

The people currently in CAMPEP-accredited programs are affected only by the 2014 deadline—depending on timing, they'll need to do a residency before they sit for the boards. But the people who started a non-CAMPEP-accredited PhD after 2006 will likely need to do an accredited residency. "If you need to do one, and you cannot get into a residency program, you are out. There is no recourse," says Samei. There are not enough residency programs in imaging physics, he adds. And master's graduates "cannot currently compete adequately [against PhDs] for the limited number of residency slots. No matter what we do, some people will fall off the cliff."

AAPM, the ABR, and CAMPEP, among others, are urging hospitals, clinics, and practice groups that offer clinical training to become accredited and those that already are to take on more than the typical one or two residents. The hurdles are money and manpower. Residents are typically paid, but unlike with medical residents, whose salaries come from Medicare, the host institution foots the bill. As for manpower, Samei says, "My idea is to hand [new hosts] a person, perhaps a retired medical physicist, for a month or two to help start up" residency programs. "This will help institutions that may have enough manpower to maintain a residency program but not enough to start one." Some places are discussing a hub-and-spoke model, whereby an established training center helps administer and oversee residencies in remote locations.

New degree

Another proposal would turn the residency from an expense for the host institution into a moneymaker: Instead of being paid during their clinical training, residents would pay. Charles Coffey, who is launching a clinical doctorate of medical physics (DMP) at Vanderbilt University this fall, says it's "part of their education. It's a professional degree, not a research degree." The university's existing two-year master's program would be supplemented with courses in ethics and in-depth diagnostic and radiation calculations, in addition to two years of clinical training. The program is off to a running start, Coffey says. At steady state the program aims for about five new students each year. The DMP will only incrementally help meet the immediate need for residency slots. But, says Coffey, "I really think by 2020 it will play a major role."

Samei recently surveyed students, residents, faculty, and directors of medical physics programs about their opin-

ions about DMP degrees. "The results were mixed," he says. "The majority of students said they would apply to such a program. But overall there was a feeling that it could be detrimental to research because the people who in the past would have gotten a PhD would do this instead."

Samei himself worries that the DMP might create two classes, "PhDs that are the 'real' doctors and DMPs that are sort of doctors." But, he says, to meet the need for the 2014 certification requirements "we need a multifaceted approach. I personally feel we are not moving fast enough."

Toni Feder

New Argonne head is chosen

Eric Isaacs becomes director of Argonne National Laboratory this month, where he expects to refocus the lab on its core strengths in x rays, high-performance computing, materials, chemistry, and energy. Isaacs went to Argonne in 2003 to head the Center for Nanoscale Materials, one of five nanotechnology user facilities located at US Department of Energy labs. He will retain his appointment as a professor of physics at the University of Chicago, which has managed ANL for the DOE and its predecessors since the lab's inception during World War II.

Prior to Argonne, Isaacs spent 15 years at Bell Labs, first as a postdoc, eventually as director of the materials

physics research department, and later head of the semiconductor physics department. Isaacs sees the national labs as heirs to Bell Labs' former role as an innovation hub: Both places hired the best scientists and engineers, and both invested in high-risk basic research. What sets the national labs and, historically, Bell Labs apart from research universities, Isaacs says, is their focus on research to meet missions.

Isaacs says he is grateful for the \$13 million in stimulus funding that the lab is receiving for infrastructure upgrades, although it is the lowest amount going to any of DOE's civilian multi-program labs. "We're in between projects," he explains, noting that the recipients of more funding have major facilities or upgrades under way. Last year ANL lost the competition to host DOE's \$550 million Facility for Rare Isotope Beams (see PHYSICS TODAY, February 2009, page 25). But Isaacs vows to do what it takes to keep the lab's Advanced Photon Source at the head of the pack of US synchrotrons that produce hard x rays. A proposed revitalization of the APS, he says, could provide the capability to produce x-ray pulses as short as 1 picosecond, which would give researchers the ability to take snapshots of rapid processes as they occur.

David Kramer ■



Isaacs

web watch

To suggest topics or sites for Web Watch, please visit <http://www.physicstoday.org/suggestwebwatch.html>. Compiled and edited by Charles Day

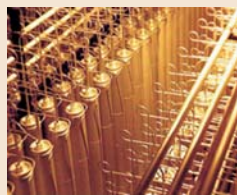


<http://www.quantumdiaries.org>

In 2005, a diverse group of particle physicists began blogging about their work and life on a website called **Quantum Diaries**. That first group has disbanded, although some members continue to publish their own blogs. Now, a second group of quantum diarists has formed.

Among them is Cao Jun, an experimenter who works on the Daya Bay Reactor Neutrino Experiment in southern China. Cao writes in English and Chinese.

<http://fas.org/programs/ssp/nukes/fuelcycle/centrifuges>



Gas centrifuges are the most efficient tools for separating ^{238}U , uranium's most abundant isotope, from ^{235}U , the isotope that fuels nuclear reactors and powers nuclear bombs. To inform the public about this key technology, the Federation of Atomic Scientists has put together a set of online resources entitled **Uranium Enrichment and Gas Centrifuge Technology**.

<http://www.ck12.org/>

Providing free, high-quality textbooks online is the aim of the **CK-12 Foundation**. Based in California's Silicon Valley, the nonprofit organization publishes what it calls FlexBooks—collaborative, user-generated texts akin to the entries in Wikipedia. A recent search for physics yielded 22 FlexBooks.

