

**Stephanie Chasteen**  
**Writer & Education Consultant**  
*Boulder, CO*



I decided in 8th grade home economics, of all places, to be a physicist. There, I was told that a physicist is someone who “figures out how the world works.” But my career path has been more of a random walk to an interesting place than a beeline with a purpose.

In college I realized that in research, I would study just a small bite of the universe. I wasn't sure that's how I wanted to spend my life. Instead, I got my BA in social psychology, because it felt more relevant. At my graduation, my physics and psychology professors posed, each tugging me in opposite directions.

Those opposing forces have continued in my life, but they have combined in a delightful unforeseen way. I missed science and entered a PhD program to learn more physics. But, indeed, I didn't like scientific research. At the heart of it, I'm interested in how we understand and explain the world. I interned at NPR's science desk. After earning my PhD in physics, I took a postdoc at the Exploratorium Museum of Science, Art and Human Perception in San Francisco where I helped develop and teach workshops for high school physics teachers.

I'm now researching how juniors learn physics at the University of Colorado, but I'm soon to go underground once again. I am launching on my own as a science writer and education and outreach consultant. Like other scientists who have left the bench, my jobs allow me to combine my love for science, creativity, and communication in a way that is constantly unfolding.

**Robert L. Greeson**  
**Patent Attorney**  
*Dallas, TX*

I am a patent attorney at the international law firm of Fulbright & Jaworski, LLP, in Dallas, TX. My practice largely involves the prosecution of patents before the United States Patent & Trademark Office (USPTO). My practice further focuses on patents in the areas of fluid analysis, wireless communications, audio recognition, semiconductors, networks, and energy. Also, I am involved in various patent litigation matters.

I became a member of Sigma Pi Sigma as an undergraduate student at Austin College in Sherman, TX. Afterward, I attended the University of Texas at Dallas, where I received an MS in Applied Physics. As a graduate student I had the opportunity to work on industry-specific applications, particularly in the fields of telecommunications and semiconductor processing. I received my law degree from Baylor Law School in Waco, TX. During law school I passed the Patent Bar to become registered to practice before the USPTO.



**Timothy F. Harris**  
**Consulting Actuary**  
*Clayton, MO*

When I graduated from Purdue in 1971 with my BS in Physics, the space program had just gone through a major reduction. The career prospects for physicists were so dim that there were articles about physicists working as sanitation engineers (garbage collectors) in California, and the government was offering retraining programs including one that covered the cost of dental school. I opted instead to hit the pavement with my minor in computer science and apply for positions as a computer programmer.

As luck would have it, I was hired as

an “actuarial programmer” by an insurance company and the rest is history. I passed the series of actuarial exams in under 5 years, went on to accept positions as Vice-President and Actuary at several insurance companies. I even had the title of President at one small insurance company and was on the Board of Directors at a couple of others. The insurance industry was going through a period of consolidation at that time and after surviving a couple of mergers, I opted to go into consulting with Milliman, Inc., where I have been for over 20 years.

About the only place my physics background is applied is in my diving and underwater photography. I also serve as Adjunct Director of Photography and Shark Behavior Expert for the World Aquarium in St. Louis, Missouri where my underwater photography and video is on display. This is also the home of two nine-foot nurse sharks that my wife and I drove across country from Long Beach to St. Louis, but that's another story.



**Mark L. Maiello**  
**Health Physicist**  
*Pearl River, NY*

I combined my BS in physics with a master's and PhD in environmental health and almost immediately was transformed into a health physicist. It's been a great ride! My career allowed me to visit national labs like Brookhaven, Los Alamos, and Argonne. I traveled to England, Holland, Italy, Germany, Hawaii (to the 10,000 foot level of Mauna Loa!) and numerous other US locations to do my work and to attend conferences. Part of the job's appeal is that there can be a startling lack of knowledge about radiation and radioactivity even among engineers and other scientists – let alone the public. I have always found it fulfilling to fill in that gap and get the truth out about the interesting aspects of the physical world.

My travel days are long over, but

now I find that I get nearly as much satisfaction writing and editorializing about the issues health physicists face. The potential use of radioactivity for acts of terrorism and the nuclear power resurgence are especially important topics these days. I was able to become a contributing editor of *Health Physics News* whereby I can publish my articles and ideas about this subject. But perhaps the most interesting part of the job is meeting scientists from other disciplines.. That is the nature of health physics: people from varied fields can do it. From my thesis advisor to the scientists I met on my travels, they all have something interesting to share. The learning experience never ends in this profession!



**Robert E. Maltby, Jr.,**  
**Glass Expert & Chief Executive Officer**  
*Wayne, OH*

The glass industry has been an art for thousands of years. July of 1958, as a graduate of Ohio State with a BS and having been inducted into Sigma Pi Sigma, my boss asked me to try to use science in the glass industry. Fifty years later I am still trying.

The flat glass industry was completely changed by the development of float glass by Pilkington of England in the late 1950s. My good fortune was to be present when a joint venture between Pilkington and LOF (my employer) led to making thin glass for windshields. A few years later we were the first to make glass thicknesses up to one inch. Several instruments were also patented by our group that greatly facilitated making and measuring the float glass. Over the following years, windshield lamination, double glazing insulated units, airplane glass, development of new fabricating methods and equipment, consulting, and developing and teaching a class called *Physics for Glassworkers* have been some of what I was doing. More recently the use of glass in solar panels kept me busy for six or seven years.

Nearly 30 patents are issued listing Bob Maltby and hopefully a few more will be issued soon. The company that we started in 1982, R&D Reflections (Robert and Dee-my super-supportive wife-or Research and Development) has been a joy as three sons and one grandson have and occasionally still do participate in developing instruments for the glass industry.



**Judith Barnett Seelhorst**  
**Retired Teacher**  
*South Shore, KY*

I received a BA in Physics from

College of the University of Richmond, 1948-50. I did graduate work in physics at the University of Kentucky where I was also active in Sigma Pi Sigma.

I taught for one year at (what was then) St. Mary's Jr. College in Southern Maryland, but did not get my thesis written up as I had planned. I returned to KY, married, and we raised 4 children. I taught briefly during the early years of our marriage. After our children left home, I got a Master of Science in Education and returned to teaching. I retired from Greenup County High School where I taught Physics, Conceptual Physics and Introduction to Physical Science.

After I retired, my second grade grandson talked his teacher into inviting me to come (almost 300 mi.) to show his class all of the fun things I knew how to do. Since then I have showed lots of elementary age students, in many places and situations, how to do such fun things as pull the table cloth out from under the dishes and swing a container of water around. I always tell them why and how things work (within their understanding) and make sure they know the word *physics*.

The grandson who started it all graduated in May as the top engineering student at Georgia Tech. He is now a graduate student at Cal Berkeley (grandmothers have to brag). He said he thought about majoring in physics because "It was so much fun," but aerospace engineering won out.



**John E. Walls**  
**Pastor**

*Fairfield Bay, AR*  
 John E. Walls (B.S., Arkansas State University (ASU),

1971) is a charter member of Sigma Pi Sigma at ASU. Rev. Walls (M.Div., Southern Methodist University, 1995) is an ordained Elder in the Arkansas Conference of the United Methodist Church. He is currently the pastor of Fairfield Bay United Methodist Church located in north-central Arkansas. He has never lost his interest in physics, and as time permits Rev. Walls is writing a book and recently completed an experiment on gravitational waves. The thesis of the book, tentatively titled *Moses, Darwin & Einstein: Black Holes, Butterflies and Burning Bushes* is that scientific truths and religious truths both do exist, and that when they are placed within a proper framework of understanding they will complement, rather than contradict, each other.

**Ben R. Wiehe**  
**Outreach Coordinator**  
*Boston, MA*

I've had a varied work history, from archaeological fieldwork, to refurbishing antique wooden sailboats, to wilderness EMT, to museum education. In each of these experiences I've drawn on the basic approach to rigorous problem-solving that I learned in the physics labs on my way to receiving a BA with a double major in physics and philosophy. I could provide many specific examples, but prefer to point out that the critical thinking skills, confidence, and world view gained from a degree in the natural sciences are perhaps what I have benefited from most. In one way or another, my physics training has shaped my experience of my most important life events, such as extended travel abroad, obtaining a graduate degree in cultural anthropology, and even tragic accidents.