

**Acceptance Speech for  
The American Institute of Physics Award  
for Children's Science Writing, 2002**

**by Fred Bortz**

**at the American Association of Physics Teachers  
Summer Meeting, August 5, 2002**

Thank you, Dr. Stith, for your gracious introduction, and thanks to the AIP for the generous award that recognizes my work. Before I begin, I'd like to recognize a previous winner of this award who is with us today, Gloria Skurzynski, whose book *Almost the Real Thing* discussed engineering simulators, computer simulation, and virtual reality a decade ago.

It's a pleasure to have a chance to say a few words to the AAPT about what this award means to me as a physicist, as a writer, and personally.

You've heard about my academic credentials and experience, but I could hear the buzzing in your heads: "After so many years of writing for children, does he still think like a physicist?" Let me assure you that I do; and, in the highest tradition of our science, I present the evidence.

Not only do I think like a physicist, but I also suffer from the physicist's most common intellectual affliction, a peculiar inclination toward puns and limericks. As important as this award is to me, it must be viewed in the context of an earlier writing award from my scientific colleagues. Yes, I am the most recent winner of an American Physical Society limerick contest, the "Brain Teaser" limerick competition of 1999.

The prize was publication in the "Zero Gravity" column of the APS News, plus bragging rights. I rarely have a chance to exercise the latter, so I'll tax your hospitality by reading my winning entry today.

Refresh your memories about matrix algebra, recall your graduate Quantum Mechanics lesson on the anomalous Zeeman effect, imagine Richard Feynman accompanying me on the bongos while I speak with a Carribean accent, and fasten your seat belts. Here goes:

The famed mathematicer Riemann  
Shared manifold cocktails with Zeeman.  
Their degenerate state  
Split in six; they saw eight.  
How anomalous can spectra be, Mon?

After that, no one can deny my claim to have a physicist's mind!

Exercising my bragging rights is a treat, of course, but I have a serious reason to be pleased about the award as a physicist. When I was working in industry and academe, my colleagues viewed my writing for children with a mixture of curiosity and interest. Some encouraged me, usually in the way you might encourage a child who, you are sure, will soon lose interest in the activity you are praising.

No one, not even I at first, understood the depth of connection between me and my young readers. It took me years to realize that each of us has a natural audience, and mine is the kids with hormones raging, full of questions, and eager to challenge anything adults tell them -- those dreaded, threatening, terrifying, barely human creatures we call adolescents.

Why they're just like -- gasp -- physicists who, hormones or not, question the obvious and challenge everyone else's perspective. My writing for that audience was my way of questioning the obvious notion that physicists should share discoveries with colleagues and leave the kids in the hands of people like most of you.

Now, don't get me wrong. I appreciate enormously what physics teachers do. I stayed in touch with my high school physics teacher until he died, and I dedicated TO THE YOUNG SCIENTIST in his memory. But the job that I have carved out for myself is different: not teaching a curriculum, but inviting exploration beyond the curriculum by sharing what has excited me about science for more than fifty years.

This award tells me that my colleagues in physics respect my choice and recognize the quality that I strive for in my work. That's what it means to me as a physicist.

As a writer, the recognition is more valuable than you can imagine. School librarians have a hard time keeping up with all the new books out there, so they rely on lists. At least half of them, I would guess, view nonfiction as a direct extension of the curriculum and distinct from literature.

To those librarians, TECHNO-MATTER is a puzzle. High schools don't teach Materials Science and Engineering, and most librarians never heard of the field. Even with strong reviews, they might decide to pass the book by because of budgetary constraints. One reviewer, for example, praised TECHNO-MATTER but closed with a statement that it would probably serve only a limited market. If you were a librarian allocating your limited budget for new books, how would you respond to such a review?

Fortunately, TECHNO-MATTER has been recognized not only by the AIP, but also by the New York Public Library, which publishes a highly respected list called Books for the Teen Age. The NYPL added TECHNO-MATTER to the list this year, and it should remain there for a while. The Society of School Librarians International designated TECHNO-MATTER and one other title as the best science books for grades 7-12 for 2001.

Publishers also pay attention to awards. They have special sections in their catalogs touting award winners, and they give award winners more prominent displays, even when on the backlist.

So I have no doubt that the AIP award will result in more sales to more school librarians, which means that they and many thousands of youngsters will discover Materials Science and Engineering when they otherwise would not have.

But what about the other books the AIP children's science writing award committee considered this year? Those authors worked as hard as I did and care as passionately about their subject matter as I do. Surely, the committee had some members who advocated for a few of those. Don't some of them deserve the extra attention that TECHNO-MATTER is getting?

I recommend most strongly that the AIP follow the example of the Newbery, Caldecott, and many other significant award committees and recognize "honor books." Doing so would enhance the stature of this award with virtually no cost to the organization, and those authors could, like me, be grateful for -- and somewhat enriched by -- the recognition of their work.

That brings me to the third and final way in which I appreciate the award, and that is on the personal level. For my book TO THE YOUNG SCIENTIST, I had the pleasure of interviewing eleven scientists who had been involved in some of the late twentieth century's most interesting scientific discoveries, developments, or issues.

My most memorable interview for that book was in a beautiful home overlooking Flagstaff, Arizona, where I enjoyed coffee and conversation with the late Eugene Shoemaker, a winner of the Presidential Medal of Science and the founder of a new scientific discipline called astrogeology, and his wife, Carolyn Shoemaker, who had found more comets than any living person and was closing in on the lifetime record.

A year earlier, they had become media darlings, as the fragments of Comet Shoemaker-Levy 9 made their spectacular plunges into the atmosphere of Jupiter. I asked them about their sudden fame, and Carolyn's answer remains my guide whenever my work is recognized with an award or attention. She said:

My feeling was one of utter amazement and surprise, sort of like, "Who are they talking about? It couldn't be me," and then an awareness that I really should respond to this interest in what we have done.

For Carolyn, it wasn't the personal acclaim, but rather the opportunity to share their work with a public suddenly eager to know more about it. I hope I respond to this award with the same generosity of spirit that Gene and Carolyn displayed when they gained far more attention than I ever hope to.

And there's one more reason I am personally grateful for this award. TECHNO-MATTER: THE MATERIALS BEHIND THE MARVELS is dedicated to an author of medical thrillers: "To my sister, Fay Nedra Zachary, to whom 'Novel Materials' has a very different meaning." That dedication was my challenge to Fay to write another novel and to dedicate it to me.

But that was not to be. Fay died, much too young, in late April, under circumstances that would have made a terrific plot for her next book had she survived. Now her name will be in more copies of this book than I could ever imagine, and I'll think of her every time I sit in that Windsor chair.

Fay would never want me to end the acceptance of this honor on a sad note. So for her, and for you, I end as I began, with a limerick. I call this one RECOGNITION.

Announce me with trumpets and drums.  
Display your approval: Up, thumbs!  
Inscribed chair in Boise,  
A tee-shirt in Joisey,  
I'll take it however it comes!

Thank you for your attention and for this wonderful award!