

Abbreviated VITA of **JOHN W. LAYMAN**, Professor Emeritus of Education and Physics, Department of Curriculum and Instruction, and Department of Physics, University of Maryland, College Park, MD. 20742

## **PERSONAL DATA**

Address: 7500 Sweetbriar Drive,  
College Park, Maryland 20740  
Telephone: Home (301) 474-1953  
e-mail JL15@umail.umd.edu

## **ACADEMIC BACKGROUND**

Degrees:

Ed.D. Oklahoma State University, Stillwater, OK, 1970  
M.S.Ed. Temple University, Philadelphia, PA, 1962  
A.B. Park College, Parkville, MO, 1955

Honors and citations:

1998 Awarded the Melba Newell Phillips Award, of the American Association of Physics Teachers, August 1998  
1992 Elected to a two year term as Secretary of AAPT  
1991 Secretary of the AAP - Appointed by the AAPT Executive Board  
1983 Past-President, AAPT  
1982 President, AAPT  
1981 President-Elect, AAPT  
1980 Elected Vice-President - American Association of Physics Teachers  
1981 Elected as a Fellow to the American Association for the Advancement of Science,

## **PROFESSIONAL WORK EXPERIENCE**

Present Professor Emeritus, University of Maryland  
1989 - 1999 Director, Science Teaching Center  
1962 - 1968 North Kansas City, Missouri Public Schools, High School Physics Teacher  
1958 - 1961 Kansas City, Missouri Public Schools, High School Physics Teacher

## **SELECTED RECENT PUBLICATIONS**

Books: (authored or co-authored)

Layman, J. W., Ochoa, G., and Heikkinen, H. Inquiry and Learning: Realizing Science Standards in the Classroom, The National Center for Cross

Disciplinary Teaching and Learning, The College Entrance Examination Board, 1996.

Books edited and chapters in edited books:

Layman, J. W., "Investigating the Role of Physics Departments in the Preparation of K-12 Teachers", in The Role of Physics Departments in Preparing K-12 Teachers, Buck, Hehn, Leslie-Pelecky Eidtors, The American Institute of Physics, College Park, Maryland, 2000.

Layman, J. W., "Powerful Ideas in Physical Science: A Model Course", in The Changing Role of Physics Departments in Modern Universities, Proceedings of ICUPE, AIP Conference Proceedings 399, American Institute of Physics, Woodbury, NY, August 1996, p 973.

Layman, J. W. and Krajcik, J. S., The Microcomputer and Practical Work in Science Laboratories, in Innovations in Science and Technology Education, David Layton (Ed.), Vol. IV, UNESCO, 1992, 171-180.

Krajcik, J. S. and Layman, J. W., Microcomputer-Based Laboratories in the Science Classroom, in Research Matters to the Science Teacher, NARST Monograph, No. 5, 1992, 101-108.

Layman, J. W., The Microcomputer in the Laboratory: Contributions to Conceptual Development, in Proceedings of the International Symposium on the Evaluation of Physics Education, Criteria, Methods and Implications, University of Helsinki, Helsinki Finland, June 1991,91-104.

## **PROFESSIONAL PRESENTATIONS**

International (invited):

Layman, J. W. Preparation of High School Physics Teachers: A Community Responsibility, Presented at the 46<sup>th</sup> Annual Conference, South African Institute of Physics, Durban, South Africa, July 2001

Layman, J. W., Inquiry Workshops in Cape Town, Port Elizabeth, Richards Bay, and Pretoria. July 2001.

Layman, J. W. Microcomputers and Physic Concept Development, Presentation at the University of Pavia, Pavia Italy, May 1990.

National:

Papers presented at scientific meetings and workshops (invited):

Layman, J. W., "Powerful Ideas in Physical Science: A Model Course", Workshop, International Conference on Undergraduate Physics Education (ICUPE) College Park, MD 20742, USA July 31-August 3, 1996

Layman, J. W., "National Science Education Standards - For Whom?," Pacific North West Physics Teachers Association, April 1995, Portland, OR.

Papers presented at scientific meetings (contributed papers):

- Layman, J. W., "The Influence of an Introductory Physics Course on Elementary Education Majors", Winter Meeting, American Association of Physics Teachers, January 1999 Anaheim, CA
- Layman, J. W., Shama, G., "The Role of Representation in Learning Science and Math in an Introductory Physics Course for Preservice Elementary Teachers", Winter Meeting, American Association of Physics Teachers, January 1998, New Orleans, LA.
- Layman, J. W., "Maryland Collaborative: Course, Program, or Faculty Change?," Winter Meeting, American Association of Physics Teachers, January 1996, Reno, NE.
- Layman, J. W., Philip Johnson, and Edward F. Redish, "Teaching Assistant Training: Broadening Faculty Involvement," Winter Meeting, American Association of Physics Teachers, January 1996, Reno, NE.
- Layman, J. W., Philip Johnson, Mike Shay, "Teaching Assistants - Developing a Professional," Summer Meeting of the American Association of Physics Teachers, August 1995, Spokane, WA.
- Layman, J. W., "Insights Provided by Students: An Introductory Experience," Summer Meeting of the American Association of Physics Teachers, August 1995, Spokane, WA.

Workshop Presentation (invited):

- Layman, J. W., "Powerful Ideas in Physical Science: A Model Course," Presented the Heat and Conservation of Energy portion. Winter Meeting of the American Association of Physics Teachers, Winter Meeting, New Orleans, LA, January 1998
- Layman, J. W., "Powerful Ideas in Physical Science: A Model Course," Presented the Heat and Conservation of Energy portion. Summer Meeting of the American Association of Physics Teachers, Summer meeting, Denver, CO. August 1997.

Local:

- Layman, J. W., and Spitzer, David "Is it Accelerating?", Howard County Physics Teachers Workshop, Howard County Public Schools, Columbia, MD. October 25, 1997

Colloquia:

- Layman, J. W., Reform of Undergraduate Education: Its Relation to an NSF State-Wide Collaborative, Rutgers University, March 1998.
- Layman, J. W., National Science Education Standards and our Class of 2010, with Sarah Eno, Colloquium, Physics Department University of Maryland, February 1997.

Scholarly activities:

**American Association of Physics Teachers**

1998 - 1999 Chair, Constitution and By-Law Committee  
1991 - 1995 Secretary  
1984 - 1989 Special Assistant to the Director  
1985 - 1988 Washington Representative  
1983 - 1984 Past-President, AAPT  
1982 - 1983 President, AAPT

**American Institute of Physics:**

1993-1996 Member, Publishing Policy Committee  
1986-1993 Chairman, Education and Employment Statistics  
Committee  
1986-1993 Member, Education Policy Committee

**National Science Foundation Grants:**

2001 CO-PI APS PhysTEC NSF grant. Representing the AAPT  
Executive Board  
2000 - Present Co-PI APS/AAPT/AIP PhysTEC Planning Grant  
1993-1999 Maryland Collaborative, Co-PI  
1988-1992 University of Maryland Middle School Probeware Project  
1986-1990 AAPT Physics Teaching Resource Agents Program

**At Large:**

1999– 2002 MERCK Advisory Board Member  
1997-98 Member, National Visiting Committee, Science, Technology,  
Engineering, Mathematics Teacher Education Collaborative,  
an NSF Collaborative for Excellence in Education, of the  
University of Massachusetts at Amherst.  
1993-Present NSRC Advisory Board, National  
Academy/Smithsonian Project  
1993-99 Science Academic Advisory Committee, The College Board  
1991-93 Advisory Committee QUEST Project, University of Indiana  
(NSF)  
1991-95 PSI-PET, AIP/AAPT NSF Curriculum Project (NSF)