

VITA

Walter Lawrence Trikosko

I. Personal Data

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II. Education

Ph.D. (Physics) Clemson University, December 1982

M.S. (Physics) Memphis State University, August 1975

B.A. (Physics) The University of Tennessee at Chattanooga, August 1972

III. Theses

Doctoral Dissertation: *Cylindrical Josephson Junctions in Magnetic Fields.*

Master's Thesis: *An Investigation of the Annealing Behavior of Vapor Quenched Indium Films.*

IV. Experience

August 2019: Professor of Physics

September 1983 to 2019 Assistant/Associate Professor of Physics; Department of Physics and Astronomy, Stephen F. Austin State University. Duties have included Graduate Advisor, Physical Science Certification Advisor, Society of Physics Students Advisor; teaching graduate and undergraduate physics courses.

August 1982 - August 1983 Lecturer; Department of Physics and Astronomy, Clemson University. Duties included teaching physics, conducting research on cylindrical Josephson junctions and interfacing microcomputers with experiments.

January 1981 - August 1982 Research Fellow; Department of Physics and Astronomy, Clemson University.

August 1978 - December 1981 Graduate Assistant; Department of Physics and Astronomy, Clemson University.

July 1975 Lecturer Department of Physics, Memphis State University

September 1974 – June 1975 Graduate assistant; Department of Physics, Memphis State University

July 1974 – September 1974 Research and Development; Signal Knitting Mills
Chattanooga, TN

September 1973 – June 1974 Graduate assistant; Department of Physics, Memphis State University.

July 1973 – September 1973 Research and Development; Signal Knitting Mills
Chattanooga, TN

January 1973 – June 1973 Physical Science Teacher; Murry County Junior High School,
Chatsworth, Georgia.

V. Publications

Walter L. Trikosko, "Shooting Fish in a Barrel: A Demonstration of the Refraction of Light," *The Physics Teacher*, Vol. 52, No. 6, 367 (2014).

Walter L. Trikosko and Thomas O. Callaway/, "Apparatus for Demonstrating Longitudinal Wave Pulses," *The Physics Teacher*, Vol. 49, No. 5, 312 (2011).

Walter L. Trikosko, "Physics in a Glitter Ball," *The Physics Teacher*, Vol. 49, No. 2, 110 (2011).

Harry D. Downing, Walter L. Trikosko and Paula Lovell, "Ray Tracing for a Few \$," *The Physics Teacher*, Vol. 29, No. 6, 369 (1991).

Sherrill, M.D. and Trikosko, W.L., "Josephson Phase Transition," *Physical Review B*, Vol.32, No. 11, 7590 (1985)

VI. Professional Papers

W.L. Trikosko and Benjamin Hilton "Construction of a Tunable Organic Dye Laser," Bright Ideas Conference, April 25, 2008.

W.L. Trikosko and Jose Martinez "Cylindrical Squid," Bright Ideas Conference, April 28, 2006.

W.L. Trikosko, "EXCELlent Animations," presented at the Spring meeting of the Texas Section of the AAPT, March 2002.

Betty Alford, Donnya Stephens, Walter L. Trikosko, Ali Piran, Philip Blackburn and Harry Downing "The Gear-Up Program at SFA," contributed paper at the Spring meeting of the Texas Section of the AAPT, March 2002.

W.L. Trikosko, "An Interesting Demonstration of Beats Using a Canon," presented at the Fall meeting of the Texas Section of the AAPT, Nov. 7, 1992.

Harry D. Downing, Walter L. Trikosko and Paula Lovell, "Ray Tracing Without \$," presented at the national meeting of the American Association of Physics Teachers. Awarded first prize in Low-Cost Division of the 1990 AAPT Apparatus Competition (1990).

Harry D. Downing and Walter L. Trikosko, "Inner-Room Rubber Band Ballistic Missile (IRRBBM)", Texas Section of the American Association of Physics Teachers (Spring 1990).

Harry D. Downing, Walter L. Trikosko and Paula Lovell, "Ray Tracing Without \$," presented at the fall meeting of the Texas section of the American Association of Physics Teachers (1989); selected as an outstanding paper, see attached letter.

- Hodges, Thomas L. and Trikosko, Walter L., "Supercurrent Periodicity in SQUIDs with Cylindrical Geometry," presented at the spring meeting of the Texas Section of the APS (1988)
- Trikosko, W.L. and Dennis, J.C., "Vibrational Modes of a Circular Membrane," presented at the spring meeting of the Texas Section of the APS-AAPT (1987)
- Trikosko, W.L. and Dennis, J.C., "Three Dimensional Projections," presented at the fall meeting of the Texas Section of the APS-AAPT (1986)
- Trikosko, W.L. and Dennis, J.C., "Three Dimensional Physical Functions," presented at the spring meeting of the Texas Academy of Science (1986)
- Trikosko, W.L., "Measurements of Cylindrical Josephson Junctions," Bulletin of the American Physical Society, Vol. 29, No. 5, 917 (1983)
- Trikosko, W.L. and Sherrill, M.D., "Critical Magnetic Field of the Josephson Effect," Bulletin of the American Physical Society, Vol. 28, No. 3, 352 (1983)
- Trikosko, W.L. and Sherrill, M.D., "Cylindrical Josephson Junctions, Two Effects," Bulletin of the American Physical Society, Vol. 28, No.3, 353 (1983)
- Trikosko, W.L. and Sherrill, M.D., "Measurement of the Josephson Current in Dual Cylindrical Junctions," Bulletin of the American Physical Society, Vol. 26, No. 9, 1217 (1981)
- McCay, Myron S. and Trikosko, Walter L., "A Model for Atmospheric Potential Simulation and Calibration," Presented at the meeting of the Southeastern Section of the American Physical Society (1972).

VII. Grants

- Trikosko, Walter L. "The SFA Sundial," \$11,000 private donations (2021).
- Participated on a Texas Accelerated Science Achievement Program (Texas ASAP) Grant with the Diboll ISD (\$8000.00) (2008).
- Participated on a Texas Accelerated Science Achievement Program (Texas ASAP) Grant with the Diboll ISD (\$5494.24) (2005).
- Trikosko, Walter L (Co-Principal), Gruebel, Robert W (Principal), Piran, Ali A (Supporting), Markworth, Norman L (Co-Principal), "Laboratory Modernization: Stage 2, Electricity and Magnetism," Sponsored by NSF-ILI, Federal, \$6,486.00. (1996 - 1997).
- Trikosko, Walter L (Co-Principal), Markworth, Norman L (Co-Principal), Gruebel, Robert W (Principal), Piran, Ali A (Supporting), "Laboratory Modernization: Stage 1, Wave Motion," Sponsored by NSF-ILI, Federal, \$10,388.00. (1995 - 1996).
- Trikosko, Walter L (Co-Principal), Callaway, Thomas O (Co-Principal), Gruebel, Robert W (Co-Principal), Markworth, Norman L (Co-Principal), Dennis, James C (Co-Principal), Carlton, Terry (Co-Principal), "A Mini-Course in C," Sponsored by SFASU Faculty Development Grant, Stephen F. Austin State University, \$2,100.00. (January 1988).
- Faculty Research Grant: "The Measurement of the Critical Field Curves for Tin-Tin Cylindrical Josephson Junctions" (1987).

VIII. Theses Directed SFA

In Progress:

Elevating the Transition Temperature of High Temperature Superconductors, Drue Lubanski (started 2022).

Completed:

Design and Construction of Mini-Cryostat, Benjamin Hilton (2012).

Radial Tunneling in Multiply Connected Josephson Junctions, Jose Martinez (2009).

An Investigation of Sonoluminescence, Russell Allen Coy (2003).

A Microcomputer Based Liquid Helium Temperature Controller, Timothy E. Renfro (2001).

The Critical Magnetic Field of Tin-Tin Cylindrical Josephson Junctions, K. John Hladky (1990).

Synthesis of High Temperature Superconductors, Ikerionwu Asiegbu Akwani (1988).

The Design and Construction of Equipment for the Fabrication and Testing of Josephson Tunnel

Junctions, James Wesley Miller (1987).

The Coupled Persistatron as a Device for Measuring Critical Currents at Low Temperature, Mohammad Sasan Badrzadeh (1985).

IX. Research at SFA

Theoretical:

Solutions of the Sine-Gordon equation and the Josephson Current in Cylindrical Junctions.

Experimental:

The Proximity Effect in Josephson Junctions

Cylindrical Josephson Junctions

The Effects of an Axial Magnetic Field on the Azimuthal Magnetic Field Dependence of Cylindrical Josephson Junctions

Sonoluminescence

Quantum Dots