026

Professional Organizations

- American Association of Physics Teachers
- American Astronomical Society
- Astronomical Society of New York

SERVICE

Physics Department

- *Engineering Physics Major & ABET Accreditation Committee* 2022 - present
- *Student Research* - I have supervised 35 students in research over the past 10 years. All but 2 of these students were paid from grants that I secured from the National Science Foundation and NASA. I took 15 of these students on research-related trips. Some accompanied me on observing trips to Kitt Peak National Observatory (Tucson, AZ), Arecibo Observatory (Puerto Rico), Cerro Telolo Inter-american Observatory (Chile), and the Canary Islands. All of these students presented their work at an internal Siena conference, a meeting of the Astronomical Society of New York, or a meeting of the American Astronomical Society.

- *Department Head* - 20XX - 2018? Helped recruit outstanding new physics faculty, support curricular innovations, support the research efforts of faculty and students, and to create a sense of community among both faculty and students. In recent years, the number of physics majors has increased dramatically, with 32 physics majors in the freshmen class alone.

- *Initiated conversion of Introductory Physics course to workshop physics format.*
- *Organized and led our external review, and wrote the report.* Year?
- *Physics Department Committee on Assessment* 2008-2010
- *Established Women in Physics group w/Michele McColgan* 2009 - present

School of Science

- *Member of Advisory Committee for Clare Boothe Luce Scholarhip*
- *Clare Boothe Luce Scholarhip Coordinator 2008-2009*
- *Grant Applications on behalf of the Siena School of Science*
  - Co-I on S-STEM proposal (Larry Medsker, PI)
    Title: Emerging Scientists for Tech Valley (ESTV): A Cohort Scholars Program
    submitted: 04/12/06
    amount: $498,046
    Status: Declined
  - Co-I on S-STEM proposal (Larry Medsker, PI)
    Title: Educating Scientists for Tech Valley: A Cohort Scholars Program
    submitted: 02/16/07
    amount: $598,852
    Status: Awarded

Siena College

- *Admissions Events*
- *Dean of Science Search Committee*
- *Space Master Planning Committee*, ?
- *Strategic Planning Committee*, 2015 -
- *Committee on Faculty Status*, 2015 - 2016, 2023 - present
- *Search Committee Member for Biology, Education, Computer Science*
- *Search Committee for Assessment Coordinator*, 2007-2008

Community

- *High School Physics Teachers*
  helped organize workshop for high school physics teachers (2009-present); facilitated meeting of High School Physics Teachers group (ongoing)
- ASNY board member, Siena College Representative, 2005 - present
- Organized and hosted Fall 2008, 2012, and 2023 meeting of Astronomical Society of New York meeting
- Referee, *Monthly Notices of Royal Astronomical Society*, *Astronomy & Astrophysics*
- NSF Astronomy Division Committee of Visitors, 2008
- Academic Program Review Committee, University of Arizona, 2009
- NSF Panel Review, 2009-2022
- NASA/IPAC Infrared Science Archive, User's Committee, 2021-present

FELLOWSHIPS

- Dartmouth Fellowship 1992-1994
- NASA Space Grant Fellowship 1997-1999
- NASA Graduate Student Research Program Fellowship 2000-2003
- NSF Astronomy & Astrophysics Post-doctoral Fellowship 2003-2007