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Professor of Physics and Astronomy
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Education

1981 B. A., Physics, University of Pennsylvania
1986 Ph. D., Physics, State University of New York at Stony Brook

Career/Experience

1986 Postdoctoral Fellow, Department of Astrophysical Sciences, Princeton University, (June to Sep.)
1986-88 NATO Fellow and SERC Fellow, Institute of Astronomy, University of Cambridge, U.K.
1988-90 Miller Research Fellow, Astronomy Department, University of California, Berkeley
1990-96 Assistant Professor of Physics, University of Michigan
1995 Visiting Research Physicist, Institute for Theoretical Physics, UCSB (Spring term)
1996-2001 Associate Professor of Physics, University of Michigan
1996-97 MENESR Senior Scientist Fellow, Institut d'Astrophysique, Paris
1997 Visiting Research Scientist, Max--Planck--Institut für Astrophysik, Garching (Feb.)
1997 Visiting Research Scientist, Physics Department, Durham University (July-Aug.)
1999 Visiting Research Physicist, Institute for Theoretical Physics, UCSB (Feb./Mar.)
2000-01 Associate Professor of Astronomy, University of Michigan
2001 Scientific Visitor, Carnegie Observatories, Pasadena (May/June)
2001- Professor of Physics and Astronomy, University of Michigan
2004 Visiting Research Physicist, Institute for Theoretical Physics, UCSB (Oct.)
2005 Japan Society for Promotion of Science (JSPS) Visiting Fellow, Tokyo University (Apr.)
2006 Miller Visiting Professor, Physics Department, University of California, Berkeley (Jan.-May)

National/Professional Memberships, Service, Awards and Honors

1981 William E. Stevens Memorial Prize for Physics, U. of Pennsylvania

1981-84 Graduate Council Fellowship, SUNY--Stony Brook
 1986- Member, American Astronomical Society
 1986 NATO Fellowship
 1987- Member, Royal Astronomical Society
 1988 Miller Research Fellowship, UC, Berkeley
 1990 NASA Long Term Space Astrophysics Program review panel
 1992 NATO International Travel Grant
 1992-93 Co-organizer, First Annual Great Lakes Cosmology Workshop
 1993 Scientific Organizing Committee, XXIXth Rencontres de Moriond
 1994 Scientific Organizing Committee, Aspen Summer Workshop
 1994 NASA Long Term Space Astrophysics Program review panel
 1996 Scientific Organizing Committee, NMSU Meeting "Clusters of Galaxies at Different Redshifts"
 1996 MENESR Senior Scientist Fellow, France
 1997 Scientific Organizing Committee, "Untangling Coma Berenices", Marseilles
 1997 NASA Astrophysics Theory Program review panel
 1997-2002 CINECA Supercomputer Time Allocation Committee (Italy)
 1998 Scientific Organizing Committee, "Galaxies at Different Redshifts", NMSU
 1998 NSF Astronomy Division CAREER Program review panel
 1999 NASA Chandra Fellowship review panel
 1999 Scientific Organizing Committee, "Large-Scale Structure in the X-ray Universe," Santorini, Greece
 1999 Consultant, National Geographic Society "Millennium in Maps" Series
 1999-2000 Advisor, National Air and Space Museum, "Explore the Universe" Gallery
 2000 Scientific Organizing Committee, "Constructing the Universe with Clusters of Galaxies," Paris
 2001 Scientific Organizing Committee, "Soft and Hard Excesses in the Intergalactic Medium: Observations, Theory and Modeling", Catania.
 2001 NASA Chandra AO-3 review panel chair
 2001 Scientific Visitor Program Participant, Carnegie Observatories
 2002- Science Working Group, National Virtual Observatory
 2002 Scientific Organizing Committee, "Testing Cosmological Models with Galaxy Clusters", Ringberg, Germany
 2003 Scientific Organizing Committee, "Great Lakes Cosmology VII", Ann Arbor
 2003 Scientific Organizing Committee, "Cosmology and Astrophysics with Galaxy Clusters", Aspen, CO
 2003 Scientific Organizing Committee, "Cosmology with Sunyaev-Zel'dovich Surveys", Center for Cosmological Physics, Chicago
 2003 NASA Astrophysics Theory Program review panel chair
 2004 NASA Chandra Fellowship review panel chair

- 2004 Scientific Organizing Committee, COSPAR meeting on "Clusters of Galaxies: New Insights from XMM-Newton, Chandra and INTEGRAL", Paris
- 2004 Scientific Organizing Committee, "Fundamental Physics with Clusters of Galaxies", Fermilab Center for Particle Astrophysics, Batavia, IL
- 2005 Principal Organizer, "The Future of Cosmology with Clusters of Galaxies", Kona, HI
- 2006 Scientific Organizing Committee, XXVIth Astrophysics Moriond Meeting, "From Dark Halos to Light", La Thuile, Italy
- 2006 Co-organizer, MCTP Workshop, "Galaxy Cluster Cosmology with Optical and Sunyaev-Zel'dovich Surveys", Ann Arbor
- 2006 Miller Visiting Professor, University of California, Berkeley
- 2007- Co-leader, Simulation Working Group, Dark Energy Survey

University of Michigan Service, Awards and Honors

- 1991 Rackham Faculty Research Grant
- 1992 CRLT Postdoctoral Teaching Award
- 1995-96 Selection Committee, The Ralph Baldwin Prize in Astrophysics and Space Science
- 1995-98 ITIC-Virtual Reality Faculty Advisory Committee
- 1997-2002 LS&A Information Technology Faculty Advisory Committee
- 2000-02 Executive Committee, UM Center for Parallel Computing
- 2000-02 Chair, LS&A Information Technology Committee
- 2002-04 Chair, LS&A/MAIS Pilot User Group, M-Pathways Data Mining
- 2004-05 Astronomy Department Extragalactic Faculty Search Committee
- 2005 Steering Committee, LSA Research Theme Semester "Data Dilemmas"
- 2005-07 CRLT Advisory Board
- 2005- Rackham Student Mentor, Taeyjuana Curry
- 2005- Chair, LSA Information Technology Committee
- 2007- LSA Academic Computing Infrastructure Committee
- 2007- University of Michigan Science Library Committee

Physics Department Service and Committees

- 1991-92 Astrophysics Search Committee
- 1991-93 Astrophysics Institute Committee
- 1991-92 Organized Discussion Group on Cosmological Structure Formation (W 91)
- 1991-92 Organized Joint Physics--Astronomy Journal Club (F 91)
- 1991-92 Organized Astrophysics Seminar Series
- 1992-94 Physics Department Computing Committee member
- 1992-96 Selection Committee Member, Ralph M. Bodine Scholarship
- 1994-95 Faculty Mentor, UM Mentorship Program
- 1994-96 Chair, Physics Department Computing Committee

1997-98	Physics Department Colloquium Committee
1997-98	Co-Chair, Physics Department Computing Committee
1998-00	Chair, Physics Department Computing Committee
1999	Search Committee, Instructional Technology Programmer
1999-04	Instructional Technology Oversight Team (ITOT)
2000-02	Editorial and WWW Committee
2001-06	Computing Committee, Michigan Center for Theoretical Physics
2000	Chair, Astrophysics Search Committee
2001-03	Physics Department Executive Committee
2002	Astrophysics Search Committee
2003-04	Physics Department Admissions and Fellowships Committee
2003-04	Physics Department Awards Committee
2003-05	Michigan Center for Theoretical Physics Executive Committee
2004-05	Introductory Physics Oversight Committee
2004-05	Leff Assistant Professor Search Committee
2004-05	Mentor to Dave Winn (Lecturer II)
2004-05	Cornwell Prize Committee
2005-06	Introductory Physics Committee
2005-07	Physics Department Computing Committee
2006-07	Editorial Advisory Board and Web Page Committee
2006-07	Faculty Search Committee
2006-07	Financial Reporting Committee
2007-08	Physics Concentration Counselor
2007-08	Introductory Physics Committee
2007-08	Graduate Admissions China Interviewer
2007-09	Michigan Center for Theoretical Physics Executive Committee
2007-09	Physics Department Executive Committee
2007-	Faculty Mentor, Asst. Prof. Dragan Huterer

Current or Pending Sponsored Research Support

NSF Extragalactic and Cosmology Program, \$304,933, Aug 2007-Aug 2010, "From Theory to the Sky: Observable Features of Clusters of Galaxies".

NASA Chandra Postdoctoral Fellowship Program, \$244,720, Sep 2006-Aug 2008, "Bringing Theory Closer to Observation: Mock X-ray Catalogues of Galaxy Clusters"

NASA, Astrophysics Theory Program, \$15,000, June 2007-June 2008, "Population Studies of Simulated Galaxy Clusters"

Prior Sponsored Research Support

NASA, Astrophysics Theory Program, \$330,000, Apr 2003-Mar 2008, "Modeling of X-ray Clusters"

NASA HST Cycle 14, \$10,000, Aug 2005-Jul 2007, "On the Road to Coma: A "Longitudinal Study" of Galaxy Cluster Evolution", (subcontract of \$94,000 grant to U Colorado, PI, E. Ellingson)

NSF ITR, \$258,261, Oct 2001 to Aug 2007, "Statistical Data Mining for Cosmology" (subcontract to \$3.5M grant to CMU, PI A. Moore)

NSF Extragalactic Astronomy and Cosmology Program, \$334,764, Sep 2002-Aug 2007, "Determining the Relation between Dark and Luminous Matter: Weak Lensing and N-body Simulation", (PI: T. McKay)

NASA FUSE Guest Investigator Program Cycle 5, \$78,763, Jun 2004-Sep 2005, "Local Missing Baryons in the Cosmic Web", (PI: R. Dupke, co-I J. Bregman, UM Astronomy)

HST Guest Observer Program Cycle 12, \$22,000 Feb 2004-Jun 2005, "A Search for Missing Baryons in the Cosmic Web", (PI: R. Dupke, co-I J. Bregman, UM Astronomy)

LS&A Cost Sharing, \$20,000, "Determining the Relation between Dark and Luminous Matter: Weak Lensing and N-body Simulation", (PI: T. McKay)

NASA Chandra Theory, \$88,826, Jan 2004-Dec 2005, "A Virtual Cluster Exploratory Year Two: Mock Observations of Simulated Galaxy Clusters", (co-I's M. Donahue, STScI; R. Dupke, UM Astronomy)

NSF Extragalactic and Cosmology Program, \$10,000, Feb 2005-Feb 2006, conference support for "The Future of Cosmology with Clusters of Galaxies"

NASA Chandra Theory, \$85,013, Jan-Dec 2003, "A Virtual Cluster Exploratory Prototype: Mock Observations of Simulated Galaxy Clusters", (co-I's M. Donahue, STScI; R. Dupke, UM Astronomy)

NASA, Astrophysics Theory Program, \$124,000, Apr 1999 to Mar 2003, "Modeling of X-ray Clusters"

NSF, Extragalactic Astronomy and Cosmology Program, \$191,000, Jul 1998 to Jun 2001, "Galaxy Formation in Groups and Clusters", (co-I, C.S. Frenk, Durham Univ.).

NASA, Astrophysics Theory Program, \$25,000, April 1998 to Mar 1999, "Numerical Simulations of Groups and Clusters of Galaxies".

LS&A, \$7400, in lieu of cost--sharing on above grant.

NASA, Astrophysics Data Program, \$125,300, Oct 1996 to Sep 1998, "Galaxy Cluster Dynamics and Evolution at the Current Epoch" (co-I, J. Mohr).

NASA, Astrophysics Theory Program, \$305,600, Jul 1994 to Aug 1997, "Gas Dynamic Simulations of Groups and Clusters of Galaxies".

NATO, International Travel Grant, \$4700 (renewal), Aug 1994 to Aug 1996, "Formation and Evolution of Rich Clusters of Galaxies". Co-I with C. Frenk, University of Durham, UK.

OVPR Discretionary Grant, \$15,000, Oct 1994 to Dec 1995, "Parallel P3MSPH : A Parallel Cosmological Gas Dynamics Code" (matched with \$8000 from Physics, LS&A and Center for Parallel Computing).

NASA, ASCA Guest Observer Program, \$70,000, Sep 1994 to Aug 1995, "The Cluster Mass Function and Baryon Fraction from a Complete X-ray Sample" (one of six Co-I's with PI J. Bregman, Astronomy).

NASA, ROSAT Guest Observer Program, \$29,000, Jan 1994 to Jan 1995, "X-ray Emission from Compact Groups of Galaxies".

NATO, International Travel Grant, \$6300 (shared with co-I), Jul 1992 to Jul 1994, "Formation and Evolution of Rich Clusters of Galaxies". Co-I with C. Frenk, Univ. of Durham, UK.

NASA, Astrophysics Theory Program, \$305,000, Feb 1991 to Jun 1994, "Hydrodynamic Simulations of the Intracluster Medium".

NSF, San Diego Supercomputer Center, 600 Cray Y-MP hours, July 1993 to July 1994, "Large-Scale Structure in the Universe". Co-I with Marc Davis and Frank Summers, UC Berkeley.

CRLT Postdoctoral Teaching Award, \$5000, Jan 1993 to May 1993, for development of new undergraduate course "Cosmology : The Science of the Universe".

NSF, San Diego Supercomputer Center, 400 Cray Y-MP hours, July 1992 to July 1993, "Large-Scale Structure in the Universe". Co-I with Marc Davis and Frank Summers, UC Berkeley.

UM, Rackham Faculty Grant, \$9,369, Jan 1992 to Dec 1993, "Diagnosing Cosmological Models with Rich Cluster of Galaxies".

NASA, ROSAT Guest Observer Program, \$0 (\$19,781 to Co-I's), Jan 1992 to Jan 1993, "Are Large Core Radius Clusters Merged Systems?". Co-I with W. Forman and C. Jones, SAO, Harvard.

Postdoctoral Associates

1996-98	Joseph J. Mohr (currently Associate Professor at U. Illinois)
2001-03	Risa Wechsler (currently Assistant Professor at U Chicago)
2006-	Elena Rasia (Chandra Fellow)

Other Formal Mentoring

2004-05	David Winn (Physics Department Lecturer II)
2006-08	Taeyjuana Curry (Rackham Summer Institute)
2007-08	Dragan Huterer (Assistant Professor)

Articles in Refereed Journals

1. Evrard, A.E. and Yahil, A., 1985, *Virialization in N-Body Models of the Expanding Universe: II. All Pairs*, Astrophys J, v. 296, pp. 310.
2. Evrard, A.E. and Yahil, A., 1985, *Virialization in N-Body Models of the Expanding Universe: I. Isolated Pairs*, Astrophys J, v. 296, pp. 299.
3. Evrard, A.E., 1986, *Large-Scale Clustering of Galaxies With Massive Dark Halos: I. General Structure, Two-Point Correlations, and Binaries*, Astrophys J, v. 310, pp. 1.
4. Evrard, A.E., 1987, *Large-Scale Clustering of Galaxies With Massive Dark Halos: II Mass-To-Light Profiles and Dynamical Mass Estimates of Galaxy Groups*, Astrophys J, v. 316, pp. 36.
5. Evrard, A.E., 1988, *Beyond N-Body: 3-D Cosmological Gas Dynamics*, Monthly Notices Royal Astron Soc, v. 235, pp. 911.
6. Silk, J. and Evrard, A.E., 1988, *A Deep Look at Forming Galaxies*, Nature, v. 335, 766.
7. Evrard, A.E. and Davis, M., 1988 *The Fate of Cluster Gas in a Neutrino Dominated Cosmology*, Nature, v. 333, pp. 335.
8. Evrard, A.E., 1989, *Testing Origins of the Hubble Sequence*, Astrophys J, v. 341, pp. 26.
9. Evrard, A.E., 1989, *Biased CDM Theory : Trouble From Rich Clusters?*, Astrophys J, v. 341, pp. L41.

10. Evrard, A.E., Silk, J. and Szalay, A.S., 1990, *The Morphology--Density Relation for Galaxies in a CDM Dominated Universe*, Astrophys J, v. 365, pp. 13.
11. Evrard, A.E., 1990, *Formation and Evolution of X-Ray Clusters : A Hydrodynamic Simulation of the ICM*, Astrophys J, v. 363, pp. 349.
12. Evrard, A.E. and Henry, J.P., 1991, *Expectations for X-Ray Cluster Observations by the Rosat Satellite*, Astrophys J, v. 383, pp. 95.
13. Evrard, A.E., 1991, *Clues to Galaxy Activity From Rich Cluster Simulations*, Monthly Notices Royal Astron Soc, v. 248, 8p.
14. Blanchard, A., Wachter, K., Evrard A. and Silk J., 1992, *The Contribution of Clusters to the X-Ray Background*, Astrophys J, v. 391, pp. 1.
15. Evrard, A.E. and Crone, M.M., 1992, *Previrialization*, Astrophys J, v. 394, pp. L1.
16. Feldman, H., and Evrard, A.E., 1993, *Structure in a Loitering Universe*, International Journal Of Modern Physics, v. 2, pp. 113.
17. Tegmark, M., Silk, J., and Evrard, A., 1993, *Late Reionization by Supernova Driven Winds*, Astrophys J, v. 417, pp.54.
18. Evrard, A.E., Mohr, J.J., Fabricant, D.G., and Geller, M.J., 1993, *A Morphology-Cosmology Connection for X-Ray Clusters*, Astrophys J, v. 419, pp. L9.
19. White, S.D.M., Navarro, J.F., Evrard, A.E., and Frenk, C.S., 1993, *The Baryon Content of Galaxy Clusters : A Challenge to Cosmological Orthodoxy*, Nature, v. 366, pp. 429-433.
20. Evrard, A.E, Summers, F.J., and Davis, M., 1994, *Two-Fluid Simulations of Galaxy Formation*, Astrophys J, v. 422, pp. 11.
21. Evrard, A., and Charlot, S., 1994, *Optical Signatures of High Redshift Galaxy Clusters*, Astrophys J, v. 424, pp. L13.
22. Kang, H., Ostriker, J.P., Cen, R., Ryu, D., Hernquist, L., Evrard, A.E., Bryan, G.L., and Norman, M.L., 1994, *A Comparison of Cosmological Hydrodynamic Codes*, Astrophys J, v. 430, pp. 83.
23. Evrard, A.E. and Kaiser, N., 1994, *A Sudden Squall in the Cosmos*, Nature, v. 368, pp. 806.

24. Crone, M.M., Evrard, A.E., and Richstone, D., 1994, *The Cosmological Dependence of Cluster Density Profiles*, *Astrophys J*, v. 434, pp.564.
25. Metzler, C.A. and Evrard, A.E., 1994, *A Simulaton of the Intracluster Medium With Feedback From Cluster Galaxies*, *Astrophys J*, v. 437, pp. 564.
26. Pildis, R.A., Bregman, J.N., and Evrard, A.E., 1995, *Rosat Observations of Compact Groups of Galaxies*, *Astrophys J*, v. 443, pp. 514.
27. Mohr, J.J., Evrard, A.E., Fabricant, D.G., and Geller, M.J., 1995, *Cosmological Constraints From X-Ray Cluster Morphologies*, *Astrophys J*, v. 447, pp. 8.
28. Summers, F.J., Davis, M., and Evrard, A.E., 1995, *Galaxy Tracers and Velocity Bias*, *Astrophys J*, v. 454, pp. 1.
29. Pildis, R.A., Evrard, A.E., and Bregman, J.N., 1996, *Properties of Simulated Compact Groups of Galaxies*, *Astron. J.*, v. 112, pp. 378.
30. Crone, M.M., Evrard, A.E., and Richstone, D.O., 1996, *Substructure in Clusters as a Cosmological Test*, *Astrophys J*, v. 467, pp. 489.
31. Evrard, A.E., Metzler, C.A., and Navarro, J.F., 1996, *Mass Estimates of X-Ray Clusters*, *Astrophys J*, v. 469, pp. 494.
32. Frenk, C.S., Evrard, A.E., White, S.D.M., and Summers, F.J., 1996, *Galaxy Dynamics in Clusters*, *Astrophys J*, v. 472, pp. 460.
33. Evrard, A.E., 1997, *The Intracluster Gas Fraction in X-Ray Clusters: Constraints on the Clustered Mass Density*, *Monthly Notices Royal Astron Soc*, v. 292, pp. 289.
34. Mohr, J.J., and Evrard, A.E., 1997, *An X-Ray Size-Temperature Relation For Galaxy Clusters: Observation and Simulation*, *Astrophys J*, v. 491, pp. 38.
35. Metzler, C.A., and Evrard, A.E., 1997, *Simulations of Galaxy Clusters With and Without Winds: I. The Structure Of Clusters*, astro-ph/9710324 (electronic publication only).
36. Mathiesen, B, and Evrard, A.E., 1998, *Constraints on Ω_0 and Cluster Evolution Using the ROSAT LogN-LogS*, *Monthly Notices Royal Astron Soc*, v. 295, pp. 769.
37. Owen, J.M., Weinberg, D.H., Evrard, A.E., Hernquist, L., and Katz, N., 1998, *Hydrodynamic Cosmological Simulations With Scale-Free Initial Conditions I. Adiabatic Hydrodynamics*, *Astrophys J*, v. 503, pp. 160.

38. Evrard, A.E., 1998, *Well of Darkness*, Nature, v. 394, pp. 122.
39. Mohr, J.J., Mathiesen, B., and Evrard, A.E., 1999, *Properties of the Intracluster Medium in an Ensemble of Nearby Galaxy Clusters*, Astrophys J, v. 517, pp. 627.
40. Irwin, J.A., Bregman, J.N., and Evrard, A.E., 1999, *Radial Temperature Profiles of X-Ray-Emitting Gas Within Clusters of Galaxies*, Astrophys J, v. 519, pp. 518.
41. Arnaud, M., and Evrard, A.E., 1999, *The L_X — T Relation and Intracluster Gas Fractions of X-Ray Clusters*, Monthly Notices Royal Astron Soc, v. 305, pp. 631.
42. Evrard, A.E., 1999, *Real or Virtual Large-Scale Structure?*, Proc Nat'l Acad of Sci, v. 96, pp. 4228.
43. Mathiesen, B., Evrard, A.E., Mohr, J.J., 1999, *The Effects of Clumping and Substructure on Intracluster Medium Mass Measurements*, Astrophys J, v. 520L, pp. 21.
44. Frenk, C.S., et al. (25 authors), 1999, *The Santa Barbara Cluster Comparison Project: A Comparison of Cosmological Hydrodynamics Solutions*, Astrophys J, v. 525, pp. 554.
45. Nagai, D., Sulkanen, M.E. and Evrard, A.E., 2000, *A Multiphase Model for the Intracluster Medium*, Monthly Notices Royal Astron Soc, v. 316, pp. 120.
46. Brieu, P., and Evrard, A.E., 2000, *P4M: A Parallel Version of P3M*, New Astronomy, v. 5, pp. 163.
47. Evrard, A.E., 2000, *Virtual Galaxy Formation*, Phil. Trans. Roy. Soc. London A., v. 358, pp. 2143-2152.
48. Holder, G.P., Mohr, J.J., Carlstrom, J.E., Evrard, A.E. and Leitch, E.M., 2000, *Expectations for an Interferometric Sunyaev-Zel'dovich Effect Survey for Galaxy Clusters*, Astrophys J, v. 544, p. 629.
49. Mohr, J.J., Reese, E.D., Ellingson, E., Lewis, A.D., and Evrard, A.E., 2000, *The X-Ray Size-Temperature Relation for Intermediate Redshift Galaxy Clusters*, Astrophysical J, v. 544, p. 109.
50. Frenk, C.S., Colberg, J.M., Couchman, H.M.P., Efstathiou, G., Evrard, A.E., Jenkins, A., MacFarland, T.J., Moore, B., Peacock, J.A., Pearce, F.R., Thomas, P.A., White, S.D.M. and Yoshida, N., 2000, *Public Release Of N-Body Simulation and Related Data by the Virgo Consortium*, astro-ph/0007362 (electronic publication only).

51. Colberg, J.M., White, S.D.M., Yoshida, N., MacFarland, T., Jenkins, A., Frenk, C.S., Pearce, F.R., Evrard, A.E., Couchman, H.M.P., Efstathiou, G., Peacock, J., Thomas, P.A., 2001, *Clustering of Galaxy Clusters in CDM Universes*, Monthly Notices Royal Astron Soc, v. 319, p. 209.
52. Mathiesen, B.F., and Evrard, A.E., 2001, *Four Measures of the Intracluster Medium Temperature and Their Relation to Dynamical State*, Astrophysical J, v. 546, p. 100.
53. Jenkins, A., Frenk, C.S., White, S.D.M., Colberg, J.M., Cole, S., Evrard, A.E., Yoshida, N., 2001, *Mass Function of Dark Matter Halos*, Monthly Notices Royal Astron Soc, v. 321, p. 372.
54. Bialek, J.J., Evrard, A.E., Mohr, J.J., *Effects of Preheating on X-Ray Scaling Relations in Galaxy Clusters*, 2001, Astrophys J, v. 555, p. 597.
55. Dolag, K., Evrard, A. and Bartlemann, M., 2001, *The Temperature-Mass Relation in Magnetized Galaxy Clusters*, Astron & Astrophys, v. 369, p. 36.
56. Voit, G.M., Evrard, A.E., and Bryan, G.L., *Confusion of Diffuse Objects in the X-Ray Sky*, 2001, Astrophys. J, v. 548, p. 123L.
57. Yoshida, N., Colberg, J., White, S. D. M., Evrard, A. E., MacFarland, T. J., Couchman, H. M. P., Jenkins, A., Frenk, C. S., Pearce, F. R., Efstathiou, G., Peacock, J. A., Thomas, P. A., *Simulations of Deep Pencil-beam Redshift Surveys*, 2001, Monthly Notices Royal Astron Soc, v. 325, p. 803.
58. Zaroubi, S., Squires, G., de Gasperis, G., Evrard, A., Hoffman, Y. and Silk, J. 2001, *Deprojection Galaxy Cluster X-ray, Sunyaev-Zel'dovich Temperature Decrement and Weak Lensing Mass Maps*, Astrophys J, v. 561, p. 600.
59. Hamana, T., Yoshida, N., Suto, Y. and Evrard, A.E. 2001, *Clustering of Dark Matter Halos on the Light-cone: Scale-, Time- and Mass-dependence of the Halo Biasing in the Hubble Volume Simulations*, Astrophys J, v. 561, p. L143.
60. Evrard, A.E., MacFarland, T. J., Couchman, H. M. P., Colberg, J., Yoshida, N., White, S. D. M., Jenkins, A., Frenk, C. S., Pearce, F. R., Efstathiou, G., Peacock, J. A., Thomas, P. A., 2002, *Galaxy Clusters in Hubble Volume Simulations: Cosmological Constraints from Sky Survey Populations*, Astrophys J, v. 573, p. 7.
61. Bialek, J.J., Evrard, A.E., Mohr, J.J., 2002, *A Cold Front in a Preheated Galaxy Cluster*, Astrophys J, v. 578, p. L9.
62. Busha, M.T., Adams, F.C., Wechsler, R.H., Evrard, A.E. 2003, *Future Evolution of Cosmic Structure in an Accelerating Universe*, Astrophys J, v. 596, p. 713.

63. Adams, F.C., Busha, M.T., Evrard, A.E. Wechsler, R.H., 2003, *The Asymptotic Structure of Space-Time*, Intl. J. Mod. Phys., D12, p.1743.
64. Mohr, J.J. O'Shea, B., Evrard, A.E., Bialek, J. Haiman, Z., 2003, *Studying Dark Energy with Galaxy Cluster Surveys*, Nucl. Phys. B, 124, 63.
65. Kasun, S.F. and Evrard, A.E., 2005, *Shapes and Alignments of Galaxy Cluster Halos*, Astrophys. J., 629, 781.
66. Miller, C.J, et al. (15 authors), 2005, *The C4 Clustering Algorithm: Clusters of Galaxies in the Sloan Digital Sky Survey*, Astron. J., v. 130, p. 968.
67. Busha, M.T., Evrard, A.E. Adams, F.C. and Wechsler, R.H 2005, *The Ultimate Halo Mass in a LCDM Universe*, Monthly Notices Royal Astron. Soc., 363, L11.
68. Pawl, A., Evrard, A.E. and Dupke, R.A., 2005, *Detecting Intracluster Gas Motion in Galaxy Clusters: Mock Astro-E2 Observations*, Astrophys. J., 631, 773.
69. Springel, V., White, S.D.M., Jenkins, A., Frenk, C.S., Yoshida, N., Gao, L., Navarro, J., Thacker, R., Croton, D., Helly, J., Peacock, J.A., Cole, S., Thomas, P., Couchman, H. Evrard, A., Colberg, J., Pearce, F., 2005, *Simulating the Joint Evolution of Quasars, Galaxies and Their Large-scale Distribution*, Nature, 435, 629.
70. O'Hara, T.B., Mohr, J.J., Bialek, and J.J., Evrard, A.E., 2006, *Effects of Mergers and Core Structure on the Bulk Properties of Nearby Galaxy Clusters*, Astrophys. J., 639, 64.
71. Stanek, R., Evrard, A.E., Böhringer, H., Schuecker, P., and Nord, B., 2006, *The X-Ray Luminosity-Mass Relation for Local Clusters of Galaxies*, Astrophys. J., 648, 956.
72. Lee, J. and Evrard, A.E., 2007, *Cluster-Supercluster Alignments*, Astrophys. J., 657, 30.
73. Busha, Michael T.; Evrard, August E.; Adams, Fred C., 2007, *The Asymptotic Form of Cosmic Structure: Small Scale Power and Accretion History*, Astrophys. J., 665, 1.
74. Koester, B. P., McKay, T. A., Annis, J., Wechsler, R. H., Evrard, A., Bleem, L., Becker, M., Johnston, D., Sheldon, E., Nichol, R., and 16 coauthors, 2007, *A MaxBCG Catalog of 13,823 Galaxy Clusters from the Sloan Digital Sky Survey*, Astrophys. J., 660, 239.

75. Koester, B.P., McKay, T.A., Annis, J., Wechsler, R.H., Evrard, A.E.; Rozo, E., Bleem, L., Sheldon, E.S., Johnston, D. 2007, *MaxBCG: A Red Sequence Galaxy Cluster Finder*, *Astrophys. J.*, 660, 221.
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81. Evrard, A.E., Bialek, J., Busha, M., White, M., Habib, S., Heitmann, K., Warren, M., Rasia, E., Tormen, G., Moscardini, L., Power, C., Jenkins, A.R., Gao, L., Frenk, C.S., Springel, V., White, S. D. M., and Diemand, J., 2008, *Virial Scaling of Massive Dark Matter Halos: Why Clusters Prefer a High Normalization Cosmology*, *Astrophys. J.*, 672, 122.
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Book Chapters

Evrard A.E. and Gioia, I.M., 2002, “*Clusters, Cosmology and Mergers,*” in Merging Processes in Clusters of Galaxies, eds. L. Feretti, I. M. Gioia, and G. Giovannini (Dordrecht: Kluwer), p. 312.

Evrard A.E. 2004, “*Galaxy Clusters as Probes of Cosmology and Astrophysics,*” Carnegie Observatories Astrophysics Series, Vol. 3: Clusters of Galaxies: Probes of Cosmological Structure and Galaxy Evolution, eds. J. S. Mulchaey, A. Dressler, and A. Oemler (Cambridge: Cambridge University Press), p. 1.

Conference Talks

- 1987 The Post-Recombination Universe - Cambridge, UK
- 1988 Formation and Evolution of Large Scale Structure in the Universe - Santander, Spain
- 1989 Clusters of Galaxies - Space Telescope Science Institute
- 1989 Computing Cosmologies - Canadian Institute for Theoretical Astrophysics
- 1989 The Epoch of Galaxy Formation - Durham, UK
- 1990 Texas ESO/CERN Symposium - Brighton, UK
- 1990 Large-Scale Structure in the Universe - Jerusalem
- 1990 Stellar Dynamics and Formation of Galaxies - Aspen, CO
- 1990 Galaxy Formation - Taos, NM
- 1990 Galaxies at High Redshift - Oxford, UK
- 1990 Traces of Primordial Structure in the Universe - Ringberg, Germany
- 1991 The Physics of Galaxy Formation - Aspen, CO
- 1991 Clusters and Superclusters of Galaxies - Cambridge, UK
- 1991 2nd DAEC Nanoworkshop - Meudon, France
- 1992 XXVIIth Recontres de Moriond - Les Arcs, France
- 1992 The Evolution of Galaxies and Their Environment, Grand Teton National Park
- 1993 First Great Lakes Cosmology Workshop - Ann Arbor, MI
- 1993 Physics Computing - Albuquerque, NM
- 1993 Numerical Astrophysics Workshop - Mexico City, Mexico

1993 SPH in Astrophysics - Trieste, Italy
 1993 Large-Scale Structure after COBE - Aspen, CO
 1994 XXIXth Rencontres de Moriond - Meribel, France
 1994 Galaxy Morphology at High Redshift - STScI, Baltimore, MD
 1994 Great Lakes Cosmology Workshop II, Fontana, WI
 1994 Physics of Galaxy Clusters - Aspen, CO
 1994 Gravitational Clustering in Cosmology - Aspen, CO
 1994 The Mass and Composition of Galaxy Clusters - Munich, Germany
 1995 Dark Matter, Clocks and Tests of Fundamental Laws - Villars-sur-Ollon, Switzerland
 1995 Great Lakes Cosmology Workshop III - Cleveland, OH
 1995 Radiation Backgrounds and Galaxy Formation - ITP, UCSB
 1995 Mapping, Measuring and Modeling the Universe - Valencia, Spain
 1996 Baryons in the Universe - UC, Berkeley
 1996 Great Lakes Cosmology Workshop IV - Minneapolis, MN
 1996 HEAD96 (High Energy Astrophysics Division '96 Meeting) - San Diego, CA
 1996 Workshop on Large--scale Structure - Ringberg, Germany
 1996 ESO Workshop on Galaxy Scaling Relations - Garching, Germany
 1996 Emergence of Structure in the Universe at the Level of Galaxies - Vatican City, Rome
 1997 Observational Tests of Cosmological Models - Aspen, CO
 1997 Clusters of Galaxies at Different Redshifts - Ruidiso, NM
 1997 A New Vision of an Old Cluster: Untangling Coma Berenices - Marseilles, France
 1998 Dark Matter '98 - UCLA
 1998 APS Meeting, Cosmology Workshop - OSU
 1998 Great Lakes Cosmology Workshop VI - Pittsburgh, PA
 1998 Structure and Evolution of the Universe, Special Session of 192nd AAS Meeting - San Diego, CA
 1998 Dark98 - Heidelberg, Germany
 1998 From Recombination to Garching - MPA--Garching, Germany
 1999 Sigma Xi Presentation, Ford Scientific Research Labs - Dearborn, MI
 1999 Address, Nat'l Honor Society Induction, Monroe HS - Monroe, MI
 1999 Inner Space/Outer Space II - Chicago, IL
 1999 194th American Astronomical Society Meeting - Chicago, IL
 1999 The Cosmological Constant - Aspen, CO
 1999 Gravitational Lensing - Boston, MA
 1999 Large-Scale Structure in the X-ray Universe - Santorini, Greece
 1999 Royal Society Discussion Meeting: Galaxy Formation - London
 2000 SPS Induction Ceremony Lecture - University of Cincinnati
 2000 Gas and Galaxy Evolution: VLA 20th Anniversary - Socorro, NM
 2000 Constructing the Universe with Clusters of Galaxies - Paris
 2000 Victoria Computational Cosmology Conference - Victoria
 2001 XXXVIth Rencontres de Moriond "Galaxy Clusters and the High Redshift Universe Observed in X-rays" - Les Arcs, France

- 2002 Galaxy Evolution: Theory and Observations – Cozumel, Mexico
- 2002 Matter and Energy in Clusters of Galaxies – National Central University, Taiwan
- 2002 Cosmology and Fundamental Physics from Space – L’Aquila, Italy
- 2002 Neutrino News from the Lab and the Cosmos – Fermilab
- 2003 Testing Cosmological Models with Galaxy Clusters – Ringberg, Germany
- 2003 Clusters of Galaxies: Probes of Cosmological Structure and Galaxy Evolution (Carnegie Institution Centennial Symposium) – Pasadena, CA
- 2003 Cosmology and Astrophysics with Galaxy Clusters – Aspen, CO
- 2003 Cosmology with the Sunyaev-Zel’dovich Effect, Kiyosato, Japan
- 2003 Cosmology with Sunyaev-Zel’dovich Surveys – Center for Cosmological Physics, Chicago
- 2003 N-body Methods in Cosmology– Paris, France
- 2004 COSPAR Conference: Energetic Processes from Clusters of Galaxies – Paris, France
- 2004 Galaxy-Intergalactic Medium Interactions – Kavli Institute for Theoretical Physics, UCSB
- 2004 Fundamental Physics with Clusters of Galaxies – Fermilab
- 2005 The Future of Cosmology with Clusters of Galaxies – Kona, HI
- 2005 Computational Cosmology – Trieste, Italy
- 2005 Clusters of Galaxies – Enrico Fermi Institute, Chicago
- 2006 XLIst Rencontres de Moriond: From Dark Halos to Light – La Thuile, Italy
- 2006 Clusters of Galaxies and Astrophysical Plasmas – Trieste, Italy
- 2007 Clusters of Galaxies as Cosmological Probes – Aspen Center for Physics, Aspen, CO
- 2007 Tracing Cosmic Evolution with Clusters of Galaxies: Six Years Later – Sesto, Italy
- 2007 X-ray Surveys – Rodos, Greece
- 2007 Cosmic Cartography – KICP, Chicago
- 2008 An XXL Extragalactic Survey: Prospects for the XMM Next Decade – Paris
- 2008 Centro De Ciencias De Benasque Workshop: Modern Cosmology – Benasque, Spain

Colloquia, Seminars, and Collaboration Talks

- 1988 Physics Department Colloquium - University of Durham, UK
- 1988 Astrophysics Seminar - Nordita, Copenhagen, DK
- 1988 Astronomy Department Seminar - University of Padua, Italy
- 1989 Center for Astrophysics High Energy Seminar - Harvard University
- 1989 Department of Physics and Astronomy Seminar - MIT
- 1989 Physics Department High Energy Seminar - University of Michigan
- 1989 Astronomy Program Seminar - SUNY at Stony Brook

1989 Astronomy Department Colloquium - UC Berkeley
1990 Astronomy Department Colloquium - UC Santa Cruz
1990 Colloquium - Space Telescope Science Institute
1991 CASS Astrophysics Seminar - UC San Diego
1991 Astronomy Department Colloquium - University of Toronto
1991 Physics Colloquium - Oakland University
1991 Center for Particle Astrophysics Seminar - UC Berkeley
1991 Astronomy Seminar - UC Santa Cruz
1991 Astrophysics Seminar - Fermilab
1991 Physics Colloquium - University of Oklahoma
1992 Astrophysics Colloquium - Caltech
1993 Astrophysics Colloquium - Harvard Center for Astrophysics
1993 Astronomy Colloquium - Northwestern University
1993 HPCC Seminar - University of Washington
1993 Astronomy Colloquium - University of Illinois
1993 Astronomy Colloquium - Dominion Astrophysical Observatory
1993 Astronomy Seminar - University of Victoria
1994 Physics Colloquium - University of Michigan
1994 Astrophysics Seminar - Canadian Institute for Theoretical Astrophysics
1994 Astrophysics Seminar - University of Chicago
1994 Astrophysics Seminar - University of Arizona
1994 Astrophysics Colloquium - University of Wyoming
1995 Physics Colloquium - Wayne State University
1995 Astrophysics Seminar - Institute for Advanced Study, Princeton
1995 Public Lecture - Oakland Community College
1996 Astronomy Colloquium - Ohio State University
1996 Astrophysics Seminar - Case Western Reserve University
1996 Michigan Journalism Fellows Presentation - University of Michigan
1996 Astrophysics Colloquium - University of Colorado
1996 Astrophysics Seminar - Fermilab
1996 Astrophysics Seminar - Theoretical Astrophysics Center, Copenhagen, Denmark
1997 Colloquium - Institut d'Astrophysique, Paris, France
1997 Astrophysics Seminar - SEA-Saclay, France
1997 Colloquium - Observatoire de Strasbourg, France
1997 Joint ESO/MPA Colloquium - Garching bei München, Germany
1997 Astronomy Colloquium - University of Leiden, Holland
1997 Astronomy Colloquium - University of Utrecht, Holland
1997 Physics and Astronomy Colloquium - University of Kansas
1998 Colloquium, Institute for Astronomy - University of Hawaii
1999 Astronomy and Astrophysics Colloquium - Columbia University
1999 Astrophysics Colloquium - MIT
1999 Astronomy Colloquium - Caltech
1999 Michigan Journalism Fellows Presentation - University of Michigan
1999 Astrophysics Seminar - University of Pennsylvania
1999 Astronomy Colloquium - University of Michigan

1999 Astrophysics Seminar - CITA, University of Toronto
2000 Astronomy Colloquium - Institute for Astronomy, University of Hawaii
2000 Astrophysics Seminar - Case Western Reserve University
2000 Physics Colloquium - University of Cincinnati
2000 Astrophysics Colloquium - Center for Astrophysics, Harvard University
2001 Astronomy Colloquium – Ohio University
2001 Astrophysics Colloquium – Ohio State University
2001 Astronomy Colloquium – University of Illinois
2001 Astrophysics Seminar - Stanford University
2001 Colloquium – Carnegie Observatories of Pasadena
2002 Astrophysics Seminar, IGPP, Lawrence Livermore National
Laboratories
2002 Applied Mathematics Seminar, University of Michigan
2002 Seminar, Center for Cosmological Physics, University of Chicago
2004 Physics Colloquium, McMaster University
2003 Statistics Department Colloquium, University of Michigan
2003 Physics Colloquium, University of Virginia
2003 Teacher Presentation, Midland Center for the Arts
2003 Astrophysics Seminar, Tokyo University
2003 Astronomy Colloquium, University of Kansas
2004 Physics & Astronomy Colloquium, University of California, Davis
2004 Astronomy Theory Seminar, University of California, Berkeley
2004 Physics Colloquium, University of Notre Dame
2004 Physics Colloquium, Kavli Institute for Theoretical Physics, UCSB
2004 Physics Colloquium, University of Sussex
2004 Astrophysics Seminar, University of Portsmouth
2004 Physics Seminar, Durham University
2004 Physics Colloquium, University of Waterloo
2005 Physics and Astronomy Colloquium, Michigan State University
2005 Physics Seminar, University of Tokyo
2005 Michigan Center for Theoretical Physics, University of Michigan
2005 Astrophysics Seminar, SISSA, Trieste
2005 Physics Colloquium, Rochester Institute of Technology
2005 Astrophysics Seminar, Durham University
2005 Astrophysics Seminar, Center for Cosmological Physics, Chicago
2006 Physics Colloquium, University of California, Berkeley
2006 Physics Seminar, Durham University
2006 Astrophysics Lunch Seminar, KIPAC, Stanford University
2006 Physics Seminar, Durham University
2006 ICE/CSIC Seminar, Universitat Autònoma de Barcelona, Spain
2006 Dark Energy Survey Collaboration Meeting, University of Michigan
2006 Astrophysics Seminar, Canadian Institute for Theoretical Astrophysics,
Toronto
2006 Theory Group Seminar, Fermilab
2007 Astrophysics Seminar, Michigan State University
2007 Physics Colloquium, Case Western Reserve University

- 2007 Simulation Working Group Summary, Dark Energy Survey
Collaboration Meeting, University College London
- 2008 Colloquium, Shanghai Observatory, Shanghai, China
- 2008 Theory Group Seminar, Los Alamos National Lab, Los Alamos, NM

Public Lectures

- 1995 Michigan Journalism Fellows Fireside Chat, University of Michigan
- 1998 Michigan Journalism Fellows Fireside Chat, University of Michigan
- 2002 Saturday Morning Physics, University of Michigan
- 2004 Knight-Wallace Journalism Fellows Fireside Chat, University of
Michigan
- 2007 Frontiers of Astronomy Lecture Series, Cleveland Museum of Natural
History, Cleveland, OH
- 2008 Saturday Morning Physics, University of Michigan

Courses Taught

- F90 Phys 125 Disc (1)
- W91 Phys 115/420 (Living with Physics)
- F91 Phys 140 Disc (3)
- W92 Phys 668 (Advanced Astrophysics)
- F92 Phys 411 (Computational Physics)
- F93 Phys 112 (Cosmology)
- W94 Phys 668 (Advanced Astrophysics)
- F94 Phys 112 (Cosmology)
- W95 Phys 411 (Numerical Methods in Physics)
- F95 Phys 112 (Cosmology)
- W96 Phys 526 (Astrophysics II: Cosmological Structure Formation)
- F96 sabbatical leave
- W97 sabbatical leave
- F97 Phys 526
- W98 Phys 140 Lecture (Mechanics)
- F98 Phys 140 Lecture
- W99 Phys 465 (Senior Seminar)
- F99 Phys 140 Lecture
- W00 Phys 465
- F00 Phys 112
- W01 research leave
- F01 Phys 125 Lecture (Mechanics)
- W02 research leave
- F02 Phys 140 Lecture
- W03 administrative leave
- F03 Phys 526

W04	Phys 140 Lecture
W05	sabbatical leave
F05	Phys 140 Lecture
W06	research leave
F06	Phys 125 Discussion
W07	Phys 411 (Numerical Methods for Physics)
Spr07	Phys 140 Lecture + Discussion
F07	Phys 140 Lecture
W08	Phys 411

Other Teaching Information

W93	Developed undergraduate freshman seminar in Cosmology (Physics 112)
F97	Faculty Advisor for Eng477 “Principles of Virtual Reality”
F99	Founded Instructional Technology Oversight Team (ITOT)
F99	Search Committee Chair, Instructional Technology Specialist
F02	Initiated College of LSA Faculty Project Grants in Instructional Technology
F04	Invited Participant, Wiley & Sons University Physics Symposium
F06	Co-developer, LSA Academic Reporting Tools (ART)
F07	Co-founder, Introductory Physics Wiki
W08	LSA-CRLT Seminar on Academic Reporting Tools (ART)

Graduate Students

Prior	Frank Summers (PhD 1994, UC Berkeley) Mary Crone (PhD 1995) Chris Metzler (PhD 1995) Philippe Brieu (PhD 1997, Univ. Paris VII) Ben Mathiesen (PhD 1999) John Bialek (PhD 2005) Michael Busha (PhD 2007)
Current	Brian Nord Rebecca Stanek (Astronomy)

Independent Study Students

415, W91	Matthew Morgan
415, F92	Phil Baggett
URE, Spr92	Rob Gibson
415, F93, W94	Dan Schreiber (+URE)

RA F93,W94	Doug Finkbeiner
RA F94	William Radcliffe
REU Spr95	Jauder Ho
RA, F98	Patrick Kuschak
415, F97-W99	Daisuke Nagai
REU, Sum99	James Battat
UROP, F99-W00	Ted Way
Sum01	Peter Dykema
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