academic researchers. Archeologists, for example, excavated homes and burials of the Pawnee people for more than a half-century before they ever contacted the tribe, says Roger Echo-Hawk, a Pawnee graduate student studying the relationship between oral history and archeology at the University of Colorado, Boulder. Indeed, scientists admit they made little effort in the past to involve Native Americans. "We've had to move from the ethics of conquest to the ethics of collaboration," says Martin Sullivan, director of Phoenix, Arizona's Heard Museum.

Still, scientists should "not look at collaboration through rose-colored glasses," says Goldstein, who points to her excavation last summer of a cemetery in California's Fort Ross State Park as an example. It took her 18 months to acquire all the necessary permissions—from state agencies, California and Alaskan tribes, the Russian Orthodox Church, and the local coroner's office—and then she went out of her way to keep all parties informed as the dig progressed. "Was it the easiest way to do archeology?" she asks. "Hell, no. But it was effective. Everybody felt they were a part of it."

Similar alliances, if they take shape, will probably coalesce around a new series of tribal museums. Not every tribe is planning to rebury all returned material; many have opened or are planning to open museums of their own, as the Confederated Tribes of the Warm Springs Reservation did last summer in Oregon. Some 120 such institutions now exist, and although some are little more than cultural centers, others maintain small research centers, which are staffed with Indian scientists.

The museums will have the material, and much of it (aside from sacred objects) will be made available to academic researchers, who are willing to work with tribal councils. "We do have common ground," says Roger Echo-Hawk. "If we build on that, we may create a new science of North American archeology."

–Virginia Morell

SHRINKING JOB MARKET

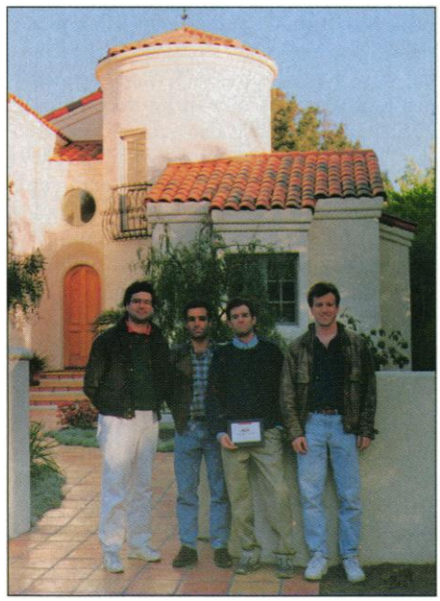
Young Physicists Hear Wall Street Calling

Ask young physicists what the job market is like these days, and they may answer with bleak humor. It's about average, one told *Science*: "worse than last year, but better than next year." Indeed, with the demise of the Superconducting Super Collider, the end of the Cold War, the precarious position of the national laboratories, and the slew of major corporations from IBM to General Electric that have cut back on their pure research, the market for physicists, whether theoretical or experimental, has been asymptotically approaching zero. And that explains why some of the best young physicists have taken refuge in one place where the curves have, for some time, been heading upward: Wall Street and finance.

No one is keeping tabs on this migration, but the anecdotal evidence for it is striking. Last year, for instance, two of the four students who received doctorates in theoretical physics from Harvard went off to jobs on Wall Street, and a third went into management consulting. The Collider Detector Facility, an experimental group at Fermilab, lost three postdocs to Wall Street. Of the 20 or so students who received theoretical physics doctorates over the last 5 years from Stanford University, only two or three, according to these students, are still in physics; they can name eight or nine who are working in finance.

Wall Street is happy to absorb the migrants, says Ron Unz, a former Stanford physicist and Oxford University Churchill Fellow who hired three other Stanford physicists for his company, Wall Street Analytics, which sells specialized software for structuring and analyzing what are known as mortgage-backed securities. "In many ways," he explains, "areas like finance, analyzing complicated securities, trading them, or designing systems to do that type of process, require many of the same kinds of skills and hardware creativity that physics researchers have to have." Rahime Esmailzadeh, who received a Ph.D. from Stanford in 1989 and began a postdoc at Berkeley's Center for Particle Astrophysics before joining Morgan Stanley, adds that physicists' backgrounds suit them to intensely mathematical tasks in the research departments of securities and investment banking firms, such as modeling options prices and risk management.

"Let me tell you about our group," says Esmailzadeh. "My boss is an ex-physicist. I'm a physicist. We hired one of my friends from UCLA who was in the same undergraduate program, and has his Ph.D from MIT. We have a consultant from the University of Texas, also a physicist, and we just recently hired two Ph.D. physics guys from Stanford." In addition, says Esmailzadeh, his firm has made offers to three former SSC experimental physicists.



MELANIE DEMERS

Physicists in finance. Ron Unz *(with sign)* and staff at Wall Street Analytics, in Palo Alto.

The recruits themselves are ambivalent about their move. All of the Wall Street migrants *Science* spoke to said they would rather have stayed in physics, but the decline of the field left them little choice. Esmailzadeh, for example, recalls the "romance of doing theoretical physics," but the romance wears off, he says, "when you start doing physics as a profession. You don't know where you'll end up every 2 years, and you don't know whether it's even possible to get a job." Adds former string theorist Dave Montano, who now works for Wall Street Analytics, "We really couldn't follow careers in physics, and making money is at least more interesting than options like engineering." Starting salaries for these Ph.D. physicists on Wall Street can be as much as $100,000 a year, including bonuses, whereas postdoctoral fellows might make one-third as much.

Those factors aren't just luring graduates in particle physics. Bob Laughlin, a condensed matter physicist at Stanford, says he lost his first student to Wall Street in early March when the student left a postdoc at the Institute for Advanced Study at Princeton and joined Goldman, Sachs. "He is arguably the brightest person I ever worked with in my life," says Laughlin. "He told me last summer that he was totally exasperated with not only the job situation in physics, but what it has done to physics as an art."

Such sentiments are driving many young physicists to cast an eye on the financial world even while they are still working on their Ph.D.s. Theorist David Land recalls that during his last year at Harvard, "you were more likely to see the Black-Scholes option pricing formula on blackboards in graduate student offices than anything to do with the standard model [of particle physics]."

Land is now with Goldman, Sachs, and he says he doesn't miss physics—at least not yet. "I will miss physics when something exciting happens. I can guarantee I'll be missing physics then."

–Gary Taubes