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**University Address**

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**Research interests**

Theoretical Astrophysics	Computer Simulations & Modeling
Active Galactic Nuclei	Magnetohydrodynamics
Star Formation	Pulsar Astrophysics

**Degrees**

August 2003	Ph.D. Astronomy & Astrophysics, University of Chicago
June 1999	M.S., Astronomy & Astrophysics, University of Chicago
June 1996	B.A., Physics & Astronomy, Carleton College, magna cum laude

**Experience**

September 2003 – present	Postdoctoral Fellow, Canadian Institute for Theoretical Astrophysics
September 1998 – August 2003	Graduate Student, studying under Arieh Königl. Dissertation topic: “Disk Driven Multiphase Outflows in AGNs” (Developing semi-analytic models of AGN Winds)
July 1999 – August 1999	Summer Research Project, working with Dr. Rita Sambruna at Pennsylvania State University (Developed BL Lac MHD/radiative driven wind models with XSPEC spectral-fitting interface code)
July 1996 – August 1998	Data Analyst/Computer Specialist <i>Chandra X-ray Observatory</i> Science Center, Calibration Team (Developed and used analysis code for ground calibration of telescope mirrors and instruments, and helped develop new Multilayer X-ray optics Facility)
June 1995 – August 1995	Summer Research, working with Dr. Joel Weisberg at Carleton College (Developed non-linear fitting program to analyze pulsar polarization measurements)
January 1995 - June 1996	Lab/Teaching Assistant Carleton College, Dept. of Physics & Astronomy (Teaching non-major undergraduate physics labs, grading homework, helping with observatory open-houses)
June 1994 – August 1994 & November 1994 – December 1994	Summer Intern Smithsonian Astrophysical Observatory (Helped develop lab verification tests for <i>Chandra X-ray Observatory</i> mirror coatings)
August 1992 – December 1994	System Programmer Administrative Computing, Carleton College (Wrote software for student records editing, tracking and reporting)

**Honors and awards**

- 2002 Sugarman Award, Enrico Fermi Institute, University of Chicago  
 1998-2000 McCormick Fellowship, University of Chicago  
 1997 Smithsonian Special Achievement Award for contributions to  
*Chandra X-ray Observatory* Ground Calibration  
 1996 Distinction in Major, Distinction in Senior Comprehensive Exercise  
 1993-1994 Dean's List, Carleton College  
 1996 Elected to Phi Beta Kappa  
 1992 William Carleton Scholar

**Professional Affiliations**

American Astronomical Society

**Computer Experience**

- Operating Systems: Linux, Irix, SunOS, MS Windows  
 System Admin. Experience: Linux, SunOS  
 Programming Languages: Fortran 77/90/95, C, C++, Perl, PerlDL  
 Experience with: Cloudy, XSPEC, IRAF, Mathematica, IDL, HTML, L<sup>A</sup>T<sub>E</sub>X

**Refereed Publications**

- Everett, J.E.**, 2005, "Radiative Transfer and Acceleration in Magnetocentrifugal Winds", accepted in ApJ, to appear in vol 631, October 1, 2005 (astro-ph/0506321)  
 Ballantyne, D.R. & **Everett, J.E.**, 2004, "On the Dynamics of Suddenly Heated Accretion Disks around Neutron Stars", ApJ, 626, 364  
**Everett, J.E.**, Ballantyne, D.R. 2004, "Continuum Acceleration of Black Hole Winds", ApJ, 615, L13  
**Everett, J.E.**, Königl, A., & Arav, N. 2002 "Observational Evidence for a Multiphase Outflow in QSO FIRST 1044+3656", ApJ, 569, 671  
**Everett, J.E.**, & Weisberg, J.M. 2001, "Emission Beam Geometry of Selected Pulsars Derived from Average Pulse Polarization Data", ApJ, 553, 341

**Invited Talks**

- Everett, J.E., "A Mighty Wind: Physics of AGN Outflows", St. Mary's University, Halifax, NS, February 4th, 2005  
 Everett, J.E., "Radiative and MHD Winds in AGN", Ringberg Castle Workshop on AGN Physics, November 24th, 2004

**Conference Proceedings**

- Everett, J.E.** 2002, "Multi-phase Disk Wind Models with Combined Hydromagnetic Stresses and Radiative Forces", in Active Galactic Nuclei: from Central Engine to Host Galaxy, ed. S. Collin, F. Combes, & I. Shlosman, ASP Conference Series, in press  
**Everett, J.E.**, Königl, A., & Arav, N. 2002, "Observational Evidence for a Multiphase Outflow in QSO FIRST 1044+3656", in Active Galactic Nuclei: from Central Engine to Host Galaxy, ed. S. Collin, F. Combes, & I. Shlosman, ASP Conference Series, in press

- Everett, J.E.**, Königl, A., & Arav, N. 2002 “Observational Evidence for a Multiphase Outflow in QSO FIRST 1044+3656” in “Mass Outflow in Active Galactic Nuclei: New Perspectives,” eds. D.M. Crenshaw, S.B. Kraemer, and I.M. George, ASP Conference Proceedings, Vol. 255, p. 189
- Everett, J.E.**, Königl, A., & Kartje, J.F. 2001, “Modeling Observational Signatures of Disk-Driven Outflows” in “Probing the Physics of AGN by Multiwavelength Monitoring,” eds. B.M. Peterson, R.S. Polidan, and R.W. Pogge, ASP Conference Series, Vol. 224, p. 441
- Weisberg, J.M., Morgan, J.J., Despotes, J.T., **Everett, J.E.**, Cordes, J.M. 2000, “A Search for Variable Interstellar Magnetic Fields and Neutron Star Precession in Four Years of Polarization Position Angle Measurements on 98 Pulsars”, in “Pulsar Astronomy - 2000 and Beyond” eds. M. Kramer, N. Wex, and N. Wielebinski, ASP Conference Series, Vol. 202, p. 269
- Romaine, S.E., **Everett, J.E.**, Bruni, R.J., Ivan, A., Gorenstein, P., Ghigo, M., Mazzoleni, F., Citterio, O., Pedulla, J., 1998, “Progress in replication of substrates for multilayer coatings” in “X-Ray Optics, Instruments, and Missions,” eds. Richard B. Hoover & Arthur B. Walker, Proc. SPIE Vol. 3444, p. 564
- Romaine, S.E., **Everett, J.E.**, Bruni, R.J., Ivan, A., Gorenstein, P., 1998, “Characterization and multilayer coating of cylindrical x-ray optics for x-ray astronomy” in “X-Ray Optics, Instruments, and Missions,” eds. Richard B. Hoover & Arthur B. Walker, Proc. SPIE Vol. 3444, p. 552
- Ivan, A., Romaine, S.E., Bruni, R.J., **Everett, J.E.**, Gorenstein, P. 1998, “Characterization of graded d-spacing multilayers for hard x-ray telescopes” in “X-Ray Optics, Instruments, and Missions,” eds. Richard B. Hoover & Arthur B. Walker, Proc. SPIE Vol. 3444, p. 556
- Romaine, S.E., Hussain, A.M., **Everett, J.**, Clark, A.M., Bruni, R.J., Gorenstein, P., Ghigo, M., Mazzoleni, F., Citterio, O., Pedulla, J., 1997, “Application of multilayer coatings to replicated substrates” in “Grazing Incidence and Multilayer X-Ray Optical Systems,” eds. Richard B. Hoover & Arthur B. Walker, Proc. SPIE Vol. 3113, p. 253
- Hussain, A., Romaine, S., Gorenstein, P., **Everett, J.**, Bruni, R., Clark, A., Ruane, M., Fedyunin, Y. 1997, “Studying Density vs. Ar Pressure for Optimization of DC Magnetron Sputter Deposition of Ni/C Multilayers for Hard X-ray Telescopes”, Proc. SPIE, Vol 3113: Grazing Incidence and Multilayer X-ray Optical Systems, July 1997, p. 260

### Presentations

- Everett, J.E., “Magnetocentrifugal Winds and Radiative Acceleration in Active Galactic Nuclei”, Poster presented at CASCA 2005, May 15-17, 2005, Université de Montréal, Québec
- Everett, J.E., Ballantyne, D.R., “Continuum-Driven High Velocity X-ray Winds”, Poster presented at AAS HEAD Meeting, New Orleans, LA, September 8-11, 2004
- Everett, J.E., “Multi-phase Disk Wind Models with Combined Hydromagnetic Stresses and Radiative Forces”, Poster presented at “Active Galactic Nuclei: From Central Engine to Host Galaxy”, July 23-27, 2002, Observatoire de Paris, Meudon, France.
- Everett, J.E., Königl, A., & Arav, N. “Observational Evidence for a Multiphase Outflow in BALQSO FIRST 1044+3656” Poster presented at “Active Galactic Nuclei: From Central Engine to Host Galaxy”, July 23-27, 2002, Observatoire de Paris, Meudon, France.

- Everett, J.E., “Observational Evidence for a Continuous Wind with Embedded Clouds in BALQSO 1044+3656.” Talk presented at “Mass Outflow in Active Galactic Nuclei: New Perspectives”, March 9, 2001, The Catholic University of America, Washington, D.C.
- Everett, J.E., Königl, A., Kartje, J.F., “Observational Signatures of Disk-Driven Outflows.” Talk presented at “Probing the Physics of AGN by Multiwavelength Monitoring”, June 22, 2000, NASA Goddard Spaceflight Center, Washington, D.C.
- Everett, J.E. “Solar Dynamo Theory: A Review of Progress and Problems.” Talk presented at the January 31, 2001 meeting of the University of Chicago/ASCI MHD Group.
- Everett, J.E., Romaine, S.E., Southwick, J., Hussein, A., Bruni, R., Ivan, A., Clark, A., Gorenstein, P., “Characterization of Multilayers for X-ray Optics.” Poster presented at the January 1998 meeting of the American Astronomical Society, Washington, D.C. BAAS, 29, 1300
- Everett, J.E. and Weisberg, J.W., “Determining the Magnetic Inclination Angle for Pulsars: A Comparative Study.” Poster presented at the January 1996 meeting of the American Astronomical Society, San Antonio, Texas. BAAS 27, 1305
- Everett, J.E., “Physics of Supermassive Black Holes in AGN.” Talk presented at the January 30, 2002 meeting of the Wopat Graduate Student Talk Series, University of Chicago.
- Everett, J.E., “A Guided Tour of the AGN Zoo.” Talk presented at the November 7, 2001 meeting of the Ryerson Astronomical Society at the University of Chicago.
- Everett, J.E., “Unsolved Problems in Astrophysics: Where’s the Cutting Edge?” Talk presented at the August 8, 2001 meeting of the Wopat Graduate Student Talk Series, University of Chicago.
- Everett, J.E., “The Space Shuttle Challenger Accident: The Inside Story and What We Can Learn From It.” Talk presented at the March 12, 2001 meeting of the Graduate Council Talk Series, at the University of Chicago.
- Everett, J.E., “Star Formation: The Big Picture.” Talk presented at the November 8, 2000 meeting of the Wopat Graduate Student Talk Series, University of Chicago.
- Everett, J.E., “Bayesian Statistics.” Talk presented at the August 4, 2000 meeting of the Wopat Graduate Student Talk Series, University of Chicago.
- Everett, J.E., “Review of Astrophysics in 1999.” Talk presented at the May 22, 2000 meeting of the Wopat Graduate Student Talk Series, University of Chicago.
- Everett, J.E., “Planet Formation.” Talk presented at the April 24, 2000 meeting of the Wopat Graduate Student Talk Series, University of Chicago.

#### **Public Outreach and Service**

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| January 2005 - present     | Helped organized weekly group meetings of the astrophysical hydrodynamics group at University of Toronto   |
| October 2002 - August 2003 | Volunteer, Adler Planetarium & Astronomy Museum  |
| April 2000 - April 2001    | Started & ran the ongoing Wopat Graduate Student Talk Series:<br>A graduate student organization for astrophysics students to present their work & interests and discuss them with other students. |

August, 2005