



Director's Matters

A rare breed

True science communicators are rare. They have a thorough understanding of a science, its intricacies and its effect on us and our surroundings, and can translate it to fellow scientists and the public alike. They can take complex issues and present them in layman's language, so people gain a better understanding and appreciation for science. Science communicators have the gift of sharing their passion for science, and their excitement is contagious. The result is science that is more tangible and approachable—and less daunting.

AIP and the Member Societies recognize the value of science communicators and provide opportunities for them to speak publicly. For example, AAPT recently awarded [Neil DeGrasse Tyson](#), astrophysicist and Director of the Hayden Planetarium in New York City, with the [Klopsteg Memorial Award](#). As part of the award, which honors those who have made notable contributions to physics, Tyson was invited to speak at the recent AAPT Summer Meeting in Greensboro, NC. His informative popular science lecture did not disappoint!

Tyson hosts the [NOVA Science Now](#) series on PBS, expounding on science as a stimulating and vibrant discipline. The impact of mass media when conveying the importance and excitement of science is striking. As a physicist, I was fortunate when my paper in a professional journal was read by 100 colleagues, and I was honored to present an invited paper to an audience of 500. In contrast, NOVA programs attract about *five million* viewers every week.



Popular science writing can also reach large audiences. AIP promotes effective science communication in print and broadcast media to improve the general public's appreciation for physics, astronomy, and allied science fields. Four [Science Writing Awards](#) are bestowed each year to authors in the following categories: journalist, scientist, children's, and broadcast media. Moreover, many members of our staff are gifted authors and communicators.

The health of science funding and public understanding of science depend on each successive generation of scientists to identify and cultivate *new* communicators. AIP and the Member Societies play a role in this process.

Sincerely yours,

Fred

Publishing Matters



Getting an upgrade

Publishing Technology has completed its upgrade of the Microsoft SQL Server—a relational database management system. Consistent with a continual effort to contain costs, SQL Server is used in lieu of Oracle to support the [online stores](#) and [Peer X-Press](#) (PXP), AIP's web-based manuscript submission and peer review service. The upgrade enables us to migrate stores from the current version, and take advantage of performance enhancements offered in the newer version.

Because our redundant architecture employs dual SQL servers, we were able to upgrade in half the otherwise-required downtime.

Double duty for data

The way that the extensive data within our databases is stored is not always optimal for reuse in our other databases or services. For example, a portion of the information in the manuscript electronic tracking system (METS) database that facilitates the production process must be re-keyed into an accounting database for billing. The Accounting and Publishing Technology groups are working to

extract data from METS and electronically transfer it to the Accounting system, increasing overall efficiency and the timeliness of reports. Another effort underway is to capture metadata on incoming manuscripts from the editorial offices for reuse during the production process. The improved workflow will eliminate the possibility of introducing errors, saving both time and effort.

Physics Resource Center Matters

Time treasure and revolutionary science

Thomas W. Sills has donated an exceedingly rare volume to the Niels Bohr Library and Archives. Bernhard Varens' *Geographia Generalis*, published in 1650, was a pioneering work in subjects we now



call geophysics. It includes an imaginative theory of the tides (by René Descartes) that Isaac Newton would replace with his theory of gravity. Newton used this book as a student, and as a professor he published a revised edition. Textbooks of the time were small, to reduce cost, and the *Geographia* is only 5 inches high. Sills writes: "Students like Isaac Newton would not likely have had the money to purchase college textbooks. The Trinity College Library would rent such books by the hour." Sills is not only a book-lover but holds degrees in both physics and education, and teaches at Wright College in Chicago. He has previously donated a variety of books to

the Library, including rare 19th-century books of science for children (see this story in a back issue of the [History Center Newsletter](#)). Over the years people have given the Library a number of exceptional books, such as the first edition of Benjamin Franklin's famous work on electricity. They are stored in a locked cage in our climate-controlled bookstacks.

PTCN attends AAPT Summer Meeting

The [Physics Today Career Network](#) (PTCN) held an exhibit at the [AAPT Summer Meeting](#) in Greensboro, North Carolina, July 28–August 1, to promote the [AAPT Career Center](#) (a PTCN affiliate site). Meeting attendees chatted about their physics teaching career goals and were encouraged to establish accounts with the AAPT Career Center. Interests ranged from high-school physics teaching to tenure-track physics professorships. PTCN directed job seekers to suitable opportunities at all levels on PTCN's aggregate job boards. PTCN was also promoting the upcoming Job Fair at the 2008 AAPT Winter Meeting in Baltimore.

Around AIP

Take good care of yourself

"Ergonomics" may sound like a funny word, but it is an important one. Ergonomics is a branch of engineering science in which biological science is used to study the relation between workers and their environments. The *Office Ergonomics: It's Your Move* pamphlet offers some tips to avoid work-related injuries:

- Avoid bending at the waist to retrieve items from low shelves or drawers.
- Get help to move heavy items or break the load into smaller parts.
- Place your phone and other things that you use frequently within easy reach.
- Learn to identify the tasks that place excess stress on your body and find easier ways to do them.

You can get a copy of the pamphlet from Human Resources. We are searching for a qualified individual to talk about ergonomics at a brown bag lunch.

Member Society Spotlight



AVS is a nonprofit, interdisciplinary professional society that promotes the dissemination of knowledge,

research, and education in the science and technology of materials, interfaces and processing. Founded in 1953, the Society has grown and diversified, from its origins in vacuum science to the current spectrum of 10 technical divisions and two technical groups. Within the ranks of AVS (~5000 members worldwide) are scientists, technologists, engineers, professors, students, and corporate executives engaged in basic research and development, high-technology product development, and manufacturing science.

AVS activities include an annual [International Symposium and Exhibition](#), numerous topical conferences, and technical short courses. For the second consecutive year, AIP's Industrial Physics Forum will be held in conjunction with the AVS symposium. Eighteen domestic and international chapters organize local events tailored to regional interests. The society publishes the archival *Journal of Vacuum Science and Technology* and open-access journal *Biointerphases*. One of its most important activities is the recognition of technical excellence via prestigious awards that honor and encourage outstanding research and technological innovations. Headquartered in New York and supported by a dedicated professional staff, AVS welcomes new members and invites you to [learn more](#) about the Society.

We invite your feedback to this newsletter via email to aipmatters@aip.org.