

AIP|Matters

Monday, May 2, 2011

Director's Matters

AIP's own Rachel Ivie, Assistant Director of the AIP Statistical Research Center, was honored by being asked to deliver a plenary talk in South Africa last month at the International Conference on Women in Physics. I've asked Rachel to contribute this week's lead story, to share a bit about the conference and her experience. The SRC has become an international authority on data about the physics community, and Ivie merits special recognition for her work to shed light on gender differences in physics education and employment. – Fred



Illuminating the situation of women in physics

Guest column by Rachel Ivie, Assistant Director, AIP Statistical Research Center

Physics has always been a collaborative, international enterprise. Nowhere is this more evident than in the participation of AIP and its Member Societies in the [International Union of Pure and Applied Physics](#) (IUPAP). Its mission is "to assist in the worldwide development of physics, to foster international cooperation in physics, and to help in the application of physics toward solving problems of concern to humanity."

AIP and several of our Member Societies are represented on the US Liaison Committee for IUPAP, one of whose goals is to promote "diversity and careers of young scientists." Accordingly, the US presence in one of IUPAP's working groups, the [Working Group on Women in Physics](#), is very prominent. Recently, this working group organized the [4th International Conference on Women in Physics](#) in Stellenbosch, South Africa. More than 200 physicist delegates, both men and women, from about 50 countries attended this conference.



Rachel Ivie (4th from left) and AAPT's Beth Cunningham (2nd from right) are enjoying the banquet at the IUPAP 4th International Conference on Women in Physics with delegates (left to right) Emma Ideal (US), Rhiannon Meharchand (US), Maria Hadjipanayi (Cyprus), Florence Mutonyi D'ujanga (Uganda), Elizabeth Freeland (US), Renée-Andrée Koornstra (Netherlands), and Kukka Banzuzi (Finland).

I was honored to be one of [six plenary speakers](#) featured at this conference. My participation was funded by South Africa's bid to host the [Square Kilometer Array](#). While I was in South Africa, I toured the [Laser Research Institute](#) at the University of Stellenbosch, where I was pleased to see the OSA Student Chapter banner proudly displayed.



Ivie with a poster advertising South Africa's bid for the Square Kilometer Array (SKA). Meerkats are the mascot for the project, and MeerKAT (the Karoo Array Telescope) is a precursor instrument for the SKA. ("Meer" is an Afrikaans word for "more.")

[My talk](#) marked the unveiling of the results of the Global Survey of Physicists, conducted by the Statistical Research Center (SRC) for the Women in Physics Working Group. Almost 15,000 male and female physicists from more than 130 countries responded to the survey, which was made available in eight different languages. The survey was supported by the [Henry Luce Foundation](#). Because the survey was conducted for the Women in Physics Working Group, one of its purposes was to document differences between the experiences of men and women in the field of physics. Some of the findings include the following:

- Early educational experiences are very important for both men and women in choosing physics.
- Female physicists report having less access to professional opportunities and resources than male physicists.
- Female physicists who have children report progressing much more slowly in their careers than those without children and all male physicists.

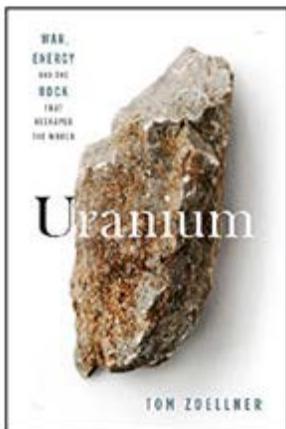
The survey was a collaborative effort among the members of the SRC and many different physical societies around the world, who worked together to develop and distribute the questionnaire. The resulting data suggest that it is time to undertake another collaborative effort, that of working to make physics equally accessible to all. Soon, IUPAP's Women in Physics Working Group will release the resolutions from this conference. Stay tuned.

PHYSICS RESOURCES CENTER MATTERS

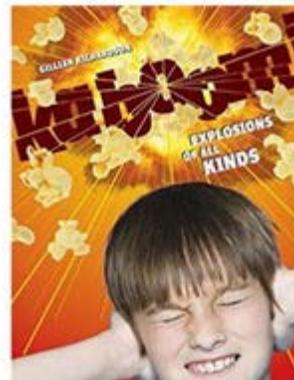
AIP Science Communication Award winners announced

Two books, one about the prized and perilous element uranium and the other a fun and fascinating look at explosions of all stripes were selected as the winners of the AIP 2010 [Science Communication Awards](#). The awards promote effective science communication in print and broadcast media in order to improve the general public's appreciation of physics, astronomy, and allied science fields.

Tom Zoellner will receive the award in the science writing category for his book *Uranium: War, Energy, and the Rock That Shaped the World*. Zoellner explores the history and impact of this seemingly commonplace element in the Earth's crust. He discusses how after World War II, uranium reshaped the global order. The book details how fortunes were made from this yellow dirt and how massive energy grids have been run from it. Zoellner takes readers on a journey through 12 nations and 500 years for a close look at the mineral that can sustain life or destroy it.



Gillian Richardson will receive the award in the children's category for her book *Kaboom! Explosions of All Kinds*. From the Big Bang to the pop of a seedpod, from solar flares to the explosive gases inside a car engine, explosions impact everyone. Richardson educates readers about dramatic volcanic eruptions, supernovae, volatile coal-mine methane, and the often-surprising results when gases are produced by decomposition.



For more information, see the [press release](#).

Ask the expert

The big physics story of last week concerned a rumor about the discovery of the Higgs particle, which high-energy physicists have been seeking for a generation. The Associated Press asked Phil Schewe of AIP's News and Media Services to comment. Schewe affirmed the importance of the Higgs particle and compared the leaking of an internal CERN report with the Wikileaks release of US State Department documents. See the [full story](#) at ABCnews.com.

On the not-so-serious front, informed reviews can help educate the public, even in pop culture. Schewe was also contacted by an MTV Movies Blog writer to comment on a bank heist scene in the Vin Diesel movie *Fast Five* (see '[Fast Five](#)' Physics: Could Two Muscle Cars REALLY Steal A Bank Vault? We Asked The Experts!).



The movie clip is entertaining, albeit utterly ridiculous—scientifically speaking, of course!

WHAT'S HAPPENING THIS WEEK

Saturday–Tuesday, April 30–May 3

- APS 2011 April Meeting (Anaheim, CA)

Sunday–Friday, May 1–6

- CLEO 2011: Laser Science to Photonics Applications (Baltimore, MD)

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

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