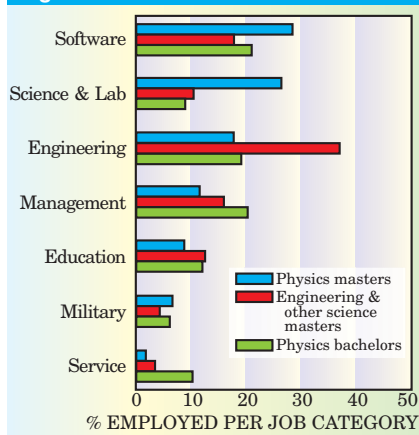


Masters in the Field

Physics bachelors who earn a master's degree in any math, science, or engineering field have higher salaries and a greater appreciation of their undergraduate training than their counterparts with only a bachelor's, according to a recent report by the American Institute of Physics.

Field of employment of physics bachelors with a master's degree in physics, a master's in another science or engineering field, or no additional degree.



The new report zeroes in on physics bachelors who hold a master's degree and are in the work force. They represent some 25% of the respondents to AIP's broad survey on employment trends of physics bachelors, which was conducted in 1998–99 and focused on graduates from 1990 to 1993 (see PHYSICS TODAY, September 2002, page 32).

Among those with master's degrees, 40% are in physics, 40% are in other math, science, or engineering fields, and 20% are in business, education, health, and other nonscience fields. Physics masters work mostly in science and lab jobs and in software, while the largest fraction of people holding a master's in another science field or engineering are employed in engineering (see figure). Physics bachelors with no additional degree are employed in software and engineering in comparable proportions to physics masters, but they hold relatively fewer science and lab jobs and are more strongly represented in management—probably, the report notes, because of having spent 14 months longer on average in the work force.

A master's in physics bumped annual salaries up by \$3900, and a master's in another science or engineering field netted \$4300 more than just a physics bachelor's. Other factors that boosted pay included having the responsibility to hire bachelor's-level

employees (+\$5200), being male (+\$2600), and years of experience (+\$800 per year).

People who added a master's to their resumé rated their undergraduate education as more useful preparation than those who stopped after the bachelor's. This rating shows the important role of physics departments, says report coauthor Rachel Ivie. "People who had a better undergraduate environment—better advising, better relationships with professors and other students—are more likely to complete graduate degrees."

Single copies of the report *Physics Bachelors With Master's Degrees* may be obtained free of charge from AIP, Statistical Research Center, One Physics Ellipse, College Park, MD 20740; e-mail stats@aip.org; Web site <http://www.aip.org/statistics>.

Toni Feder

News Notes

LANL contract to open for bid. The contract to manage Los Alamos National Laboratory will open for competitive bidding in 2005, possibly ending the University of California's six decades of running the nation's prime nuclear laboratory. "The university bears responsibility for the systemic management failures that came to light in 2002," Energy Secretary Spencer Abraham said in announcing the opening of the bid process.

His decision was based on recommendations in a review ordered last year after two internal investigators at Los Alamos were fired for going public with allegations of widespread

fraud and misuse of government funds. Their charges came on the heels of a string of problems at Los Alamos that date back to the Wen Ho Lee security scandal in 1999.

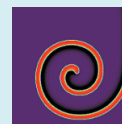
Abraham encouraged UC to bid on the next contract. UC President Richard Atkinson said that "my instinct continues to be to compete" for the contract, but he added that it may not be in UC's best interest to continue to manage the lab and that the ultimate decision rests with the university's board of regents. **JLD**

Space weather journal. The American Geophysical Union is gearing up to launch what it says will be the first journal devoted to space weather and its impacts on telecommunications, electric power, satellite navigation, and other technical systems. *Space Weather: The International Journal of Research and Applications* will feature peer-reviewed articles, political and industrial news, letters, and opinion pieces. The journal's founding editor is Louis Lanzerotti, a solar and space physicist who, in the course of his 37 years at Bell Labs (now part of Lucent Technologies), has worked on both unclassified and classified telecommunications systems. "I don't think anyone can precisely define what space weather is. I define it with more of an engineering slant than others might," he says. Starting later this year, *Space Weather* will be published frequently online, with print versions put out quarterly. For submissions, subscriptions, and other information, see <http://www.agu.org/journals/spaceweather/>. **TF ■**

WEB WATCH

<http://cnls.lanl.gov/~aric/Simulations/Simulations.html>

Aric Hagberg, an applied mathematician at Los Alamos National Laboratory, has created animations from his numerical simulations of **Reaction-Diffusion Patterns**. One of the featured animations follows the fragmentation of a single, initially stable spiral into lots of little spirals.



<http://www.astrosociety.org/education/resources/scifiprint.html>

Andrew Fraknoi of Foothill College is devoted to teaching astronomy. To that end, he has compiled **Science Fiction Stories With Good Astronomy & Physics: A Topical Index**. The list has nearly 200 entries and is divided into 40 topics, from antimatter to Venus. Fraknoi hopes that teachers can use the more-or-less accurate science in the stories to reinforce astronomy or physics concepts.

<http://www.sfu.ca/physics/funstuff/java>

If you've ever tried to picture how charged particles interact in a confined space, visit the physics department Web site at Simon Fraser University. By running the department's **Java-based particle simulator**, you can introduce an arbitrary number of charged particles into a two-dimensional box. The particles bounce elastically off the box's walls and interact with each other through the Coulomb force.

To suggest topics or sites for Web Watch, please phone the editor at (301) 209-3036.

Compiled and edited by Charles Day