



## Director's Matters

### "Physics matters"

During the first week of August, I had the pleasure of attending the 80th annual meeting of [The Society of Rheology](#) (SoR), held in conjunction with the [XVth International Congress on Rheology](#) in historic Monterey, CA. Monterey's rich history includes being the center of the early Spanish and Mexican interests in the California territory and the seat of the first state government when California statehood was established in 1850. Home to America's largest fishery, made famous in John Steinbeck's *Cannery Row*, Monterey's modern fame includes being host to the largest marine sanctuary in the US. The location, combined with the skills and dedication of the SoR all-volunteer organizers, resulted in the largest rheology meeting ever held, with more than 1000 attendees.



"What is rheology?" you ask. And "What did these 1000 scientists talk about in Monterey, other than the ghosts of Steinbeck characters and the fascinating local marine life?" If you read our recent [Member Society Spotlight](#) or checked out [SoR's website](#), you would find that rheology is the science of the deformation and flow of matter. When the society was founded in 1929, its members were predominantly physicists interested in understanding the properties of matter that have enormous practical applications, such as glasses, polymers, and fluids embedded or flowing in solids. Special experimental techniques and complicated theoretical models were needed for investigating matter in these states.

Fast forward to the Monterey SoR meeting and an observer is struck by how interdisciplinary this field has become. Rheology's original roots in physics have evolved to such an extent that most of its current practitioners and students are chemical engineers, mechanical engineers, or computational scientists with strong backgrounds in basic physics and chemistry. At the Monterey meeting, I saw a variety of papers, from theoretical work modeling the structure and properties of large polymers that are backbone commodities in the manufacturing world (such as plastics), to similarly complex studies of the large biological molecules necessary for life (such as DNA and proteins), to practical studies on extracting fluids from rock (such as oil). There was even a study on how the complex components of wine affect how it flows from a bottle—most appropriate for California.

For those who are interested in reading an engaging overview of the science and applications of rheology, please see this month's cover story in *Physics Today*: "A Tangled Tale of Topological Fluids," written by Tom McLeish of Durham University in the UK. The Society of Rheology was one of the five founding members of AIP in 1931, and we are proud to partner with SoR and provide important services, including the publication and online hosting of its prestigious journal—the *Journal of Rheology*.

Sincerely,

*Fred*

## Publishing Matters

### Program committee prepares for MMM conference



At the end of July, the program committee for the [2008 Annual Conference on Magnetism and Magnetic Materials \(MMM\)](#) met at ACP to review, sort, and accept or reject 2200 submitted abstracts. The 50-member committee was international, with most of the non-US members participating remotely in the review process. The committee agreed that although electronic evaluation is invaluable, on-site meetings for the final evaluations are necessary to maintain a robust conference. The committee and attendees are looking forward to the 53rd Annual MMM Conference, which will be held in Austin, TX, in November.

## Physics Resource Center Matters

### Women in physics worldwide

The Statistical Research Center (SRC) has applied for a grant from the Henry Luce Foundation to continue SRC's study of women physicists across the world. This will be the third in a series of such studies conducted by SRC. All the surveys are done in conjunction with the International Union of Pure and Applied Physics conferences on women in physics. The [first study](#) was conducted in preparation for the 2002 conference in Paris, and the [second](#) was conducted for the 2005 conference in Rio de Janeiro. Each time, well over 1000 women physicists from more than 50 different countries replied to the survey. While the first two surveys were conducted in English, the new survey will allow respondents to see the questions in other languages. The third survey also will be sent to men so that their answers can be compared with women's. These surveys provide the international physics community with data about the situation of women in physics worldwide.

## Around AIP

### Show your heart

It's back-to-school time and the ACP Events Committee has kicked off its Annual School Supply Drive. This year, the donations will go to Lewisdale Elementary School in Hyattsville, MD, where 79% of the children come from low-income (below poverty level) households. A donation box has been placed in the ACP lobby until August 25. The following are some supplies these local students need: backpacks, pocket folders (all colors), pens, pencils, colored pencils, composition books, spiral notebooks, combination locks, glue, glue sticks, erasers, scissors, three-hole loose-leaf paper, dividers, rulers, and boxes of tissue.

We invite your feedback to this newsletter via e-mail to [aipmatters@aip.org](mailto:aipmatters@aip.org).

For past issues of this newsletter, visit the [AIP Matters archives](#).