

Curriculum Vitae - Eric Ian Barnes

Department of Physics
University of Wisconsin—La Crosse
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Education

Louisiana State University – Ph.D.
(Physics), 2001
Louisiana State University – M.S.
(Physics), 1998
Northeast Missouri State University –
B.S. (Physics), 1995

Employment

University of Wisconsin—La Crosse, Professor,
2015-present
University of Wisconsin—La Crosse, Associate
Professor, 2010-2015 (Tenured 2012)
University of Wisconsin—La Crosse, Assistant Pro-
fessor, 2006-2010
University of Minnesota, Postdoctoral Researcher,
2004-2006
Rutgers University, Postdoctoral Researcher, 2001-
2004

Research Interests

Formation/evolution of galaxies
Dark matter modeling
Nonaxisymmetric galaxies
Computational condensed matter physics

Academic Service

Physics Department Chair
Faculty Senator
Promotion, Tenure, & Salary Committee

Affiliations

American Astronomical Society
AAS Division on Dynamical Astronomy

Teaching Experience

Intro Astronomy (Universe-in-a-semester)
Solar System Astronomy
Stars, Galaxies, & the Universe
Introductory Physics (algebra-based)
Introductory Physics (calculus-based)
Experimental Physics (comp. seminar)
Thermodynamics
Computational Physics
Classical Mechanics
Electrodynamics

Research Experience

Proposal reviewer – NASA Astrophysics Theory
Program, NSF Postdoctoral Research Fellowship
Peer reviewer – MNRAS, ApJ
Principal Investigator – NASA ATP, “Constrain-
ing Physically Motivated Equilibria of Dark Matter
Halos”, \$154,301, 02/2007-02/2011
Research Advisor – 15 undergraduate researchers

Publications

1. Ragan, R.J., Barnes, E.I. (2019). *Monthly Notices of the Royal Astronomical Society*, 487, 3618. “Predicting Steady States of One-dimensional Collisionless Gravitating Systems”
2. Barnes, E.I., Ragan, R.J. (2019). *Monthly Notices of the Royal Astronomical Society*, 487, 3037. “Relaxation of One-dimensional Collisionless Gravitating Systems”
3. Barnes, E.I., Dowling, E. (2018). *The Astrophysical Journal*, 857, 8. “Triaxiality Inhibitors in N -body Simulations”
4. Barnes, E.I. (2016). *The Astrophysical Journal*, 827, 15. “Comparing Extended System Interactions with Motions in Softened Potentials”
5. Barnes, E.I., Egerer, C.P. (2015). *The Astrophysical Journal*, 805, 66. “Entropy Production in Collisionless Systems. III. Results from Simulations”
6. Barnes, E.I., Ragan, R.J. (2014). *Monthly Notices of the Royal Astronomical Society*, 437, 2340. “Dynamics of One-dimensional Self-gravitating Systems Using Hermite-Legendre Polynomials”
7. Barnes, E.I., Williams, L.L.R. (2012). *The Astrophysical Journal*, 748, 144. “Entropy Production in Collisionless Systems. II. Arbitrary Phase-space Occupation Numbers”
8. Barnes, E.I., Williams, L.L.R. (2011). *The Astrophysical Journal*, 728, 136. “Entropy Production in Collisionless Systems. I. Large Phase-space Occupation Numbers”
9. Barnes, E.I., Lanzel, P.A., Williams, L.L.R. (2009). *The Astrophysical Journal*, 704, 372. “The Radial Orbit Instability in Collisionless N -body Simulations”
10. Barnes, E.I., Kosowsky, A., Sellwood, J.A. (2007). *The Astronomical Journal*, 133, 1698. “Milgrom Relation Models for Spiral Galaxies from Two-Dimensional Velocity Maps”
11. Barnes, E.I., Williams, L.L.R., Babul, A., Dalcanton, J.J. (2007). *The Astrophysical Journal*, 655, 847. “Velocity Distributions from Nonextensive Thermodynamics”
12. Barnes, E.I., Williams, L.L.R., Babul, A., Dalcanton, J.J. (2007). *The Astrophysical Journal*, 654, 814. “Density Profiles of Collisionless Equilibria. II. Anisotropic Spherical Systems”
13. Barnes, E.I., Williams, L.L.R., Babul, A., Dalcanton, J.J. (2006). *The Astrophysical Journal*, 643, 797. “Density Profiles of Collisionless Equilibria. I. Spherical Isotropic Systems”
14. Barnes, E.I., Williams, L.L.R., Babul, A., Dalcanton, J.J. (2005). *The Astrophysical Journal*, 634, 775. “Scalelengths in Dark Matter Halos”
15. Barnes, E.I., J.A. Sellwood, and A. Kosowsky (2004). *The Astronomical Journal*, 128, 2724. “Mass Models for Spiral Galaxies from 2-D Velocity Maps”
16. Barnes, E.I. and J.A. Sellwood (2003). *The Astronomical Journal*, 125, 1164. “Uncertainties in Spiral Galaxy Projection Parameters”
17. Barnes, E.I. (2001). *The Astrophysical Journal*, 559, 736. “Using Correlation Integrals to Characterize 3D Stellar Orbits”
18. Barnes, E.I. and J.E. Tohline (2001). *The Astrophysical Journal*, 551, 80. “Populating Stellar Orbits in a Rotating, Gaseous Bar”