

# Richard Gelderman

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## Professional Preparation

- 1994 Ph.D. Astronomy University of Virginia, Dr. Mark Whittle, supervisor  
"An Optical Study of Compact Steep-Spectrum Radio Sources"  
1990 M.A. Astronomy University of Virginia, Dr. Mark Whittle, supervisor  
"Kinematics and Excitation of Ionized Gas in Markarian 1066"  
1986 B.S. Physics Virginia Polytechnic Institute & State University

## Appointments

- 2008 - Professor, Dept. of Physics & Astronomy, Western Kentucky University  
2007 - SKyTeach Science Co-Director, Western Kentucky University  
2002 - 2008 Associate Professor, Dept. of Physics & Astronomy, Western Kentucky University  
1999 - 2002 Assistant Professor, Dept. of Physics & Astronomy, Western Kentucky University  
1996 - 1999 Visiting Asst. Professor, Dept of Physics & Astronomy Western Kentucky University  
1994 - 1996 National Research Council Resident Research Associate,  
Laboratory for Astronomy & Solar Physics, NASA/Goddard Space Flight Center

## Selected Recent Refereed Publications

- "HST/STIS Spectroscopy of CSS sources: Kinematics and Ionisation of the Aligned Nebulae", A. Labiano, C.P. O'Dea, **R. Gelderman**, W. de Vries, D.J. Axon, P.D. Barthel, S.A. Baum, A. Capetti, R. Fanti, A. Koekemoer, C.N. Tadhunter, and R. Morganti, 2005, *A&A* 436, 493.
- "The Robotically Controlled Telescope (RCT) at KPNO", **R. Gelderman**, M.T. Carini, D.R. Davis, M.E. Everett, E.F. Guinan, S.B. Howell, S. Marchenko, J.R. Mattox, C.H. McGruder, and D.K. Walter, 2004, *Astron. Nach.* 325, 6, 559.
- "Searching for Extrasolar Planets with the 1.3m Robotically Controlled Telescope on Kitt Peak", C.H. McGruder, M.E. Everett, S.B. Howell, M.T. Carini, D.R. Davis, **R. Gelderman**, E.F. Guinan, S. Marchenko, J.R. Mattox, and D.K. Walter, 2004, *Astron. Nach.* 325, 6, 648.
- "The Optical Detection of Gamma Ray Bursts with the 1.3m Robotically Controlled Telescope on Kitt Peak", C.H. McGruder, J.R. Mattox, M.T. Carini, D.R. Davis, M.E. Everett, **R. Gelderman**, E.F. Guinan, S.B. Howell, and D.K. Walter, 2004, *Astron. Nach.* 325, 6, 651.
- "HST/STIS Spectroscopy of CSS sources: Kinematics and Ionisation of the Aligned Nebulae", A. Labiano, C.P. O'Dea, **R. Gelderman**, W. de Vries, D.J. Axon, P.D. Barthel, S.A. Baum, A. Capetti, R. Fanti, A. Koekemoer, C.N. Tadhunter, and R. Morganti, 2003, *Publ. Astron. Society of Australia*, 20, 28.
- "Jet-Cloud Interactions in Compact Steep Spectrum Radio Sources", C.P. O'Dea, W. de Vries, A. Koekemoer, S.A. Baum, D.J. Axon, P.D. Barthel, A. Capetti, R. Fanti, **R. Gelderman**, C.N. Tadhunter, and R. Morganti, 2003, *Publ. Astron. Society of Australia*, 20, 88.
- "HST/STIS Observations of the Kinematics of Emission Line Nebulae in Three Compact Steep-Spectrum Radio Sources", C.P. O'Dea, W. DeVries, A. Koekemoer, S. Baum, R. Morganti, R. Fanti, A. Capetti, C. Tadhunter, P. Barthel, D. Axon, and **R. Gelderman**, 2002 *Astronomical Journal*, 123, 2333.

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## **Selected Recent Conference Proceedings**

"*Autonomous Scheduling and Operation of the 1.3-meter Robotically Controlled Telescope (RCT) at Kitt Peak*"  
R. Gelderman, L. Strolger, M. Carini, S. Marchenko, **S. Yaramala, M. Rumph, R. VanFleet and J. Wood**,  
2008, BAAS, 211, 1492.

"*A Spectrum is Worth a Thousand Pictures*" R. Gelderman, 2007, BAAS, 209, 7006.

"*Triggering AGN Through Gravitational Perturbations: An Example of a Student Project Using SDSS-DR5*"  
R. Gelderman, **S. McMurray and S. Smith**, 2007, BAAS, 209, 1492.

"*Global Network of Autonomous Observatories Dedicated to Student Research*", R. Gelderman, 2006  
Innovation in Teaching/Learning Astronomy Methods, XXVI General Assembly of the International  
Astronomical Union, Prague, Czech Republic, SPS2, #25.

"*Gravitational Perturbations as the Trigger for Nuclear Activity in Galaxies*", R. Gelderman, **S. McMurray, &  
S. Smith**, 2006 XXVI General Assembly, International Astronomical Union, Prague, Czech Republic.

"*Naked-eye and Small Telescope Observing*" R. Gelderman, 2006 Global Hands-On Universe Conference,  
Observatoire de Haute Provence, France.

"*Helping Students Visualize Spectroscopy*" R. Gelderman, 2006 Hands-On Universe Teacher Resource Agent  
Conference, Yerkes Observatory, Williams Bay, Wisconsin, June 2006.

"*Triggering Mechanisms for Active Galaxies: Multiwavelength Images*" **S. McMurray, S. Smith**, and R.  
Gelderman, Proceedings 20<sup>th</sup> National Conference of Undergraduate Research, Asheville, NC, April 2006.

## **Synergistic Activities**

SKyTeach Science Co-Director, top level oversight of WKU's replication of UTeach  
Robotically Controlled Telescope (RCT) Consortium  
WKU representative on Board of Directors, Observatory Director, Project Manager

## **Awards & Honors**

WKU Faculty Award for Public Service, 2007  
Ogden College Award for Public Service, 2002  
Marianna Hamilton Fellowship, University of Virginia; 1991-1992  
DuPont Fellowship, University of Virginia; 1991 - 1992  
Dean's Reserve Fellowship, University of Virginia; 1987, 1990 - 1992  
Governor's Fellowship, University of Virginia; 1990 - 1999

## **Professional Organizations**

International Astronomical Union	American Astronomical Society
American Association of Physics Teachers	Astronomical Society of the Pacific
National Science Teachers Association	Astronomical League

## **Collaborators and Other Affiliations**

Michael Carini (Western Kentucky University)  
Charles H. Nelson (Drake University)  
Michael Marder (University of Texas, Austin)  
Christopher P. O'Dea (Rochester Institute of Technology)  
Richard Patterson (University of Virginia)  
Donald K. Walter (South Carolina State University)  
D. Mark Whittle (University of Virginia)  
Bruce Woodgate (NASA-Goddard Space Flight Center)