

James (Jamie) D. White

Professional Preparation

Carleton College	Physics	B.A.	1985
Pennsylvania State University	Physics/Education	M.Ed.	1993
Pennsylvania State University	Physics	Ph.D.	1994

Appointments

1998-present	<u>Physics Department Chair</u> (2008-present) <u>Professor of Physics</u> (2006-present), <u>Associate Professor</u> (2000-2006), <u>Assistant Professor</u> (1998-2000), Juniata College Endowed chair: <u>William I. and Zella Book Professor of Physics</u> (2006-present) Gibbel Distinguished Professor Award for Outstanding Teaching (2004)
1999-present	<u>Associate Site Director</u> , Pennsylvania State Championship of the Science Olympiad (1999-present), <u>Co-Site Director</u> , National Science Olympiad (2004)
2004-2005	<u>Sabbatical: Senior Visiting Fellow</u> , University of Melbourne, Collaborators: Associate Professor Robert Scholten and Professor Keith Nugent
2002 summer	<u>Visiting Researcher/Consultant</u> , The Pennsylvania State University Meteorology Department, Collaborator: Dr. Ken Davis, Grant: NSF - ROA
1997-1998	<u>Assistant Professor of Physics</u> , The College of Potsdam, SUNY
1994-1997	<u>Assistant Professor of Physics and Adjunct Professor of Education</u> , Baldwin-Wallace College
1996 summer	<u>Summer Faculty Research Fellow</u> , American Chemical Society, Petroleum Research Fund, College of Wooster, Collaborator: Dr. Anna Ploplis Andrews
1995 summer	<u>Visiting Researcher/Consultant</u> , The Pennsylvania State University Physics Department, Collaborator: Dr. Renee Diehl
1989-1991	Duncan Fellowship, The Pennsylvania State University
1989-1994	Teaching at The Pennsylvania State University: <u>Lecturer/Instructor in Physics Department</u> (1994 spring, 1994 summer) <u>Instructor in Department of Independent Learning</u> (1990-1992) <u>Group Physics Tutor for Tri-Forces' ROTC Program</u> (1990-1992) <u>Teaching Assistant/Graduate Lecturer</u> (1989-1990, summer 1990)
1991-1994	<u>Graduate Research Assistant</u> under Dr. Renee Diehl at The Pennsylvania State University Grant: NSF - Physisorption
1990-1991	<u>Graduate Research Assistant</u> under Dr. Julian Maynard at The Pennsylvania State University, Grant: ONR - Photoacoustics
1985-1989	<u>Physics Teacher</u> , The Haverford School, Haverford, Pennsylvania
1984-1989	<u>Assistant Summer Director of Camp Kirchenwald</u> , The Lutheran Camping Corporation of Central Pennsylvania, Arendtsville, Pennsylvania

Synergistic Activities

- 2007-2010 Research funding through National Science Foundation (NSF) Award PHY-0653518 RUI: Enhancement of Nonlinear Processes in Atomic Vapors Via Atomic Coherence
- 2005: Rural Regional Coordinator for NSF-sponsored American Association of Physics Teachers /Physics Teacher Resource Agent (AAPT/PTRA) program in Central PA
- 2004: Co-Site Director of the National Science Olympiad Tournament
- 1998- present: Co-Site Director of the PA State Science Olympiad Tournament
- 2000 Awarded an International Society of Optical Engineers (SPIE) Equipment Grant
- 1999 Awarded a Spectroscopy Society of Pittsburg College Equipment Grant

Current Professional Memberships

American Association of Physics Teachers
American Physical Society
Omicron Delta Kappa, The National Leadership Honor Society
Optical Society of America
Sigma Pi Sigma, The National Physics Honor Society

Publications

D. J. D’Orazio, M. Pearson, J. T. Schultz, D. Sidor, M. Best, K. Goodfellow, R. E. Scholten, J. D. White, “Measuring the speed of light using beating longitudinal modes in an open-cavity HeNe laser.” *Am. J. Phys.*, in review.

J. T. Schultz, S. Abend, D. Döring, J. E. Debs, P. A. Altin, J. D. White, J. D. Close, and N. P. Robins, “Coherent 455 nm beam production in cesium vapor,” *Optics Letters* **34**, 2321(2009).

R. E. Scholten, S. C. Bell, D. V. Sheludko, J. D. White, L. D. Turner, T. Meijer, B. Smeets, M. Jeppesen, C. S. Hofmann, and M. Jasperse, “Quantum coherence in the rubidium 5S-5P-5D ladder system: applications in frequency conversion, imaging, and squeezing,” in *New Trends in Quantum Coherence and Nonlinear Optics* (Horizons in World Physics, Volume 263, 2009).

S. C. Bell, D. M. Heywood, J. D. White, J. D. Close, R. E. Scholten, “Laser frequency offset locking using electromagnetically induced transparency,” *Appl. Phys. Lett.* **90**, 171120 (2007).

T. Meijer, J. D. White, B. Smeets, M. Jeppesen, and R. E. Scholten, “Blue five-level frequency-upconversion system in rubidium,” *Optics Letters* **31**, 1002 (2006).

M. Jeppesen, J. D. White, K. F. E. M. Domen, and R. E. Scholten, “Coherent blue laser beam production in a rubidium vapour cell,” In *Physics for the Nation*, Congress Proceedings of the 16th National Congress, ISBN 0-9598064-8-2, Australian Institute of Physics (2005).

L. D. Turner, A. Slavec, K. P. Weber, J. D. White, K. F. E. M. Domen, and R. E. Scholten, “Control theory for frequency stabilization of external cavity diode lasers,” In *Physics for the Nation*, Congress Proceedings of the 16th National Congress, ISBN 0-9598064-8-2, Australian Institute of Physics (2005).

M. Jeppesen, J. D. White, K. F. E. M. Domen, T. Meijer, and R. E. Scholten, “Coherent blue laser beam production in a rubidium vapour cell,” *Australian Optical Society News* **19**, 21 (2005).

J. D. White, “Statement on the future of Undergraduate SME&T,” *Faculty for the 21st Century: Collection of Statements*, (Project Kaleidoscope, 1999).

M. Harrison, T. Marik, and J. D. White, "Rediscovering Poisson's Spot," *Phys. Teach.* **35**, 18 (1997).

J. D. White, "Continuous Quality Improvement of the Learning of Physics by Engineering Students," in Jack Wilson (ed.), *The Conference on the Introductory Physics Course (on the Occasion of the Retirement of Robert Resnick)*, (John Wiley & Sons, Inc, 1997) 237-239.

S. Broadbent, J. D. White, and J. Zumuchick, "Speed Skating and the Physics of Ice," a chapter in *The Encyclopedia of Sports Science*, John Zumuchick, ed., (MacMillan, 1997) 390-418.

J. D. White and L. R. White, "Answer to Question #33: Underwater vision of dolphins and terns," *Am. J. Phys.* **64**(11), 1353 (1996).

J. D. White, J. V. Lakin, M. A. Strauss, and R. D. Diehl, "He-atom Scattering Study of Xe Coadsorbed with Alkali Metal Atoms on Graphite," *J. Chem. Phys.* **101**, 4445 (1994).

J. D. White, J. Cui, M. Strauss, R. D. Diehl, F. Ancilotto, and F. Toigo, "He-Scattering Studies of Alkali Metal Overlayers on Graphite," *Surf. Sci.* **307-309**, 1134 (1994).

J. Cui, J. D. White, and R. D. Diehl, "Anomalous Inelastic He-Atom Scattering Intensities for the Vibrational Modes of Alkali Metals on Graphite," *Surf. Sci. Lett.* **293**, L841 (1993).

J. Cui, J. D. White, R. D. Diehl, J. Annett, and M. W. Cole, "Alkali-Metal-Plated Graphite Surfaces: He Interaction and Diffraction," *Surf. Sci.* **279**, 149 (1992).

J. D. White, "The Role of Surface Melting in Ice Skating," *Phys. Teach.* **30**, 495 (1992).

C. Yu, M. J. McKenna, J. D. White, and J. D. Maynard, "A New Resonant Photoacoustic Technique for Measuring Very Low Optical Absorption in Crystals and Glasses," *J. Acoust. Soc. Am.* **91** (2), 868 (1992).