

## TERRENCE LEE REESE

2015

Professional Address  
Department of Physics  
Southern University  
P. O. Box  
Baton Rouge, LA 70813  
(225) 771-4130

### Professional Experience:

Chairman Department of Mathematics, Physics and Science and Math Education,  
Southern University, Baton Rouge, LA. August 2015-Present.

Professor of Physics, Southern University, Baton Rouge, LA. August 2008-2015.

2008 Associate Professor of Physics, Southern University, Baton Rouge, LA. August 2003-

2002. Assistant Professor of Physics, Southern University, Baton Rouge, LA, August 1997-

1995-May 1997. Visiting Assistant Professor of Physics, Swarthmore College, Swarthmore, PA, August

1995-May 1997. Science Instructor, Upward Bound Program Texas Christian University, Fort Worth, TX,  
June 1995-August 1995.

1995. Instructor of Physical Science, Jarvis Christian College, Hawkins, TX, August 1992-May

1995. Research Assistant, Mica Corporation, Culver City, CA, Summer 1984.  
U. S. Navy, 1980-1983.

### Educational Background:

Ph.D. Theoretical Condensed Matter Physics and Computational Physics, August 1992,  
Texas Christian University, Fort Worth, TX.

B.S. Physics, August 1986, Texas Christian University, Fort Worth, TX.

### Courses Taught:

Jarvis College:

Physical Science, Freshman Physics, Calculus I, Chemistry I, Physical Science  
Lab, Chemistry Lab

Swarthmore College

Classical Dynamics, Freshman Physics, Mathematical Methods of Physics,  
Freshman Physics Lab

Southern University

Advanced Mathematical Physics, Modern Physics, Physical Science

### Refereed Publications:

1. Self-Trapping of Positronium in a Classical Fluid, Terrence Reese and Bruce Miller,  
*Proceedings of the International Symposium on Positron Annihilation Studies of Fluids*, ed. S.  
C. Sharma, World Scientific, Singapore, 1988, pp. 259-264.
2. Self-Trapping of a Light Particle in a Dense Fluid: A Mesoscopic Model B. N. Miller and  
Terrence Reese, *Physical Review A*, **39**, 4735 (1989).
3. Theory of Self-Trapping with a Realistic Equation of State, B. N. Miller and Terrence Reese,  
*Positron Annihilation*, eds. L. Dorikens-Vanpraet, M. Dorikens and D. Segers, World  
Scientific Singapore, 1989, pp. 733-746.

4. Self-Trapping of a Light Particle in a Dense Fluid: Application of Scaled Density-Functional Theory to the Decay of Ortho-Positronium, Terrence Reese and B. N. Miller, Physical Review A, **42**, 6068 (1990).
5. Positronium in Xenon: The Path Integral Approach, Terrence Reese and Bruce N. Miller, Physical Review E, **47**, 2581 (1993).
6. Positron Lifetime Distribution in Fluids, B. N. Miller, Terrence L. Reese and G. Worrell, Physical Review E, **47**, 4083 (1993).
7. The Virial Expansion of a Positron in a Classical Gas, B. N. Miller, T. L. Reese, G. Worrell, Canadian Journal of Physics, **74**, 548 (1996).
8. The Virial Expansion of a Quantum Particle in a Classical Gas: Application to Ortho-Positronium Decay in Gases, G. Worrell, B. N. Miller and T. L. Reese, Physical Review A **53**, 2101 (1996).
9. Path Integral Study of Positronium Decay in Xenon, T. L. Reese and B. N. Miller, Physical Review E **64**, 061201 (2001).
10. Path Integral Simulation of Positronium, Bruce N. Miller and Terrence Reese, Nuclear Instruments and Methods in Physics Research B; **192** (2002) pg. 176-179.
11. Self-Trapping at the Liquid Vapor Critical Point, Bruce N. Miller and Terrence Reese, Modern Physics Letters B; **20** (2006) pg. 169-177.
12. Self-Trapping at the Liquid Vapor Critical Point: A Path Integral Study, Bruce N. Miller and Terrence L. Reese, Physical Review E; **78** (2008) pg. 061123-1.

#### **Papers Presented at Professional Meetings:**

1. Self-Trapping of Light Particles in Fluids, October Meeting of the Texas Section of the American Physical Society, 1986.
2. Self-Trapping of Light Particles in Dense Fluids: Importance of Transitions, March meeting of the Texas Section of the American Physical Society, 1991.
3. Self-Trapping of Light Particles: Path Integral Approach, April Meeting of the Texas Section of the American Physical Society, 1992.
4. The Virial Expansion of the Decay Rate of Ortho-Positronium, Leibowitz Statistical Mechanics Meeting, Rutgers University, December 1995.
5. The Virial Expansion of the Decay Rate of Positrons and Ortho-Positronium, National Meeting of the American Physical Society, Indianapolis, IN, May 1996.
6. Linear Contribution to the Decay Rate of Positrons and Ortho-Positronium, October meeting of the Texas Section of the American Physical Society, University of Texas at Arlington, 1996.
7. Changes in PIMC computations with respect to changes in the Hard Sphere Diameter, October meeting of the Texas Section of the American Physical Society, Texas Christian University, 2001.
8. Learning at the Timbuktu Academy, National Association of Black Physicist (NASBP) February, 2002.
9. Self-Trapping at the Critical Point, March national meeting of the American Physical Society, Austin, TX, 2002.
10. Variations in Self-Trapping Related to Hard Sphere Diameter, October meeting of the Texas Section of the American Physical Society, Houston, TX 2005.
11. Comparisons of Selection Methods for Path Integral Monte Carlo, October meeting of the Texas Section of the American Physical Society, Arlington, TX 2006.
12. Using Blackboard to Facilitate Homework, 81<sup>st</sup> Annual Meeting of the Louisiana Academy of Sciences, Baton Rouge, LA 2007.
13. Using Blackboard to Eliminate Homework Copying, Spring Meeting of the Texas Section of the American Physical Society and American Association of Physics Teachers, Abilene, TX (2007).
14. Comparison of Correlation Functions for Path Integral Formulation of Ortho-Positronium in Dense Fluid, Joint Fall Meeting of the Texas Section of the American Physical Society and the American Association of Physics Teachers, Brownsville, TX (2013).
15. Comparison of Correlation Functions for Path Integral Formulation of Ortho-Positronium in Dense Fluid, March Meeting of the American Physical Society, San Antonio, TX (2015).

**Summer Research:**

1. June-August 2012: Lead student team in 2 projects at Fermi National Laboratory, Chicago, IL
2. June-August 2011: Lead student team in 2 projects at Fermi National Laboratory, Chicago, IL
3. June-August 2009: Lead student team in 3 projects at Fermi National Laboratory, Chicago, IL.
4. June-August 2007: Lead student team in 2 projects at Fermi National Laboratory, Chicago, IL.
5. June-August 2006: Lead student team in 2 projects at Fermi National Laboratory, Chicago, IL.
6. June-August 2005: Lead student research team at Argonne National Laboratory, Chicago, IL.
7. June-August 2004: Lead student research team at Argonne National Laboratory, Chicago, IL.
8. June-August 2003: Remote Sensing Research at Stennis Space Center, Hancock County, MS.
9. June-August 2002: Remote Sensing Research at Stennis Space Center, Hancock County, MS.
10. June-August 1999: Lead student research team at Kentucky State University, Lexington, KY.
11. June-August 1998: Lead student research team at Kentucky State University, Lexington, KY.

**Grants:**

1. June 1993: Models for Teaching Science at Minority Colleges, Lilly Foundation, \$2000.00.
2. May 1994: Jarvis Enrichment of Young Black Males, NSF grant on the improvement of academic skills of fourth, fifth and sixth grade black males, \$90,000.00.
3. January 1989-January 1997: co-investigator in continuing NSF Supercomputer access grant, Pittsburgh Supercomputing Center, Access to Cray Supercomputer time equivalent to \$1,000,000.00.
4. December 1995: Research grant Swarthmore College, \$1000.00.
5. March 2000: Graduate Research Excellence at the Timbuktu Academy. Louisiana Board of Regents Grant, \$87,000.
6. March 2001: Technology Grant for Improving Physical Science Laboratory, \$3600.00.
7. Novel Cathodes and Cathodic Catalysts for Solid State Power Sources, Department of Defense, August 2001, \$697,594.
8. Strengthening Mathematics and Physics Instruction and Learning, Title 3, August 2015, \$88,000.00.
9. Planetarium for Recruitment Excellence in Physics, Title 3, \$144,000.00

**Workshops Attended:**

1. January 1999: A developmental workshop on the use of Graphical Calculators and CBL's in Science and Math education at Northwestern University.
2. September 1999: GLOBE Train the Trainer Workshop at Hamline University in St. Paul, MN, NASA/GLOBE
3. March 2000: Southern University GLOBE/PIPELINES workshop for K-12 teachers. Speech on Land/Cover
4. May 2000: Southern University GLOBE Train the Trainer Workshop. Served as trainer for Atmosphere and Soil Protocols.
5. June26-July3: University of Alaska Fairbanks GLOBE Train the Trainer Workshop. Served as assistant trainer for Land Cover/Biology Protocols.
6. March 17-24: Norfolk State University, Norfolk, VA NASA Globe Train the Trainer Workshop. Served as assistant trainer for Hydrology Protocols.
7. October 11-22: Fernbank Science Center, Dekalb, GA NASA Globe Train the Trainer Workshop. Served as assistant trainer for Land Cover/Biology Protocols.
8. October 1-2, 2010; Quality Education for Minorities Network Workshop.

**Seminars Attended:**

1. July 1989: Pittsburgh Supercomputing Center Summer Institute, supported by the National Science Foundation, Pittsburgh, PA.
2. September 1993: National Science Foundation, Quality Education for Minorities seminar on writing professional grants, Washington, D.C.

3. March 1994: Bush Foundation Winter Faculty Development Conference in Minneapolis, MN.
4. February 1996: Pittsburgh Supercomputing Center J-90 workshop.
5. September 2002: A seminar on how to use the Blackboard educational.
6. November 15, 2009: A seminar on Interactive Multimedia and Melot for educational purposes.
7. November 22, 2009: A seminar on using the educational software Moodle.

**Thesis Committees Served on:**

Polybenzimidazoles (PBI) Membranes and Platinum-Cobalt/Carbon Alloy Catalysts for High Temperature Proton Exchange Membrane Fuel Cells, Sundara L. Gatty, May 2010.

**Editing Experience**

**Dec 2009:** Served as sorting editor for the APS for the March 2010 meeting.

Dec 2010: Served as sorting editor for the APS March 2011 meeting.

**Computer Experience:**

Extensive use of the Cray Supercomputers in theoretical research efforts.

Extensive experience in Unix based operating systems.

**Computer Languages:**

Fortran, C, Cray Fortran, XLC, Cray C.