

Joanne Hughes Clark

Physics Department, Seattle University, Seattle WA 98122

Tel.: (206) 296-5935 (Work) and (206) 303-7378 (Cell)

jhughes@seattleu.edu

EDUCATION

- **1985-88:** Ph.D. in Astrophysics (awarded in May, 1989) from the Department of Physics, Queen Mary and Westfield College, University of London, Thesis advisor: Dr. J.P. Emerson. Thesis work: study of the low-mass star formation process with infrared satellite data (IRAS) and follow-up work using ground-based telescopes.
- **1982-85:** B.Sc. (1st Class Honors) in Physics and Astronomy from the Department of Physics, Queen Mary and Westfield College, University of London.

PROFESSIONAL EXPERIENCE

- **Fall 2008 to Present:** Tenured Associate Professor, Physics Department, Seattle University.
- **Fall 2009 to Present:** Affiliate Associate Professor, Astronomy Department of the University of Washington.
- **Fall 2014 – 2016:** Arline F. Bannan Chair of Mathematics and Natural Sciences in the College of Science and Engineering.
- **Fall 2012 – 2015:** Murdock Science Research Program Director, College of Science and Engineering.
- **Sept. 2004 – Spring 2008:** Assistant Professor, Physics Department, Seattle University.
- **Sept. 1999 – June 2004:** Tenured Physics Instructor, Physics Department, Chair of Science Department, Everett Community College. Summer research appointments at UW, Seattle.
- **Jan. 1998 – June 1999:** Assistant Professor of Physics, Department of Physics, Georgia Southern University.
- **Sept. 1996 – Dec. 1997:** Lecturer (postdoctoral instructor) in the Astronomy Department of the University of Washington.
- **June 1994 – August 1996:** Part-time lecturer and systems programmer in the Astronomy Department of the University of Washington.
- **July 1991 – June 1994:** Postdoctoral Research Fellow in the Five College Astronomy Department of the University of Massachusetts.
- **July 1990 – June 1991:** Visiting Assistant Professor of Astronomy in the Five College Astronomy Department of Smith College, Northampton, MA.
- **Jan. 1990 – June 1990:** Teaching Assistant and Postdoctoral Research Fellow in the Five College Astronomy Department of the University of Massachusetts.
- **Oct. 1988 – Dec. 1989:** Postdoctoral Research Assistant in the Astronomy Unit, Department of Mathematical Sciences, Queen Mary and Westfield College, University of London.

Graduate and Postdoctoral Advisors:

- *George Wallerstein*, Professor (Emeritus), Department of Astronomy, University of Washington.
- *Stephen Strom*, (Astronomer Emeritus) former Associate Director, Science Program, KPNO. I worked for Dr. Strom at UMass, Amherst.
- *Michael Rowan-Robinson*, Astrophysics Group, The Blackett Laboratory, Imperial College, University of London.

Thesis advisor:

- *James Emerson*, at the time: Lecturer in Physics, Queen Mary & Westfield College, University of London, and now: Professor and director of the Queen Mary, University of London Astronomy Unit, School of Mathematics Science, and also VISTA Consortium Director, Edinburgh, Scotland.

ACADEMIC HONORS AND GRANTS**Grants:**

- **NASA (WNSGC UW subcontract):** “*From Undergraduate to Research Scientist,*” 2007-2018.:
- **NSF (Proposal ID: 1009372): RUI:** “*Stellar Populations in Nearby Dwarf Galaxies,*” 2010-2014 (under NCE)
- **2012-15: Director of the Murdock Summer Undergraduate Research Program** of the SU College of Science & Engineering
- **1992:** PI on Rosat Grant for the project, “*Pre-Main Sequence Populations in Cha II.*”

Prizes:

- **1986:** Valerie Myerscough Prize at QMWC.
- **1985:** Drapers' Society Award for final-year degree examination results at QMWC.

Service:**Professional**

- Referee, at various times for papers submitted to the AJ, MNRAS, PASP.
- Established Seattle University's membership in the Washington NASA Space Grant Consortium (WNSGC). Reviewed applications for WNSGC's JPL internships.
- Member of a Review Panel for NSF grants from 1998 onwards.
- Judge at the Washington Science Olympiad (2000-2011).
- Chaired sessions in several AAS meetings in 2006-2019.
- SU representative to the Astronomical Research Consortium.

Professional, within Seattle University

- Past member of Science Futures Committee.
- SU Director for the Washington NASA Space Grant Consortium (UW subcontract – 2007-2018): “*From Undergraduate to Research Scientist,*” (for CSE student-support only, not faculty).
- Past member of College of Science & Engineering Rank & Tenure Committee.
- Past Chair of the Faculty Technology Committee (FTC), continuing member since 2019.
- Director of the Summer Research Program for the College of Science and Engineering 2012-2015.

- Member and vice-chair of the Teaching/Learning Technology Roundtable (TLTR) from Fall 2005, until it was reorganized to become the FTC.
- Gave public and internal science colloquia.
- Reviewed student applications for Goldwater Scholarships.
- Serving as a reviewer for Murdock Research Grants (external to SU also).

PUBLICATIONS: *Indicates undergraduate student co-author.

PUBLICATIONS IN REFEREED JOURNALS

AJ: Astronomical Journal; PASP: Publications of the Astronomical Society of the Pacific; MNRAS: Monthly Notices of the Royal Astronomical Society.

Hughes, J.D., Stetson, P.B., Leaman, R.C., Wallerstein, G., Venn, K., Farrell, E.M, Marshall, T, & Cook, Z.* 2020, "Wide-Field Imaging of WLM: A Checkered Past Revealed by the Evolved Stars," submitted to MNRAS.*

Hughes, Joanne, Lacy, Brianna, Sakari, Charli, Schiefelbein, S.* , Corrin, O.* ,and Joudi, H.* , "A Multiwavelength Study of the Segue 3 Cluster, 2017, *AJ*, 154, 57.

Hughes, Joanne, Lacy, Brianna, Sakari, Charli, Schiefelbein, S.* , Corrin, O.* ,and Joudi, H.* , "VizieR Online Data Catalog: New SDSS and Washington Photometry in Segue 3," *VizieR Online Data Catalog*, 515.

Hughes J., Wallerstein, G., Dotter, A., and Geisler, D. (2014) "Photometric Metallicities in Boötes I," *MNRAS*, 439, 788 - arXiv:1401.3389

Hughes J., Wallerstein, G., and Bossi, A.* (2008), "THE AGE AND METALLICITY OF THE BOOTES I DWARF GALAXY," *AJ*, 136, 2321.

Hughes J., Wallerstein, G., Covarrubias, R., and Hays, N.* (2007), "WASHINGTON PHOTOMETRY OF THE RED GIANT BRANCH IN NGC 6388," *AJ*, 134, 229.

Hughes, J., Wallerstein, G., van Leeuwen, F., and Hilker, M. (2004), "THE GIANT BRANCHES OF OMEGA CENTAURI: MULTIWAVELENGTH OBSERVATIONS OF EVOLVED STARS," *AJ* 127, 980.

Hughes, J., and Wallerstein, G. (2000), "AGE AND METALLICITY EFFECTS IN OMEGA CENTAURI: STROMGREN PHOTOMETRY AT THE MAIN SEQUENCE TURN OFF," *AJ*, 119, 1225.

Hughes, J., and Wallerstein, G. (1997), "STARS ABOVE THE RED HORIZONTAL BRANCH IN M15," *PASP*, 109, 274.

Chen, H., Grenfell, T.G., Myers, P.C., and **Hughes, J.D.**, (1997), "COMPARISON OF STAR FORMATION IN FIVE NEARBY MOLECULAR CLOUDS," *ApJ*, 478, 295.

Hamuy, M., Phillips, M.~M., Maza, J., Suntzeff, N. B., della Valle, M., Danziger, J., Antezana, R., Wischnjwesky, M., Aviles, R., Schommer, R. A., Kim, Y.-C., Wells, L. A., Ruiz, M. T., Prosser, C. F., Krzeminski, W., Baylin, C. D., Hartigan, P., **Hughes, J.** (1994), "SN 1992K: A twin to the subluminous Type IA SN 1991bg" *AJ*, 108, 2226

Hughes, J., Hartigan, P., Krautter, J., and Kelemen, J., (1994), "THE STELLAR POPULATION OF THE LUPUS DARK CLOUDS," AJ, 108, 1071.

Leech, K. J., Rowan-Robinson, M., Lawrence, A., and **Hughes, J. D.** (1994), "OPTICAL STRUCTURE OF A LARGE SAMPLE OF ULTRALUMINOUS IRAS GALAXIES," MNRAS 267, 253.

Hughes, J., Hartigan, P., and Clampitt, L.* (1993), "THE DISTANCE TO THE LUPUS STAR FORMATION REGION," AJ, 105, 571.

Hughes, J., and Hartigan, P. (1992), "CHAMAELEON II: DISTANCE DETERMINATION AND H-R DIAGRAM," AJ, 104, 680.

Hughes, J.D., Hartigan, P., Graham, J.A., Emerson, J.P., and Marang, F. (1991), "THE OPTICAL COUNTERPART OF IRAS 12496-7650: A HIGHLY EMBEDDED AE STAR," AJ, 101, 1013.

Rowan-Robinson, M., Jones, M., Leech, K., Vedi, K., and **Hughes, J.** (1991), "IRAS MAPS OF GALACTIC EMISSION AND THE ZODIACAL BANDS," MNRAS 249, 729.

Rowan-Robinson, M., **Hughes, J.**, Vedi, K., and Walker, D. W. (1990), "MODELING THE IRAS ZODIACAL EMISSION," MNRAS 246, 273.

Hughes, J. D., Emerson, J. P., Zinnecker, H., and Whitelock, P. A. (1989), "IRAS 12496-7650 - AN AE STAR WITH OUTFLOW?" MNRAS 236, 117.

Harris, Stella, Clegg, Peter, and **Hughes, Joanne** (1988), "T TAURI STARS IN TAURUS – THE IRAS VIEW," MNRAS 235, 441.

OTHER PUBLICATIONS/POSTERS/TALKS

Hughes, J.D., Stetson, P.B., Leaman, R., et al. 2019, "Star Formation History of the WLM dIrr," American Astronomical Society Meeting Abstracts, #233 233, 449.02

Hughes, J.D., Schiefelbein, S*., Le, D*., et al. 2016, "Multi-Wavelength Study of Segue 3," American Astronomical Society Meeting Abstracts, 228, 319.12

Hughes, Joanne D., Wallerstein, George, Stone, Myra, & Albright, Meagan 2015, "Sample Selection and [Fe/H]-variations in NGC 3201", AAS Meeting #225, #247.21

Albright, Meagan, **Hughes, Joanne D.**, & Wallerstein, George 2015, "Washington and Strömgren Study of the Isolated Dwarf Galaxy WLM", American Astronomical Society Meeting Abstracts, 225, 143.16

Stone, M., **Hughes, J.D.**, Wallerstein, G., & Albright, M. 2014, "Photometric Metallicities of Stars in the Retrograde Globular Cluster, NGC 3201" poster presented at American Astronomical Society Meeting Abstracts, 223, 442.21

Hughes, J. 2011, "Photometric Metallicities in dSphs," **talk** given at "*RR Lyrae Stars, Metal-Poor Stars and the Galaxy*", January 23-25, 2011, Carnegie Observatories, **article published** in: Carnegie Observatories Astrophysics Series, Vol. 5. Edited by Andrew McWilliam, p.249, arXiv:1108.5020

Hughes, Joanne D., Leaman, R., McCormick, K.*, Hankins, A.* 2011, **poster** presented at “Observations of Dwarf Galaxies in Several Photometric Systems,” American Astronomical Society, AAS Meeting #217, #147.05, Bulletin of the American Astronomical Society, Vol. 43

Hughes, J., & Wallerstein G. 2010, “Photometric Metallicities in dSphs,” **poster** presentation at *Cool Stars 16*, UW, Seattle, 29 Aug. – 2 Sept. 2010.

Hughes, Joanne D., Luxon, J.*, Corcoran, R.*, Wallerstein, G. 2010, “Photometric Metallicities in the CVn II dSph System,” **poster** presented at the American Astronomical Society, AAS Meeting #215, #457.02, Bulletin of the American Astronomical Society, Vol. 42

Hughes, J., & Wallerstein, G. 2008, “The Age and Metallicity of the Bootes I System,” **poster** presentation at “*Chemical Evolution of Dwarf Galaxies and Stellar Clusters*”, July 21-25, 2008, Garching bei Munchen, Germany.

Hughes, D., Wallerstein, G., Bossi, A.*, McDougald, W.*, and Covarrubias, R. (2006), “WASHINGTON PHOTOMETRY OF NGC 6441,” **poster** presented at American Astronomical Society, 209th AAS Meeting, #26.11, Bulletin of the American Astronomical Society, Vol. 38, p.938.

Hughes, Joanne D., Wallerstein, G., Covarrubias, R., and Hays, N.* (2006), “EVIDENCE FOR A METALLICITY SPREAD AMONGST THE GIANTS IN NGC 6388,” **poster** presented at American Astronomical Society, 208th AAS Meeting, #65.01, Bulletin of the American Astronomical Society, Vol. 38, p.144.

Hughes, J., Wallerstein, G., van Leeuwen, F., and Hilker, M. (2002), "THE GIANT BRANCHES OF OMEGA CENTAURI," American Astronomical Society, 201st AAS Meeting, #108.01, Bulletin of the American Astronomical Society, Vol. 34, p.1276.

Hughes, J., Wallerstein, G., and van Leeuwen, F. (2002), "PHOTOMETRIC OBSERVATIONS OF OMEGA CENTAURI: MULTI-WAVELENGTH OBSERVATIONS OF EVOLVED STARS," in "Omega Centauri: a Unique Window into Astrophysics", ASP Conf. Ser. 265, edited by F. van Leeuwen, J.D. Hughes, and G. Piotto, p.73.

"OMEGA CENTAURI: A UNIQUE WINDOW INTO ASTROPHYSICS" (2002), ASP Conf. Ser. 265, **edited by** F. van Leeuwen, **J.D. Hughes**, and G. Piotto.

Hughes, J., Wallerstein, G., and van Leeuwen, F. (2001), "OMEGA CEN: MULTI-COLOR OBSERVATIONS OF EVOLVED STARS," ASP Conf. Ser. on Astrophysical Ages and Timescales, ASP Conference Series No. 245, Astronomical Society of the Pacific, Eds. T. von Hippel, N. Manset, C. Simpson, 319.

Grocholski, A.J.* and **Hughes, J.D.**, (1999), “THE STAR FORMATION HISTORY OF THE LUPUS DARK CLOUDS,” American Astronomical Society, 194th AAS Meeting, #68.02, Bulletin of the American Astronomical Society, Vol. 31, p.931.

Wallerstein, G., and **Hughes, J.** (1999), “AGE AND METALLICITY EFFECTS IN OMEGA CENTAURI,” in “*The Galactic Halo : From Globular Cluster to Field Stars*,” Proceedings of the 35th Liege International Astrophysics Colloquium, held 5-8 July, 1999. Edited by A. Noels, P. Magain, D. Caro, E. Jehin, G. Parmentier, and A. A. Thoul. Liege, Belgium : Institut d'Astrophysique et de Geophysique, 2000., p.535.

Hughes, J., and Wallerstein, G. (1998), "AGE AND METALLICITY EFFECTS IN OMEGA CENTAURI I: STROMGREN PHOTOMETRY," American Astronomical Society, 193rd AAS Meeting, #68.09, Bulletin of the American Astronomical Society, Vol. 30, p.1348.

Wachter, S., Deutsch, E. W., **Hughes, J. D.**, Margon, B., and Layden, A. (1996), "QX NORMAE," IAU Circ., 6422, 2, edited by Green, D. W. E.

Clampitt, Lori,* **Hughes, Joanne**, and Hartigan, Patrick (1992), "THE DISTANCE TO THE LUPUS STAR FORMATION REGION," American Astronomical Society, 181st AAS Meeting, #116.06, Bulletin of the American Astronomical Society, Vol. 25, p.734.

Leech, K. J., Rowan-Robinson, M., Lawrence, A., and **Hughes, J. D.** (1991), "ARE ALL HIGH LUMINOSITY IRAS GALAXIES INTERACTING?" in *"Dynamics of Galaxies and Their Molecular Cloud Distributions: Proceedings of the 146th Symposium of the International Astronomical Union,"* held in Paris, France, June 4-9, 1990. Edited by F. Combes and Fabienne Casoli. International Astronomical Union. Symposium no. 146, Kluwer Academic Publishers, Dordrecht, p.432.

Hughes, J. D., and Emerson, J. P (1988), "THE LUMINOSITY FUNCTIONS OF TAURUS AND CHAMAELEON", *"Comets to Cosmology, Proceedings of the Third IRAS Conference,"* Queen Mary College, London, England, July 6-10, 1987. Lecture Notes in Physics, Vol. 297, edited by A. Lawrence. Springer-Verlag, Berlin, p.159.

Hughes, J.D. (1986), "FAR-INFRARED INVESTIGATION OF THE TAURUS STAR-FORMING REGION USING THE IRAS DATABASE," In NASA. Ames Research Center Summer School on Interstellar Processes, Abstracts of Contributed Papers, p.1-2.

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RG Score: 22.93

h-index: 10