



Director's Matters

By H. Frederick Dylla, Executive Director & CEO

Fueling future innovation

Studying physics reveals many intricacies about nature, unlocking truths and advancing our knowledge of all things scientific. It is also a means to advance technologically. In fact, according to [data collected from our own Statistical Research Center](#), more advanced degree holders in physics find careers in industry than in any other sector—developing new devices, materials, energy sources, medical practices, modeling systems, and so on. Therefore, the relationship between the university (where physicists are trained) and industry (where they find their livelihood) is very important. This relationship, however, is often strained by divergent convictions about ideal training, cultures, end goals, professional reward systems, resources, and intellectual property rights.

At the 2006 and 2008 APS March meetings, AIP and APS teamed up to convene the [Industrial Physics Leadership Summits](#), where senior members of the industrial research community—largely representatives from the AIP Corporate Associates member companies—can discuss areas of concern. When considering how AIP and APS could support this constituency, participants twice identified issues surrounding the industry-academe relationship that merited further attention. Out of these discussions grew the title for the Industrial Physics Leadership Summit III: ["Fueling Future Innovation: Coupling Industry and Universities for Physics Research."](#) Because it seemed natural to join with representative academic physics department leadership for the discussion, we held the meeting in conjunction with the biennial [APS-AAPT Physics Department Chairs Conference](#). Select members of the APS Forum on Industrial and Applied Physics also joined in the summit roundtable discussion, which took place on June 11 at ACP. Fred Pinkerton of General Motors, a Corporate Associate Advisory Committee member, chaired the summit planning committee and presided over the roundtable discussion.



Fred Pinkerton of General Motors, the Summit III chair, leads a discussion about how strengthened partnerships can benefit future competitiveness.

Among the goals of Summit III was to arrive at a set of best practices that strengthen industry-university physics research relationships. To that end, participants exchanged information about working programs and collaborations that seem to



Bob Doering of Texas Instruments, Corporate Associates Advisory Committee chair, offers a perspective from industry-based R&D.

produce positive results, and about their experiences with initiating and maintaining these efforts. The summit also sought to build

cooperation at the forefront of science to advance corporate research, feed the front end of the innovation pipeline, assure future competitive success of industry, and prepare students to work in, and academic physicists to work with, industry. The conversation was lively and covered a lot of ground, yet a few subtopics gained traction and were discussed in detail: exposing undergraduate and graduate students to broader career possibilities; broadening the physics curriculum to include training in areas such as communication, teamwork, and project management; and exploring the cultural divergence between academia and industry.

Of the 37 participants, 21 represented corporations, 8 represented academic physics departments, and 2 represented government laboratories. By the end of the day, several ideas had resonated among the group, and more issues pertaining to this relationship came to light. The group adjourned to connect with the larger group of physics department chairs for a reception and dinner. Steven Koonin, Undersecretary for Science in the US Department of Energy, gave a talk titled "Broadening Physics Career Paths: Industry, Education and Policy."



Richard Hazeltine of the University of Texas at Austin, Mark Verbrugge of General Motors, and Zuyu Zhao of Janis Research connect at the joint summit/department chairs meeting dinner.



Bharat Doshi of the Johns Hopkins University Applied Physics Laboratory and Pat Burchat of Stanford University.

A summit committee is working to prepare a "Summit Outcomes and Action Items" document that will be disseminated broadly and shared with a larger community. In the meantime, you can read the [preliminary report](#), which was delivered by a panel of summit participants to the physics department chairs on Saturday, June 12.

PUBLISHING MATTERS

India is on the move, and AIP is along for the ride

India is on the move, scientifically speaking. Research papers published by Indian scientists



Doug LaFrenier (center) meets with K. Bhanumurthy (right) and Mohini Ravel (left) of BARC, a subscriber to AIP Complete and customer of the AIP Digital Archive.

increased 80% between 2000 and 2007, and the government has doubled its investment in science and technology in recent years. These developments have been mirrored by a growing appetite for AIP journals, and AIP's Publication Sales department has concluded multisite licensing arrangements with many of the top scientific institutions

in the country. This spring, Publication Sales Director Doug LaFrenier visited with several of these customers in New Delhi, Ahmedabad, and Mumbai, seeking to learn more about trends in this market. He met with officials from the two biggest academic consortia: INFLIBNET, the main university consortium, which currently purchases access for 150 institutions; and INDEST, the consortium of the Indian Institutes of Technology, where the country's top engineers are trained. LaFrenier also met with librarians from several government agencies, including the Bhabha Atomic Research Centre (BARC); the Defence Research and Development Organisation, with 52 labs across the country; and the Council of Scientific and Industrial Research—India's largest R&D organization, with 39 labs and 50 field stations in India. AIP's current customers are confident of sustained funding, and there is plenty of potential for new business. BARC librarians, for example, asked LaFrenier to provide a quote on AIP and Member Society content not just for BARC but for all 13 institutes in the Department of Atomic Energy.



LaFrenier pauses to jot down some notes during his trip through India.

Society for Scholarly Publishing Meeting



Earlier this month staff from AIP participated in the [2010 Society for Scholarly Publishing Meeting](#)—one of the few events that focuses on advancing communication among all sectors of the scholarly publication community.

Speakers discussed various aspects of semantic technologies, with Daniela Barbosa from [Dow Jones Client Solutions](#) characterizing the growing demand for "context along with content." Janet Fisher from [Publishers Communication Group](#) called for executives to force themselves out of the "print mindset" when considering emerging technologies and opportunities, and she highlighted some of the benefits of semantic publishing, including additional metadata and a richer, more dynamic content offering. Other sessions included "Mobile Strategies for STM Publishers," "Social Media Tools and Analytics," and "The Future Scientist"—an entertaining session that highlighted the

needs and behaviors of researchers from the past, present, and future. Chris Iannicello, AIP's Manager of Scientific Social Networking, served as an apt panelist for a discussion addressing the importance of metrics in social media analytics.

The meeting closed with the "Food Fight! The Best of Scholarly Kitchen" session, in which all bloggers from the [SSP's Scholarly Kitchen](#) blog site participated in a lively discussion. They shared details about how they create their particular brand of "stew" and discussed the recipe for maintaining an increasingly popular blog site.

PRC MATTERS

Community building at the Center for History of Physics

Historians of the physical sciences can have diverse backgrounds, careers, and historical approaches. Although they share a common interest in the history of physics, they are often separated by geography or subject matter. Historians of astronomy and historians of physics, for example, do not usually interact fully, even though astronomy and physics are allied sciences. While organizations such as APS's Forum on the History of Physics and AAS's Historical Astronomy Division provide valuable opportunities for discussion, the community remains somewhat fragmented.



The Center for History of Physics aims to foster communication and collaboration across many boundaries to build a stronger community in the history of the physical sciences. Staff members are working on two initiatives to achieve this goal. First, Center

Director Greg Good (center), Web Specialist Ada Uzoma (left), and graduate student intern Amy Fisher (right) are developing an interactive website for historians of the physical sciences. Besides including research and educational resources, it also provides a discussion forum for scholars who share common interests but are separated by geography. Second, Greg and Amy are helping to organize an international conference titled "Continuity and Discontinuity in the History of the Physical Sciences" to be held at the center next summer. Primarily for graduate students and early career scholars, the conference promises to bring together a diverse group of historians. By providing opportunities for online discussion and arranging actual get-togethers, the center continues to promote knowledge of the history of the physical sciences.

THIS WEEK AT AIP

Events at ACP (College Park, MD)

Thursday, June 24

- ACP Picnic (12 – 2 pm)

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

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